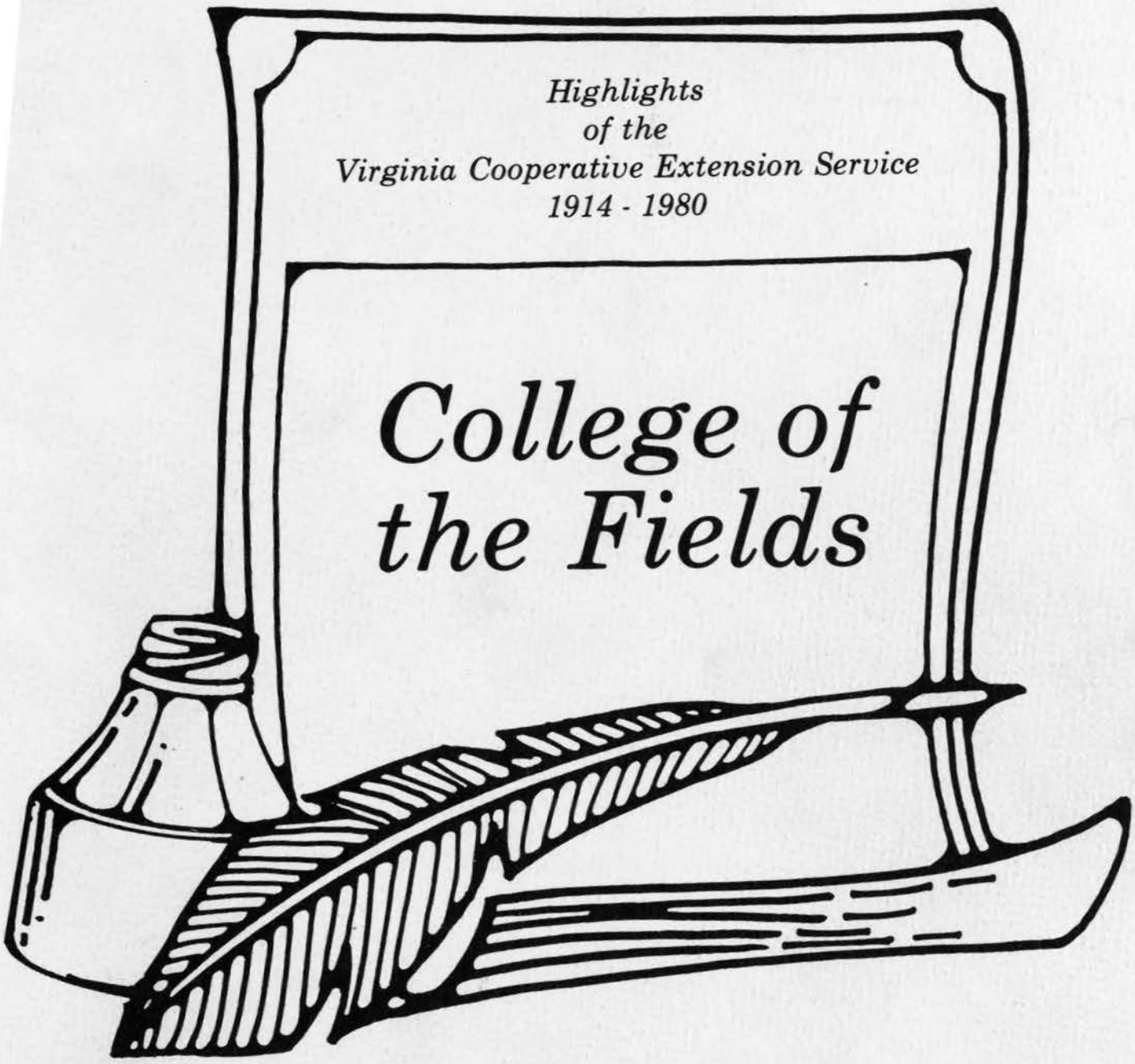
Highlights
of the
Virginia Cooperative Extension Service
1914 - 1980

College of the Fields



Virginia Cooperative Extension Service
Publication 478-025
September 1987

COLLEGE OF THE FIELDS

Some Highlights of the Virginia Cooperative Extension Service 1914-1980

Prepared and Published
in Cooperation With

Alpha Gamma Chapter
Epsilon Sigma Phi

Virginia Tech and Virginia State
Virginia's Land-grant Universities

TABLE OF CONTENTS

FOREWORD

The impetus for Some Highlights of the Virginia Cooperative Extension Service, 1914-1980 was provided by Milton C. Harding, Sr., when he was president of the Alpha Gamma Chapter of Epsilon Sigma Phi. In a letter to Extension personnel dated April 15, 1977, he requested information that might be useful in an Extension history. President Harding wrote that the Alpha Gamma Chapter Board had generally agreed "a history would be a valuable document for immediate and future use in Extension."

It became apparent that there was much support throughout Extension for a history project, so Mr. Harding appointed a committee to make decisions and oversee plans for publication. Committee members were:

Mildred Payne (Blokker)	J. Andrew Reynolds
Thelma T. Hewlett	Delwyn A. Dyer
P. H. DeHart	Ann W. Frame

Delwyn A. Dyer, president-elect of the Alpha Gamma Chapter at that time, sought and received a CETA (Comprehensive Employment and Training Act) grant to employ someone to write the history. The individual subsequently hired was Jerry Jones, a part-time English instructor at Virginia Tech. Although Jerry had no Extension background, he did an outstanding job of cataloging materials, interviewing many people, reading historical documents, and preparing a first draft of the history, which he entitled "College of the Fields."

After reading the publication, which was written from a social and economic needs perspective, the history committee decided that Extension program areas needed more emphasis. Consequently, many individuals (mostly retired staff) were recruited to prepare a chronological history of each program area.

A publication of this nature is not an easy undertaking. In the hands of a professional author, it might have more clearly represented the great contribution of Extension to agrarian life in Virginia. But, at the same time, it may have missed a perspective that retirees were able to bring to the writing because they had experienced much of what they wrote about. They searched personal records and their minds--rich with memories--and wove a history of time, events, and people, thus providing a dimension that is often not found in the archives. This is not to say, however, that they did no "searching out". Indeed, some read annual reports on microfilm in the Newman Library; some studied records available in departments and Extension unit offices. Others substantiated certain information by using Lyle Kinnear's The First 100 Years. Many were frustrated because

information they needed either was not available or could not be located.

Some information in this publication may be inaccurate. A project of this scope is seldom free of error. In addition to "sins of commission", there are likely to be "sins of omission". Only the thoughtless will blame the writers for either. Preparation of a major part of the history has been a volunteer effort--a caring way for some of the finest "unsung" Extension workers to help those coming along behind them to discover their roots.

Every achievement begins as an idea. The satisfaction derived from acting upon that idea is certainly one of the most satisfying experiences that life has to offer. The Alpha Gamma Chapter of Epsilon Sigma Phi conceived the idea of an Extension history and achieved its goal. The project has been a worthy one, and the final product is a rich contribution to Extension history in Virginia. Readers will find it interesting and a valuable document for immediate and future use.

ACKNOWLEDGMENTS

This publication is the work of many individuals, each of whom made a valuable contribution. Ann W. Frame, retired Extension home economist, and chair of the History Committee, showed initial and continuing commitment to the project. Assisted by a committee composed of Mildred Payne (Blokker), Thelma T. Hewlett, P. H. DeHart, J. Andrew Reynolds, and Delwyn A. Dyer, she located volunteer writers, provided words of encouragement, served as a sounding board when they were frustrated, and "dished-up" large doses of patience. We are indebted to Ann and the committee for stimulating and helpful counsel and for their willingness to help the Alpha Gamma Chapter of Epsilon Sigma Phi pursue this project to completion.

Gratitude is also extended to Jerry Jones, who reviewed the literature, conducted personal interviews, and from his findings prepared a first draft. Many volunteers added to his work by preparing subject matter sections or developing other topics of interest. So many volunteer writers were involved, in fact, that any attempt to acknowledge them individually is likely to result in omission of names. Also, this project has been a long time in the making, and some records have been lost. If the following list is not inclusive, we beg your understanding.

Albert S. Beecher*
Mildred Payne Blokker*
William C. Burleson
Roscoe H. Burtner*
Janet Cameron*
Robert M. Chandler
W. F. Collins*
F. W. Cooler
O. W. Cundiff**
Ann W. Frame*
George J. Flick
Chester L. Foy
W. L. Gibson, Jr.*
G. C. Graf*
James M. Grayson*
Katherine Habel*
Gaynelle Hogan*
T. B. Hutcheson, Jr.
Jane Janey
Ann Lastovica
C. Ned Lester
N. G. Marriott
C. Curtis Mast*
James P. McAlister
William A. McElfresh
J. Andrew Reynolds**
Betsy Schenck*
Mary Settle*
J. F. Shoulders*
Aubrey R. Slayton*
Earl T. Swink*
Jack M. Tyree*

*Retired
**Deceased

To each of the foregoing, and any unlisted writers, we express our appreciation and sincere gratitude for their contribution.

And finally, a debt of gratitude is owed Jane P. Janey, Extension Specialist, Center for Volunteer Development; Barbara J. Waller, Secretary, Extension Home Economics; Cynthia L. Koziol, Secretary, Psychology; Carolyn B. Agnew, Secretary, Extension/Support Systems; Joyce W. Smith, Publications Manager, Extension/Support Systems; Kathy D. Lewis, Secretary, Extension Evaluation/International; Beverly J. Brinlee, Information Officer, Educational Communications; and James N. Cranor, Extension Editor, Educational Communications. These individuals contributed a tremendous amount of their time and talent in the proofreading and typing of this document. We appreciate the work of each of these individuals.

EXTENSION WORKERS' CREED

I believe in people and their hopes, their aspirations, and their faith; in their right to make their own plans and arrive at their own decisions; in their abilities and powers to enlarge their lives and plan for the happiness of those they love.

I believe that education, of which Extension work is an essential part, is basic in stimulating individual initiative, self-determination, and leadership, that these are the keys to democracy and that people, when given facts they understand, will act not only in their self-interest but also in the interest of society.

I believe that education is a life-long process and the greatest university is the home; that my success as a teacher is proportional to those qualities of mind and spirit that give me welcome entrance to the homes of the families I serve.

I believe in intellectual freedom to search for and present the truth without bias and with courteous tolerance toward the views of others.

I believe that the Extension Service is a link between the people and the ever-changing discoveries in the laboratories.

I believe in the public institutions of which I am a part.

I believe in my own work and in the opportunity I have to make my life useful to mankind.

Because I believe these things, I am an Extension worker.

--Epsilon Sigma Phi, 1959

I believe in the democratic way of life and in the principles and the processes which make it possible.

I believe that education is a life-long process and the greatest university is the home; that my success as a teacher is proportional to those qualities of mind and spirit that give me welcome entrance to the homes of the families I serve.

I believe in intellectual freedom to search for and promote the truth without bias and with courteous tolerance toward the views of others.

I believe that the Extension Service is a link between the people and the ever-changing discoveries in the laboratories.

I believe in the public institutions of which I am a part.

I believe in my own work and in the opportunity I have to make my life useful to mankind.

Because I believe these things, I am an Extension worker.

--Spelling Signs Ltd., Kent

SECTION I

Chronicle of the Virginia Cooperative Extension Service

SECTION I

Chronicle of the Virginia Cooperative Extension Service

HOW IT STARTED
And Why

In the summer of 1906, H. B. Frissell, president of Hampton Normal and Industrial Institute, heard Seaman A. Knapp, an agriculturalist representing the United States Department of Agriculture (USDA), speak at a Southern Education Board meeting in Louisville. Knapp spoke about the two-step demonstration model he had developed to get poor farmers to diversify their crops and produce enough vegetables, milk, meat, and eggs for family needs--a practice that would help them become self-sustaining.

The collapse of Virginia's plantation system near the turn of the century helped prepare the state for Knapp's program, one that always kept the small farmer in the forefront. From the middle of the 17th century to the outbreak of the Civil War, both small and large plantations east of the Blue Ridge Mountains had continued to grow noticeably. This section of the state was tobacco-raising country, and production demanded that large areas of land be added to the plantations annually. It was easier to acquire more land than to let the fields lie fallow after having been exhausted. So, for 20-year periods, exhausted sections were turned over to the growing of pines, and new lands were added to grow tobacco.

For a time following the Civil War, the Virginia plantation system "maintained itself, despite the change in the system of labor, until the generation of youths who were living at the close of the war had grown to manhood."[1] When the boys became men, however, they emigrated to cities. And by this time (1875-1885), most of the generation of blacks working on the plantations prior to the Civil War had died.

When there was no longer anyone to maintain the plantation system, it collapsed and a radical agricultural revolution began. Plantations were subdivided and land was cheap; black free-holders and whites who wanted their own small farms bought much of it. In his history, Virginia: Rebirth of the Old Dominion, Philip Alexander Bruce states:

> **How far the subdivision had gone by 1900 was revealed in the fact that Negro free-holders had acquired title to 990,790 acres in a total area of 19,907,883 acres in the state. In other words, they had become the owners of every twentieth acre.**[2]

Western Virginia, on the other side of the Blue Ridge Mountains, was not dominated by the plantation system before the war. Planting was more diversified and farmers did not have to

struggle with acute soil exhaustion problems. In fact, many of them in the Shenandoah Valley, as county agent Charles W. Wampler observed in 1910:

> **...had been complimented so long and so often that they began to feel as though they knew about all there was to know about farming and that they could continue to farm in the same old way and yet remain the best and wealthiest farmers in the state.**[3]

Nevertheless, after the Civil War, on both sides of the Blue Ridge, Virginia was a state of small farms which produced an array of cash crops such as hay, corn, wheat, oats, tobacco, Irish potatoes, sweet potatoes, peanuts, apples, peaches, pears, and grapes. Numerous farmers prospered, chiefly because they knew how to benefit from farmers' institutes and agricultural societies. The purpose of the institutes was to satisfy the demands of farm men and women for up-to-date information about farming techniques. Virginia's first Farmers Institute was organized about 1904, and the first appropriation of $500 was made through the State Board of Agriculture.

Agricultural societies at the turn of the century were very active in the eastern part of the state. Like their counterparts throughout the nation, they were convivial, social organizations of gentlemen-farmers of the area. Serious discussions of agriculture took place, however, and farmers worked through these societies to develop fairs that were "instrumental in helping disseminate the reform ideas to the general populace."[4]

Agricultural societies and farmers' institutes, through printed materials and such events as fairs and contests, kept interest in agricultural problems at high intensity among Virginia's agricultural leaders and their supporters in the early 1900s. The earliest recorded agricultural contest in the United States took place in 1856 in New York State and was very much like the one-acre-per-boy concept of the Boys Corn Clubs later introduced into demonstration work by F. Southall Farrar in 1909. Interest in the contest was heightened by an offer of $50 to the winner of the best corn crop. The prize money was donated and awarded by Horace Greeley, editor of the New York Tribune, to Franklin B. Spaulding, who:

> **...plowed the land 10 inches deep in April and dragged it twice. He planted the corn on May 17, in hills three feet apart, the rows also three feet apart, four kernels to the hill. Corn appeared above ground May 22. The corn was Dutton Yellow, and the acre took eight quarts of seed. The corn was planted dry without previous preparation. One and one half cords of barnyard manure and 1/2 cord of hog and hen manure were broadcast in the hill. . .with 2" of dirt over it. The**

corn was shucked in September and measured 152 bushels of ears and 76 bushels of shelled corn at 63 pounds per bushel. At 56 pounds there were 85 per acre by weight.[5]

In addition to the agricultural institutes and societies, there was another very important force that helped demonstration work get started, and that was federal legislation. The Morrill Act of 1862 created the land-grant colleges, and the Hatch Act of 1887 provided for experiment stations in connection with land-grant institutions. Such legislation favored the spread of progressive farming through education rather than demonstrations, an important distinction because in the early years of demonstration in Virginia the educational direction being promoted for agriculture was through the agriculture departments of Virginia Agricultural and Mechanical College, and Hampton Normal and Industrial Institute.*

Frissell and those meeting with him decided to cooperate with the Southern Education Board in the promotion of its educational goals. The money needed for their campaign was given by the General Education Board of New York, a Rockefeller Foundation agency organized in 1902 to strengthen public education throughout the South with large donations of money. The Foundation was the major contributor, and it pledged $100,000 annually for 10 years for this purpose.[6]

One promotional plan was called the "May campaign". The Association decided in 1904 that Governor Montague and President Alderman of the University of Virginia should stump the state during May of the following year to stir up interest for better public education. What happened in May was remarkable. Historian Heatwold wrote:

Never was a state so bombarded in the interest of any cause. Men spoke in the remotest communities. Candidates of both political parties and for all offices turned aside from national questions to the earnest advocacy of an adequate school system for the state. Preachers found a fresh application of the principles of religion. Editors gave their editorial and news columns for the dissemination of knowledge and

---

*Referred to hereafter as VPI or Virginia Tech, and Hampton Institute.

> **the inspiration of the people. College presidents and professors in state and private institutions found new fields for useful labor. On the political hustings, in places where camp meetings were wont to take place, at crossroads stores, and "old field" schoolhouses, Dr. Bruce R. Payne, then of William and Mary College, kept the papers filled with educational literature. During the so called "May campaign", 100 of the ablest speakers of the state, including the governor, delivered 300 addresses in 94 counties at 100 different meetings. Two hundred thousand pages of educational literature were issued, and 50 citizen school associations were organized. All this was done in 30 days.**[7]

Thus, from two important boards formed outside the state early in the 1900s, the Cooperative Education System in Virginia was launched, a movement that generated far-reaching reforms and further prepared the way for Knapp's farm demonstration work.

Virginia was ripe by 1905 for the introduction of a more generally intensive system for agriculture than it had ever known. The few prosperous farmers knew how to benefit from available programs and experiment station work, but the low-income, uneducated, and uninformed farmers needed some sort of program that could show them how to become self-sufficient; a program that would not insult them or reinforce their blind prejudices against outside intrusion. Farmers' institutes, agricultural societies, and experiment station work did not reach the farmers who were selling their meager crops for food and survival items and were seldom realizing even a small profit. Consequently, low-income farmers did not know about or adopt more profitable methods of farming, and it was for them that "there was a man sent from God, whose name was Seaman A. Knapp."[8]

Among the land-grant colleges, including VPI, Knapp's work was suspect. After all, it was a federal program sponsored by the Department of Agriculture, and Knapp was one of its agents. Joseph Bailey, in his biography of Knapp, points out that farm demonstration work:

> **...inevitably meant trespassing on the territory of some state college of agriculture, a state experiment station, in many cases a state board of education, and a host of persons and enterprises such as the agricultural press, farmers' unions or the state grange, chambers of commerce and so on, whose interests intermeshed in ways resistant to outsiders.**[9]

College agricultural staffs got especially nervous when they heard a rumor that a movement was underway to place all the experiment stations under the Department of Agriculture. Then, a

fortuitous situation opened in 1906 which just about assured the beginning of farm demonstration work in Virginia: J. D. Eggleston became State Superintendent of Public Instruction at a time when the enthusiasm for better educational facilities was at "white heat". He approached appropriate individuals at VPI about their recalcitrant attitude toward Knapp's demonstration method of teaching.

> **I tried [he said] to get the Agricultural Department of...the VPI to seize this opportunity, but they laughed at it, stating that it was nothing but a fad and would soon "peter out". This made me so indignant that, after consulting Mr. Sandy and a few others, I determined to start the thing in and through my office.**[10]

Eggleston, a man of action, did just that. It was through his office that Knapp entered Virginia with the farm demonstration method of teaching.

When writing Extension Work in Virginia: A Brief History 1907-1940, Eggleston prepared two paragraphs about VPI's "reluctance to endorse demonstration work" in the early days. The editor deleted one of them, however, because he did not want to print anything that looked like a criticism of VPI. The deleted paragraph read:

> **It may be asked--it has been asked in former years--why the adult demonstration work was not done ab initio at our agricultural college as the center. The answer is that from 1906 to 1913 those in authority at the Virginia Polytechnic Institute did not see that the "Knapp way" was the next logical step, now that the experiment stations had acquired a large deposit of scientific data. They believed that the plans of having the farmers visit the experiment station, of having county meetings and lectures, of disseminating scientific data through bulletins, were the ultimate answers to the problem of how to get the farmers to do more scientific farming. It not infrequently occurs that those habituated to certain methods are not so apt to adopt new methods as those not so habituated.**[11]

Nevertheless, the legislation that gave great power to Virginia's land-grant and experiment station movements helped the cause of demonstration work at the same time. After it was launched, farmers, especially those east of the Blue Ridge Mountains, insisted that the agricultural force gaining momentum in the state remain practical. They scorned "book farming". Land-grant institutions could no longer scorn demonstration farming. Eggleston, who by 1913 was president of VPI and later Virginia's first director of Cooperative Extension under the

Smith-Lever Act, saw the book/field problem clearly. An advocate of Knapp's demonstration work from the very start, he spoke with remarkable insight, as shown by the following words:

> **It is a fact too often overlooked [he insisted] that the large majority of farmers and farmers' sons do not attend an agricultural college or school; that a large majority of them do not read bulletins and circulars, and do not follow them when read; that a large majority of them do not attend institutes and movable schools; that a large majority of people, even if willing, do not know how to follow instructions at a distance; that there are as many puzzles in one agricultural problem as there are minds working on it; that it is an exceedingly difficult thing to persuade a man that his way of doing a thing is wrong, and that even if convinced, he is usually helpless to change without the personal, present help of his instructor; and that often he will sit silent to his own hurt.[12]**

SMITH-LEVER ACT--1914
And One Year Thereafter

From 1906 to 1914, the cooperative farm demonstration movement grew fast in every southern state. It did so well that in 1907 President Theodore Roosevelt recommended that demonstration work be started in every state. A year later the federal government established a Country Life Commission to study conditions of rural farm life and suggest how they could be improved. The report, coming out in early 1909, revealed many problems, but the Commission chose to focus on the poor educational system prevalent in rural areas. Commission members believed that Extension work was the best way to reach rural families. They suggested that:

> **...there now should be added a third coordinate branch (to academic teaching and experiment station work), comprising extension work, without which no college of agriculture [could] adequately serve its state.[1]**

A powerful group, however, opposed the placement of demonstration work at land-grant institutions. Everyone observed that farmers needed and benefited from demonstration work, but not everyone agreed on what Extension work should be if it were handled by the colleges. J. D. Bailey has written:

> **...the proposition of establishing a nationwide system of agricultural extension became an issue of national interest in which the principal contest was waged, not**

against opposition to the creation or the cost of such a service, for such opposition was surprisingly unimportant, but over the educational purpose and practices involved and, as a corollary issue, who was to organize, guide, and supervise such a system and its purposes.[2]

The Association of American Agricultural Colleges and Experiment Stations was one of two strong camps. It wanted the federal government to support the kind of Extension work that agricultural colleges and experiment stations were already doing, but felt the colleges rather than the government should control the way the money was spent. It opposed Knapp's demonstration work because it came from the United States Department of Agriculture, and that direct connection suggested too much federal control of land-grant colleges.

But an even more powerful coalition opposed the Association of American Agricultural Colleges and Experiment Stations. This was the National Soil Fertility League, which, according to Bailey, consisted of:

...politicians and railroad presidents in abundance, bankers, agricultural journalists, farm implement manufacturers, mail-order-house magnates, and many leaders in the vigorous conservation movement stimulated by Theodore Roosevelt. President Taft was a member of the major committee of the League. So were James J. Hill of the Great Northern; S. C. Brown, President of the New York Central; and F. A. Delano, President of the Wabash Railroad. Others included Champ Clark, William Jennings Bryan, Samuel Gompers, J. M. Studebaker, Henry Wallace (the elder), A. H. Sanders of the Breeder's Gazette, Dr. E. J. James, President of the University of Illinois, all strategically placed to assist a bill through Congress.[3]

The league wanted Knapp's demonstration method to be the Extension wing of land-grant colleges, and it was successful. It took Kenyon L. Butterfield, president of Massachusetts Agricultural College, member of the Country Life Commission, and a very able spokesman for the Association of American Agricultural Colleges and Experiment Stations, however, to convince its members that the understanding developed between the Department of Agriculture and each land-grant college bound the federal government to cooperate with the colleges. He also convinced them that sharing costs of a program at a land-grant institution by federal, state, and county funding would keep the government in check. Though hesitant, association members at last supported the demonstration method as the basis for Extension work at land-grant colleges.

The Smith-Lever Act, approved May 8, 1914, made Knapp's demonstration method part of the educational system of land-grant colleges throughout the United States. Several pieces of federal legislation led to it. The Enabling Act, passed in 1862, established the Department of Agriculture to collect agricultural information and distribute it nationally. In that same year, Congress passed the Morrill Act, which provided for at least one land-grant institution in each state to teach agricultural and "mechanic arts" subjects. In Virginia, 10 years later, the Virginia Agricultural and Mechanical College was established. In 1886, the Hatch Act provided funds for experiment stations at land-grant institutions, and two years later a station was formally organized at VPI. Congress passed the Second Morrill Act in 1890, legislation which established black land-grant institutions in each state; in Virginia, Hampton Institute, a private school, received "1890 funds" until 1930, at which time Virginia State College began to get the appropriation instead.

The Smith-Lever Act provided for the combining of instruction through the usual experiment station methods with Knapp's more radical way of dealing with the farmer face-to-face in his own field. Specifically, the law mandated:

> **Cooperative Agricultural Extension work shall consist of the giving of instruction and practical demonstrations in agriculture and home economics to persons through field demonstrations, publications, and otherwise.**[4]

Prior to the Smith-Lever Act and during Dr. Paul Brandon Barringer's tenure as President of VPI (1907-1913), Knapp's demonstration work started and flourished. Barringer and VPI's agricultural faculty, however, would not support it. Undoubtedly, according to Kinnear:

> **...the greatest error and lack of imagination manifested by Barringer and his faculty in agriculture was the failure to see the potential and significance of the farm demonstration work and its closely allied boys' and girls' club work which Eggleston was promoting with effective vigor.**[5]

When Barringer resigned, Eggleston, pioneer advocate of demonstration work, assumed the presidency. This was on July 1, 1913. One of the major tasks assigned him by the Board of Visitors was the reorganization of agricultural activities to include farm demonstration work. In January 1914, the United Board of Agriculture and the Board of Visitors of VPI united in a petition to the legislature, requesting that the United Board be dissolved and that cooperative demonstration work be conducted at VPI. Legislation passed on Friday, March 13, 1914, made this a reality.

Eggleston had, of course, favored moving the demonstration work to VPI. Kinnear relates an example of how important it was to Eggleston. S. W. Fletcher, Director of the Agricultural Experiment Station at the college, disliked demonstration work and, like Barringer, believed that the best way to help farmers was through work at the agricultural substations located throughout the state. Just before legislative action transferred demonstration work to VPI, Fletcher hired a number of county agents to work at several of his substations. He offered them more money. Quickly, T. O. Sandy, state agent over demonstration work, wrote to Eggleston that Fletcher was undercutting demonstration work. Furious with Fletcher's action, Eggleston forced him to resign.[6]

Although Eggleston maintained that demonstration work was transferred to VPI July 1, 1913, when he went to VPI as president, Jesse M. Jones, the second director of Extension at VPI, explained that Extension work shifted gradually over a period of years to VPI. He said:

> **Until July 1st, 1916, the work was located at the College only nominally. The greater part of the work of administration was centered at Burkeville in the office of the State Agent for Farm Demonstration Work and the State Agent for Home Demonstration Work, respectively.**[7]

Demonstration work in Virginia after the passage of the Smith-Lever Act was called VPI Farmers Cooperative Demonstration and Extension Work, and was financially and institutionally grounded by the Act. Bailey gave Knapp major credit for its design. He called it "The Institutionalization of an Individual" and stated that the legal basis of the Extension Service was made up of the scheme that Knapp shaped and popularized:

> **...seemingly intricate, but eminently workable, three-level integration of federal, state, and county governmental machinery involved in county agent operations, with it beneficial check on excessive centralization counter-balanced by its vigorous stimulation of neighborhood self-help.**[8]

Administratively, the Smith-Lever Act required that Extension work be aimed at persons not attending or resident in colleges in the communities, and stated that land-grant colleges could not spend large amounts of money on Extension projects other than demonstration work. The projects had to be carried out in a manner that was mutually agreed upon by the Secretary of Agriculture and the state agricultural college or colleges receiving the benefit of the Act.

Financially, under the Smith-Lever Act, each state received $10,000 from the federal government for the fiscal year 1914-15. During this period, Virginia's General Assembly passed the Appropriation Act, which set up funds to offset Smith-Lever appropriations and authorized county boards of supervisors to give money for Extension projects and agents' salaries (Acts of the General Assembly, 1914, Ch. 353, p. 710). For the next eight years, the federal government gave each state an annual increment according to the size of its rural population. Director Eggleston's report for the fiscal year 1914-15 states that the federal government appropriated $10,000 to VPI for Extension work that year. In addition, a contribution of $40,000 was made for experiment station research, agricultural publications, and special projects like demonstration trains. Since this kind of Extension work was combined with the county agent plan of demonstration work by the Smith-Lever Act, VPI got $50,000 in federal money; it also got $25,000-$30,000 from Virginia counties and $20,000 from the state government for work in agriculture. By fiscal year 1922-23, Virginia was to receive $141,700 from the federal government, $131,700 from its own government, and sums from county boards of supervisors that the boards considered appropriate.

The Smith-Lever Act gave demonstration work institutional and financial stability, and an assured longevity. It also created a much more ambitious program with far-reaching possibilities because it brought together so many resources that people wanted and needed. Yet the development and the institutionalization of demonstration work remained true to Knapp's intent of improved living conditions for the low-income farm family.

Extension over the years might have stayed as uncomplicated as it was in 1914 except for one thing: It was too effective and popular. It met in an almost spectacular way a number of needs of an entire rural population. Even some prosperous farmers benefited from the program. Representative Hughes of Georgia had recognized this prior to passage of the Smith-Lever Act. He said:

> **Demonstration is effective and conclusive not only to the man behind the plow and with the hoe, but to the large farmer with his agents and supervisors. I know a large landowner conducting several farms, who has two sons that have remained on the farm and are his partners. They have attempted to be progressive along agricultural lines. They are members of the state agricultural society, attend farmers' institutes, subscribe to the best agricultural publications, and apply to the state agricultural college for scientific information. They declare they have obtained better results and more practical information by and through**

the Knapp demonstration work than from any other source, and now they are conducting their farms exclusively on scientific plans which have been demonstrated.[9]

Although farmers were a major demonstration audience, whether they were poor or prosperous, club work for boys and girls was emphasized. In addition to the experiences they were having in local agriculture and home economics clubs, boys and girls were beginning to receive instruction and take part in recreation on a state scale. In 1915 the first short course for girls was held at Madison Normal School, Harrisonburg. The first state short course for boys was not held until 1918. At that time it was held in connection with the Farmers Institute at VPI.

About the time Miss Ella Agnew was conducting the first short course for girls, Eggleston was crying out for help with an expanded program. He said:

The time has come when we must summon to our aid every other factor in the county. The schools, the farmers' organizations, the business men's clubs, the bankers' associations, and every compact interest should be prevailed upon to cooperate with us in this great work.[10]

One type of support resulted in a cooperative venture between Extension and the Norfolk and Western Railroad. It represented an early attempt by Extension to use a technique other than field demonstrations to reach groups of farm families. In the fall of 1915, John R. Hutcheson and representatives of the N&W Railroad put together Extension's first "demonstration train" in Virginia and "the best train of its kind ever operated in the South." In her 10-year history, Agnew recalled this first demonstration train, the "Better Farming Special":

The N&W furnished the train, the Farm Demonstration Agents helped the men on the way. The home demonstration workers, with the cooperation of the State Normal Schools at Farmville, Fredericksburg, Harrisonburg, and Radford, which loaned Home Economics teachers, gave demonstrations in preservation of fruits and vegetables as well as in conservation of wheat, sugar, etc.[11]

The demonstration train traveled for five weeks and introduced Extension's work in many sections where its benefits were unknown. It started from Roanoke early Tuesday morning, October 26, 1915, with two livestock cars and a display platform for the animals. The livestock consisted of one Percheron mare, two Hampshire sheep, one Duroc-Jersey, one Yorkshire and one Berkshire hog, one Guernsey, one Holstein, one Hereford, one

Angus, one Shorthorn, two Jersey cows, and two grade Shorthorn steers. There were also two exhibit cars for farm products and machinery and excellent specimens of practically every farm crop grown in the state of Virginia. Another car displayed products of the women's demonstration work, and three more coaches were used for speaking coaches; a private car accommodated the speakers.

The train was successful immediately. News coverage in the Roanoke Times began two days before the train left, with news on pages 15 and 16--about halfway through the paper. By November 2, the "Better Farming Special" got front-page coverage. An average of 1500 to 2000 persons visited it each day during its three daily scheduled stops. Schools closed if they were nearby so that teachers could take their pupils to see the train. Farmers came from as far away as 20 miles, and specialists from the "Better Farming Special" often went out to nearby farms.

Kinnear mentions in his history of VPI that the arrival of one of these trains "in many communities became a great local event at which bands played, educational speech-making flourished, and huge picnic lunches did not go unnoticed."

WORLD WAR I
And What It Brought

Jesse M. Jones was director of Cooperative Extension throughout World War I. In his Survey, Three Years of Extension Work, which covered the period July 1, 1916, to May 15, 1919, he wrote about Extension's work in agriculture and home living, and among youth. "The scope of the work," Jones said, "is so broad that there are few farm or home problems the Division cannot help solve and the service is free, honest and impartial to all people within the state. By this means, agriculture and rural life generally are being readjusted on a higher plane of profit, dignity and power."[1]

Nearly every project conducted in agriculture and home economics was labeled a demonstration. Jones' organizational chart of the Extension Division at that time showed that demonstration work dovetailed with the teaching and research divisions at the college. Other than administrators and county agents, the only personnel were specialists at the college, in nine subject matter departments, who were directly responsible to the Extension Division Director. Specialists had to be sure that information given county agents or farmers agreed with findings from either their subject matter departments or the most up-to-date experiment station research.

The most important kind of demonstration--and the one that received by far the greatest appropriation--was the Knapp method, the purpose unchanged: To help low- or average-income farm families raise enough food for themselves, feed their animals, and have cash crops that would bring in some spending money. A farmer whose five-acre orchard was not producing enough fruit is an example of one individual who sought Extension help. The county agent had the farmer prune four or five trees and leave the others alone. In the fall, the farmer stated that he picked more marketable fruit from the pruned trees than from all the rest of the orchard. Another example is the help given farmers who found simple infection among their livestock. Agents did not try to outdo veterinarians; they merely showed farmers how to take care of their own stock when they had ordinary ailments. Such treatments were so practical that any farmer, after having been shown how, could perform them himself.

Such farm demonstration projects had to be mutually agreed upon by the Secretary of Agriculture and the state agricultural colleges. The agreement assured that land-grant colleges would use federal appropriations mainly for demonstration work on farms, in farm homes, and with farm youths. A tally of appropriations in Jones' report shows that for 1918-19 Extension used $325,047 to carry out the Knapp method of demonstration work. Most of the remaining $55,330 went into a second kind of demonstration work that was conducted in cooperation with departments external to the Extension Service, such as the Bureau of Biological Survey. The major purpose of such specific work was to increase the state's overall productivity. Specialists were responsible for demonstrations in such areas as cheese making, swine and dairy husbandry, horticulture, agronomy, agricultural engineering, and entomology. Agricultural engineers, for example, drained 3,375 acres of land on 85 farms to demonstrate to farmers that they could increase production that way. Counting the acreage farmers then undertook to drain after they understood the value of the practice, 7,375 acres were drained in three years. The productive value of this land went to $20 per acre per annum, or a total of $147,500 annually. The demonstration was successful, and as a result many more thousands of acres were drained in succeeding years.

Besides demonstration work, Extension cooperated with authorized public organizations whose activities in any way paralleled those of Extension by setting up educational programs and exhibits, and supplying lecturers. Among the organizations were the State Department of Agriculture, State Department of Education, Cooperative Education Association, Corn Growers Association, Dairymen's Association, State Farmers Institute, Farmers Union, State Horticultural Society, and the State Fair Association. The Cooperative Education Association, for example, organized a series of community leagues in Virginia in 1916, and Extension supplied programs for six of their meetings:

November 1916 - What a Community Should Know About Itself
December 1916 - Improvement of Rural Schools
January 1917 - How to Make Poultry More Profitable
February 1917 - Health in the Home and Community
April 1917 - The Home Garden and Yard
May 1917 - Building Better Roads

Only three of these topics dealt with the immediate farm situation.

During 1917, the county agents and district agents paid special attention to the formation of farm-loan associations in the state. This practice continued, and by April 1919 there were 74 organizations through which $4,719,850 had been loaned.

Between 1916 and 1918, emphasis was placed on "movable schools" that focused mainly on horticulture, home economics, dairying, and general agriculture. Movable schools were simply demonstration lessons taught by Extension staff members who moved around with their equipment and know-how to various locations. In the fall of 1916, 12 packing schools were held with an attendance of 365. The packing schools taught farmers how to pack fruits, vegetables, etc., for marketing. In the winter of 1917, 22 home economics schools were held, with an attendance of 899. In March 1917, a special school for judging dairy cattle was conducted in connection with the State Dairymen's Association. Exhibits included cows that were heavy producers, along with their progeny. Discussions of herd management and breeding were held. In 1918, 10 movable schools on general agriculture were held in as many counties with a total attendance of 3,062. Plans were made for conducting a similar series of schools on a much larger scale in 1919, but the outbreak of influenza made if impractical.

Although Extension was able to complete much helpful work between 1916 and 1918, wartime problems made the three-year period the most difficult known for the development of Extension's work up to that time. Because the federal government funded one-third of its expenditures, Extension was obligated to carry out the government's war programs and campaigns. The difficulty was increased because well-trained agents were hard to get and keep. During 1917-18, 20 agents resigned, most of whom enlisted in the military.

Large-scale food production, essential to winning the war, was Extension's chief concern. But, aside from being involved in stepped-up agricultural production, county agents had other responsibilities; for example, they were to talk-down pro-German sentiment voiced inside county districts and help with salesmanship of Thrift Stamps. Jesse Jones said, "Our agents

helped tremendously to 'put over' special campaigns such as Red Cross, Thrift Stamp, Liberty Loan, and Y.M.C.A."

Home demonstration agents during the war were very busy in every county organizing rural women into clubs. Agnew's expectation that this would be done is found in the list of duties of a home demonstration agent in 1916.

1. To enroll intelligently and carry to a successful finish a girls' canning club of 75 or more members.

2. To be followed as soon as practicable by a similar club among women to be known as the "Home Demonstration Club".

   To do this she must know her county, number of districts, schools, churches, tenant farmers, number of eligible girls and women in the county, amount of canned goods brought in, the variety, county officials, and how secured, etc.

3. Plan carefully and secure local leaders to assist in carrying on.

4. Arrange for short courses for girls and women.

5. Keep her mind and heart open to opportunities for serving the county and to arouse both girls and women to their responsibility to the community as well as home!

The goals of the home demonstration clubs included such home improvement projects as screening windows and doors, securing indoor running water, getting better lighting, painting houses, starting winter gardens, and canning and drying food. Additional goals were community improvement projects, which included various health programs that required cooperation with the county health departments and State Board of Health and local doctors and nurses, school cleanup programs, and installation of restrooms or rest areas for women in towns. Clubs also opened canning and drying centers, and two counties started community club meetings. Equipment was available for cooking and serving dinners when they had all-day meetings.

Both farm and home agents were working to improve rural community living, but in 1917 home agents went into urban areas as a special war measure. Agnew said of this: "Many new opportunities for service opened up, and the agents were quick to take advantage of them." They set up demonstration kitchens in Danville, Richmond, Petersburg, Hopewell, Newport News, Portsmouth, Lynchburg, and Roanoke. These kitchens were clearing houses for all matters pertaining to managing a home. Home

agents also got many city people to grow backyard gardens and raise their own chickens. Some agents were asked to do special tasks; for example, one revised menus for the city almshouse while another headed a special clean-up campaign in Petersburg in 1919 with great success. "Everybody in town, white and colored, was interested, and on April 5th Petersburg was the cleanest city in the state."[2]

Besides helping to organize home demonstration clubs and improve community living, home agents played big roles in the war efforts at home. They got girls and women to sew bandages and make clothes for the Red Cross, helped organize Liberty Loan drives, started Thrift Clubs among children and older adults, and even worked for the State Department of Health during the terrible epidemic of influenza in 1918. They were called to do:

> **Nursing in destitute private families, helping in both city and town hospitals, organizing and managing hospitals where nurses could not be secured, opening diet kitchens, and acting as distributors of food, medicine and clothing from one end of the county to the other and taking the place of the doctors who could not be gotten but who had given her special instructions.**[3]

Some agents did not think they should volunteer for this emergency work; it was not their job. Agnew responded:

> **...why was it not? Did not all homes need help? Were they not demonstrating the vision of the leader from the beginning, who said "home demonstrators find their work wherever there is need. The home extends as far as the need of the human family."**[4]

She said of that period, which was roughly from late summer through mid-autumn, 1918:

> **Facing the situation fairly, we knew our home agents would not be able to carry on their program for a while, at least; so...all of our workers <u>who</u> <u>were willing</u> were offered to help Dr. Ennion Williams, State Commissioner of Health. I am proud to say every woman volunteered.**[5]

According to Jones, this involved about 55 county agents. One home agent reported:

> **I worked every day this week nursing pneumonia cases. We had seven cases of pneumonia and they kept us busy night and day. We had two doctors but no trained nurse except Mrs. Rives who left her own family to help in this time of deep distress. We will never be able to thank her for her kindness and skill. My own son**

contracted the disease while helping the others and about Tuesday he was ill. I went from place to place and undressing only to change my clothes for ten days.[6]

Hallie L. Hughes, district agent for Southwestern Virginia in 1918, was in Richmond when the flu broke out. She recalled: "In the high schools they were in the halls and in the rooms. Hospitals were already full. The dead were placed in coffins stacked up in the street." Hughes came down with the disease herself as a result of working with a doctor in Blacksburg when she returned from Richmond. "I nearly burned up with it," she said. "The doctor would come to treat me, but it would be 11 o'clock until he got done with the rounds.[7]

The fearful epidemic eventually began to wane, and at least one agent was anxious to get back to club work. She said:

Now that the "flu" is subsiding, the boys and girls want to know what are we to do with our pigs and chickens, and won't there be a fair somewhere. Those are questions we will have to answer to their satisfaction. We must keep our promises.[8]

Agents had not involved boys' and girls' clubs to any significant extent in the war effort. Girls' sewing clubs had made some clothes for the Red Cross, but agents were too concerned with organizing clubs to accommodate the rapid growth of membership to help youths with other possible war effort projects.

For the first few years of club work, agents visited boys and girls right on the farm to help them with their projects, but as the number of boys and girls in clubs grew, agents had to develop a more efficient pattern of organization.

Typical clubs for boys were corn, peanut, livestock, and pig. Home agents helped girls work on different projects, but they did not have separate clubs for each kind of project. Girls in the same club grew gardens, canned and dried foods, cooked, and sewed.

Agnew pointed out, "Experience has taught that greater results are obtained in club work when all boys and girls in an individual school or community are combined in one club." Agents had already formed a few community clubs. In fact, the first was organized as early as 1913 in Dinwiddie County and was called the Sunnyside Club. But most clubs were much slower to organize. During 1916 and 1917, agents began to organize boys and girls into separate clubs according to communities and schools. The farm and home demonstration agents visited them when they could, each meeting his or her own club. The club work grew so rapidly it became necessary to organize a special department at the state

level with a special agent in charge. Charles G. Burr was put in charge of the state boys' club network and, shortly afterward, Hughes was made state agent for girls' club work. In 1918, boys and girls started to be brought together in agriculture and home economics clubs. That same year, the first state short course for boys was held at VPI in connection with the Farmers Institute. At this time, Extension was giving boys' club work its own appropriation each fiscal year, but lumping girls' club work with the women's home demonstration appropriation.

And so it was between 1916 and 1919. The Extension program was having a few growing pains, but it was striving to fulfill the mission for which it had been created. In less than a half-dozen years after passage of the Smith-Lever Act, Dr. A. W. Drinkard, director of VPI's experiment station, could write that Extension work carried on through county agents "provides a means which otherwise would be quite limited for the station men to learn more about farming problems in the state, thereby keeping the station in touch with the needs of its constituency." Extension was being true to Knapp's insistence, "If a man is in a rut, the first step is to make the rut more liveable."

THE 1920s
Epoch of New Organizations

"Your value," Knapp once told his agents, "lies not in what you can do, but in what you can get the other people to do." By 1920, agents had succeeded in getting many people to do many things to improve farm and home living. Farmers had profited from increased production; home demonstration clubs had organized county advisory boards (1915-16); club work for boys and girls had expanded greatly. More people than Extension could handle individually demanded services; it took a larger force than Extension could possibly keep in the field to answer the calls of the farm men and women of the state. Increased emphasis on working through organizations became necessary.

Farmers needed desperately to organize. Farming in Virginia had been especially profitable during the years of the World War, and from 1917 to 1919 the farmer's dollar had a purchasing power of at least $1.05 in terms of other commodities. However, during 1920, the forces of deflation came into full play throughout the nation, and by the end of 1920 the average American farmer's dollar had a purchasing power of only 69 cents.

Having profited from increased production during the war years, farmers continued their stepped-up production, causing market prices to drop. Industry suffered from overproduction too, but the farmers were hit first, hardest, and longest because they were the least protected and most poorly organized class of

people in the country. John R. Hutcheson, who was named Director of the Agricultural Extension Service in 1919, sometimes wrote at length about this problem. He believed that farmers could raise their selling power only if they organized strong cooperatives.

Extension began to spend considerable time helping farmers organize themselves into distribution and marketing associations. The county farm bureaus were the direct result of these efforts, and close ties were formed between county farm bureaus and Extension. In many states, farm bureaus were organized for the purpose of raising money to support Extension agents.

The Virginia Farm Bureau was organized in 1920 and was instrumental in forming the American Farm Bureau Federation at a meeting in the LaSalle Hotel in Chicago, November 12-14, 1920. At this meeting, each of the 31 states represented seated a voting delegate. The delegate from Virginia was James Hall Quesenberry, a farmer of Louisa County and former county agent. Later, he was appointed Extension district agent.

By 1922, the nationwide agricultural depression had hit Virginia. No argument was needed to prove to anyone living on a Virginia farm that the farmers of the state were confronted with a real crisis. So long as the farm family had been able to remain self-sufficient, bargaining was not a problem. Supply and demand adjusted the process reasonably well. But, in the early 20s, farmers were depending more and more on goods and services for which they had to trade, and each vendor had a voice in fixing the price at which he would exchange his product. In addition, the farm family was paying high county and state taxes for services such as drainage, roads, and schools.

Farmers could not go back to a simple subsistence-type living; farm-family living had become too complex. But a farmer could adjust to the simpler method and perhaps make out. If a modified program was going to work, however, agricultural leaders first needed to organize across the state. Even though for decades farmers had formed societies and clubs, and more lately the farm bureaus, these organizations, as late as the 1920s, still needed to "perfect sufficiently strong business organizations among themselves if farmers hoped to stabilize prices of farm products and regulate production to consumption."[1]

Extension responded by helping organize the Virginia Agricultural Advisory Council. Formed in August, 1922, it was made up of at least 34 different agricultural organizations and institutions; it hoped to improve farm conditions by getting all these groups to cooperate more closely.[2] On this council were representatives of each general and commodity farm organization, representatives of the state agricultural college and Department of Agriculture, committees of the State Bankers Association, the

State Chamber of Commerce, and the railroads, and representatives of the agricultural and daily press.

In 1924, the council put together a long-range plan for Virginia's agriculture. Hutcheson wrote 17 years later that "this plan has been the basis of the Extension program in the state ever since."[3] The council recommended that Virginia farmers follow four practices that seemed to offer "the greatest hope of permanent relief."[4] The first two goals dealt with the production of food, feed, and livestock raised right on the farm. The next two goals, which showed how Extension's interest had expanded in response to farmers' demands, helped farmers join together in buying and selling farm goods to fit agricultural production to consumer demands. The combination of these practices, Hutcheson believed, would help farmers achieve the council's overall objective, which was to raise rural standards of living.

The council did not just state solutions for Virginia's agricultural economy, it also suggested a procedure that helped the farmer. Each county, according to the five-year scheme, should create its own County Agricultural Advisory Council made up of the leading farm men and women and businessmen in the county. County advisory councils could develop county agricultural programs in response to information given out by the state council. Hutcheson said that in counties where Extension work was carried on, county councils were organized and began immediate operation. Control of the corn crop, by far the most important crop grown in Virginia at that time, was a good example of how the advisory council system worked. It brought together experiment station research and demonstration work to help reduce effects of the agricultural depression and recommended:

> **That the thousands of acres annually planted to corn in the state of Virginia which produce less than 20 bushels per acre be discontinued as rapidly as possible as corn land and be planted to legumes and other soil-improving crops.**
>
> **That the Boys' Corn Club work, which has already done so much to improve corn production in Virginia, be encouraged in every way possible and continued on an even larger scale than in the past.**
>
> **That more attention be paid to adapted varieties of corn for the various sections of the state. For the high altitudes we recommended as a white field corn, Government No. 182 and Silver King; as a yellow field corn, Leaming; as a silage corn, Cocke's Prolific, Eureka, and Government No. 192, Leaming and Silver King. For the remainder of the state the following varieties are advised: for white field corn, Boone**

County White, Virginia White Dent, and Johnson County White; for yellow field corn, Reid's yellow Dent, Leaming Virginia Ensilage; for hogging down, one of the white or yellow varieties already named; and for poor land, Hickory King.

That field selection for seed be made before the first killing frost from healthy, upright, disease-free stalks, and that after curing and storing, the ears be gone over and tested for diseases and germination. This is the best know method of control of root rot which is becoming a very serious corn disease in the state.[5]

Negro Extension workers developed a similar organization for the farmers with whom they worked. It was called the Negro State Agricultural Advisory Board and was organized in 1926. J. B. Pierce, Lizzie Jenkins, and two other district agents, J. L. Charity and T. B. Patterson, organized the state board and established county boards in every county where a Negro farm or home agent worked. Membership was made up of men, women, and youths. These advisory boards were very influential. The big project that the state and county boards undertook was community improvement, with about 2,000 families taking part every year. The agents began to rely heavily on volunteer leadership, a practice which made it possible for work among the Negroes to include such basic programs as home management, poultry raising, home marketing, and home beautification.

Although the advisory groups helped the farmer and his family, nationwide deflation would not let up. USDA's Miscellaneous Publication No. 44, The Agricultural Outlook for 1929, made cautious projections about the national economy and stressed that farmers should improve the quality and distribution of crops and livestock, but not increase production, action which would deflate prices even more in markets already full. And like Virginia's five-year plan, the report encouraged home-grown food and feed.

Farmers had needed to organize for economic reasons, and Extension was partly successful in helping them. It became apparent that homemakers throughout Virginia needed to organize also. Their numbers were increasing too rapidly for agents to deal with them individually. So, in 1923, agents, through the leadership of M. M. Davis, helped rural women in Virginia organize themselves into a state association. Davis, a native of Tennessee, had come to Virginia to serve as Assistant Emergency State Home Demonstration Agent in October 1918. When Agnew resigned in 1919, Davis assumed her position and held it until December 31, 1928. According to the history of Virginia's Homemakers clubs, "Mrs. M. M. Davis...called a meeting of her staff, together with the women attending the Farmer's Institute,

to consider the advisability of a state organization for rural women."[6]

Davis brought a speaker to the meeting, Ruby Green Smith of New York State, who apparently had been invited to the Farmers Institute or had come with her husband; at any rate, she was a guest that year. Smith told the group about the work of the New York Home Bureau. As a result, the women organized the Virginia Homemakers Association, a name changed in 1934 to the Virginia Federation of Home Demonstration Clubs, and again in 1972 to Virginia Extension Homemakers Council. The group elected Mrs. C. R. Hall, Norfolk County, the first president, and in a year's time wrote and adopted a constitution and bylaws. (The Extension Homemakers Council has a published history that is brought up to date every 10 years. The latest issue was published in 1980.)

In March 1921, Extension appointed the first Negro home agent, Rachel R. Carter, and black home demonstration work began to develop rapidly after that.

> **Carter started the first home demonstration program for Negroes in Virginia in Amherst, her home county. She not only helped farm women with their canning, poultry raising, and general home improvement programs, but also helped farmers with their tobacco and livestock production problems. In addition to her demonstration work through the years, Carter cooperated with all of the health, public welfare, and general improvement programs operating in the county.**[7]

It was during the decade of the 20s that the boys' and girls' clubs gained national identity as 4-H clubs. The name 4-H has an interesting history. As early as 1902, the three Hs--Head, Heart, Hand--phrase was widely used in speech-making. Franklin Reck, in his book The 4-H Story, quotes a prominent educator of that time who believed student character should be built "not by means of the three Rs but rather by means of the three Hs--Head, Heart, and Hand--and make him fit for self-government, self-control, self-help; a living, thinking being." O. H. Benson, a member of the USDA staff who worked with boys' corn and girls' tomato and canning clubs, picked up the same phrase. On March 23, 1911, he made a talk on "Rural Leadership" before the South Carolina Improvement Association, and said that education for leadership must be along the lines of the four Hs rather than three Rs--suggesting that the four Hs stand for "Head, Heart, Hands, and Hustle."

And since about this time girls' canning clubs in the South had canned goods to sell, the question of sticking a uniform label on the cans came up. With the slight change of "hustle" to "health", a change suggested by O. B. Martin, USDA Director of Boys and Girls Clubs, each "H" was placed on the petal of a four-

leaf clover; this emblem, adopted in 1911, was used not only for the labels on goods but also as a badge for club members. However, several years passed before the boy's and girls' community clubs became known nationally as 4-H clubs.

Here and there in the early 20s, people were beginning to call the clubs 4-H clubs. Four-H had appeared on canning labels since 1913. Members' pins were a constant reminder of the four Hs. But for the most part people spoke of cotton clubs, corn clubs, canning clubs, or boys' and girls' clubs. With growing usage, however, and the appearance of "4-H Club" in federal publications, the name finally stuck. "By 1929, club work had acquired the name by which it would thereafter be known throughout the world."[8]

The 4-H staff developed an additional dimension of the organization in 1922. It created the Virginia Chapter of 4-H All Stars. P. H. DeHart, in his history of the Virginia All Stars, explains why and how the group developed. When emphasis shifted after the Smith-Lever Act in 1914 from project work to learning about local, state, and national 4-H Club work, 4-H boys and girls had a "wider range of opportunity for the development of the individual." Project work certainly was not overlooked, but as 4-H members were encouraged to talk about their projects "at meetings and use the livestock, poultry, canning, clothing, garden, and other crop demonstrations as exhibits at county and state fairs, emphasis shifted from project results to development of the person carrying out the project results to development of the person carrying out the project." Starting a 4-H All Star chapter in Virginia was the next logical step. According to DeHart:

> **The increased attention being given to the development of the individual as part of the overall 4-H program created the need for some method of recognizing the individual club member for outstanding performance in activities in addition to the project work. The increased popularity of the State Short Course where 4-H club members, adult leaders, county Extension staff and the state 4-H staff could easily recognize a difference in the level of performance of club members provided the ideal climate for another step forward in the 4-H club program.**[9]

The short course that DeHart mentions had been developed by 4-H Extension leaders to help students develop leadership and service skills.

Extension leaders invited three 4-H All Stars from West Virginia to the VPI short course in August 1922 to initiate nine 4-H charter members and three leaders into the Virginia chapter. They were:

Russell Bailey, Buckingham County
Alice Baskerville, Prince George County
Richard Ellis, III, Buckingham County
Pattie Hubbard, Dinwiddie County
Alfred Hufford, Wythe County
Hallie Hughes, State Girls Club Agent
John R. Hutcheson, State Extension Director
Peggy Keith, Fauquier County
Andrew Miller, Montgomery County
C. A. Montgomery, Assistant State Boys Club Agent
Grace Reid, Campbell County
Howard Swank, Rockingham County

As 4-H work among Negro youth expanded in the 20s, agents began to hold more rallies, achievement days, and short courses. In 1921, Lizzie Jenkins helped organize a tri-county 4-H club rally in Powhatan, which was attended by 71 members. In 1923, she helped develop the first 4-H short course. It was held at Hampton Institute; 119 boys and 62 girls attended. The short course immediately became a popular experience. The eighth annual short course, and the last to be held at Hampton, was typical. Courses dealt with different phases of health (the only subject offered to the boys), clothing, room care, and canning. In later years, Ross Newsome initiated state awards for Negro 4-H youth. Both boys and girls received $25 and $50 U.S. Savings Bonds and pen-and-pencil sets or wrist watches from businesses like Ford Motor Company, Sears Roebuck, and Allied Chemical Corporation.[10]

The 4-H center idea grew out of the earlier 4-H camps. The first such camp was the Jamestown 4-H Camp, founded in 1928 on the James River, one mile north of Jamestown. Previously, 4-H camping had been held for two years on St. George's farm about a mile further up the river; boys and girls camped there in tents and cooked under some of the many buildings on the farm. So the Jamestown camp was quite an advance. It was built on a 5 1/2-acres obtained from the Chesapeake and Ohio Railway through the efforts of C. J. Jehne, agricultural agent for C&O. In the spring of 1928, agents in that district supervised the construction of eight cottages and a dining hall. A total of 250 club members, agents and leaders attended the only encampment held that year. Times were allotted in the daily program for recreation (mainly swimming and outdoor games) and vespers, and instruction in such things as how to conduct club meetings, nature study, safety, gardening, forestry, pottery, music, food conservation, and table service.

Toward the end of the 20s, Extension workers formed another important organization--Epsilon Sigma Phi, a national honorary fraternity. It began in Bozeman, Montana, on January 10, 1927, in the home of M. L. Wilson, and was organized to promote

fellowship and better working conditions for employees. Promotion of the idea caught on quickly, and states began to form chapters. On July 21, 1927, representatives of 10 chapters attended the first grand council meeting in Reno, Nevada. By the end of the first year, 26 chapters had been organized; and Virginia was one of them.

Virginia's Alpha Gamma Chapter was organized in Blacksburg on January 10, 1928. Its charter members were:

Ella G. Agnew
Rose B. Burke
James G. Bruce
William L. Browning
William H. Bryne
Otho H. Cockes
Shirley L. Cole
Mary M. Davis
Sally G. Davis
Abraham L. Dean
Harvey B. Derr
Martha D. Dinwiddie
Frederick A. Motz
James E. Oliver
Herbert E. Ozlin
William C. Shackleford
Sylvia Slocum
Gordon A. Elcan
F. Southall Farrar
Lillian Gilbert
Bessie M. Hodsden
Hallie L. Hughes
John R. Hutcheson
Harvey S. Lippincott
William O. Martin
Horace E. McSwain
Bessie D. Miller
Cephas A. Montgomery
William P. Moore
Joseph C. Stiles
Lucius M. Walker
Benjamin A. Warringer
William W. Wilkins

Hutcheson--"Dr. Jack," as he was often called in later years--was Alpha Gamma's Chief; Bessie M. Hodsden, assistant poultry husbandman, its secretary/treasurer; and Martha Dinwiddie, special home demonstration agent, its annalist.

Both the national fraternity and its Alpha Gamma Chapter have created a number of special awards to honor its outstanding members. Epsilon Sigma Phi created a special honorary group, the House of Pioneers. Persons who worked with Extension before the Smith-Lever Act of 1914 made up the membership of this special group. F. S. Farrar was its dean. Other House of Pioneer members from Virginia were Ella Agnew, G. C. Breed, O. H. Cockes, Hallie Hughes, W. R. Linthicum, W. O. Margin, W. P.Moore, W. C. Shackleford, Sylvia Slocum, and B. A. Warriner.

Epsilon Sigma Phi also created the Distinguished Service Ruby Award as the highest honor a member could receive. In 1927, A. C. True of the Federal Extension Service was the first member to earn this award. Only one person is given this award each year, and in 1970, W. E. Skelton received it. In 1979, Ann E. Thompson was the recipient.

At its 1934 meeting the grand council of Epsilon Sigma Phi began awarding certificates of recognition to outstanding

Extension workers within each state. Persons became eligible through a rotation plan based on the chapter's membership size. Several Virginians have received this award.

John R. Hutcheson, 1937
Cephas A. Montgomery, 1947
Maude E. Wallace, 1951
Joseph E. Delp, 1955
George C. Herring, 1963
Leaner B. Dietrick, 1963
W. E. Skelton, 1967
Patrick H. DeHart, 1971
Thelma T. Hewlett, 1972
Ross W. Newsome, 1973
Curtis C. Mast, 1975
Margaret G. Skelton, 1976
Ann W. Frame, 1977

Virginia's 1978 awards went to J. Andrew Reynolds, Milton C. Harding, Sr., and Ann E. Thompson. In 1979, the awards went to Nancy H. Ascue, George A. Allen, Jr., and Willette T. Merritt.

Virginia's Alpha Gamma chapter has also established awards of its own. One award is given to workers with 25 years of service. Another is the chapter award established in 1964 for outstanding teamwork. In 1973, Alpha Gamma started recognizing members for outstanding individual accomplishments. Up to 10 persons annually may receive this award regardless of their years of service. They must show either unusual abilities for completing a job or demonstrate outstanding initiative, motivation, or determination. Alpha Gamma has also established a loan fund that supplements the national scholarship loan fund and is set up so that a member who wishes to pursue an advanced degree may borrow up to $1,000.

Black Extension workers became eligible for these awards on both the national and state levels in 1964. In 1972, Thelma Tonkins Hewlett became the first black in Virginia to receive Epsilon Sigma Phi's certificate of recognition.

In addition to the awards and loan fund, the chapter sends welcoming letters to new Extension workers, entertains them during new workers' conferences, keeps in touch with retirees by inviting them to annual conferences and awards banquets, and encourages good students to pursue careers in Extension.

Three other Extension professional associations were formed in the 20s: the Virginia County Agricultural Agents Association, for white male agents; the Virginia Home Demonstration Agents Association, for black male and female agents; and the Virginia Farm and Home Agents Association, for black male and female agents. These associations formed the basis for the Virginia Extension Service Association (VESA) created in 1967 "for the purpose of advancing the professional development of Extension staff."

The first Institute of Rural Affairs, sponsored by the Extension Division, was held on the VPI campus in 1929. It

received full endorsement by the Farmers Institute and was the beginning of a conference-workshop-tour speakers event that lasted 30 years. The Institute, a four- or five-day affair, provided an opportunity for the people of Virginia to come to a land-grant campus, tour its facilities, receive information on a variety of subject matter areas, and be briefed on VPI's latest and on-going research, as well as prospects for football and other competitive sports.

The Institute of Rural Affairs provided VPI with knowledge of the needs and interests of citizens and an opportunity to be attuned to the pulse of organizations dedicated to the educational growth of the people and to the advancement of VPI as a leader in educational affairs. The Southern Planter and Agricultural Conference Board, established in 1928, and the Virginia Federation of Home Demonstration Clubs were two of the co-sponsors.

In late 1927 and early 1928, a big program of legislation, outside of direct farm relief, was moved through Congress, with considerable success. Some of these legislative successes included increased funds for agricultural Extension, reforestation, research, corn borer and pink boll weevil extermination, wool standards enforcement, experiments in new uses for cotton, and continued rural highway building. New legislation included establishing standard sizes for baskets and hampers, extending livestock quarantine laws to include live poultry, developing inland waterways, and ordering an investigation of the electric power trust. Each piece of legislation affected Extension in some way.

THE 1930s
And the Great Depression

Virginia agriculture, as everywhere in the United States, was almost ruined by the Great Depression. Extension agents had to cut back on farm and home demonstrations, but they carried on other types of Extension work in every Virginia county. The county agent system was very valuable as a communications network and was geared for state emergency work because, through it, grassroots farm families could be reached. During emergencies, in fact, the county agent system grew even stronger. Hutcheson said in 1931:

> **Extension work in agriculture and home economics of some kind was carried on in every county of the state. Eighty-three counties employed white farm demonstration agents, 52 counties employed white home demonstration agents, 20 counties employed Negro farm demonstration**

agents, and 6 counties employed Negro home demonstration agents. This is the largest number of agents ever employed in Extension work in Virginia, and as a consequence more worthwhile work was accomplished than in any previous year.[1]

The Great Depression, which began in the United States in October 1929, created an emergency situation for Extension. Most of the bank failures took place in agricultural areas. Farm prices had fallen 40% in 1920-21 and remained low throughout the decade. Some farmers could not continue to reduce their mortgages, an unfortunate plight that meant they had to rent their land or move. The United States, because the American economy was suffering from part of a worldwide business slump, raised tariffs on imports to try to stimulate its slumping economy and give it a favorable balance in international trade. But other countries did the same thing, so the high protective tariffs imposed by these countries and the United States only made the Depression worse. Countries were unwilling to trade with each other. Consequently, in the United States, surpluses built up. Prices went way down, and wages went even lower. As a result, prices of farm goods fell about 50% between 1929 and 1933. The economy would have worsened even more, but Roosevelt became President in March, 1933, and initiated several relief programs. The Agricultural Adjustment Act (AAA) was one of them, and the Secretary of Agriculture designated the Extension Service to administer the Act since the people in Extension were cooperative employees, not only of state and county governments but of the federal government as well. W. H. Daughtrey, Extension agronomy specialist, was assigned to administer the program in Virginia. Administering the Act meant adjusting farmers' crops; in other words, giving support payments to farmers for taking specified crops out of production.

The first such program was the cotton "plough-up", designed to bring the supply of cotton in line with effective market demand. Convincing farmers to plough-up cotton was quite a hassle. "I recall trying to explain the difficult program to a group of farmers at a country store in Brunswick County," Daughtrey said. "One particular farmer asserted that he didn't intend to plough-up a single plant. He said what God had given him no man could destroy. I didn't know what to say to that; but anyway, farmers took part."[2]

Tobacco was the second crop to be controlled in Virginia. The markets were suspended for a while, and, during this time, Extension workers made every effort to explain the Act to tobacco farmers. The plan was to get farmers to indicate their intention to participate in the program during the following year in exchange for support prices on tobacco for the rest of the marketing season.

"Like cotton, trying to control the production of tobacco caused turmoil among farmers," Daughtrey said, "but Extension survived it some way." He recalled going to a meeting in Brunswick County after having been in Lunenburg County the day before. On the way to Lawrenceville, the county seat of Brunswick, he found that the bridge had been washed out and he had to detour. "I thought I was going in the right direction," he said, "but wasn't sure. So I stopped at a service station to ask a boy about 14 years old where I was. I asked him if I was headed toward Lawrenceville. Instead of answering my question, he asked, 'Are you supposed to attend that meeting?' Yes, I replied, if we're both talking about the same one. 'Well I got guns and shells I'll sell you.' Then he told me I was on the right way."[3]

Such turmoil resulted from misunderstanding over individual acreage allotments, which were assigned to farmers on the basis of their crop production over the last three to five years. If an outstanding circumstance affected his production immediately prior to the year in which the allotment was established, AAA would make adjustments. But, once AAA established a farmer's allotment, the farmer had to stay within it if he wanted to receive price supports at the market place.

Another big AAA program for farmers was the corn-hog program, which started shortly after the cotton and tobacco programs. Over-production of corn and hogs, along with a loss of demand because of the overall economic situation, resulted in a collapse of the market for these conditions. If a sale could be made, it would be at a price of 10¢ per bushel for corn and 3¢ to 5¢ per pound for finished hogs. Drastic action was needed. The AAA program provided the action by offering cash payments to the farmer to reduce production of the commodities. Since corn was already planted, it was necessary to plow up some corn if the acreage on the farm exceeded the allotment. The contract for hogs provided for a payment to the farmer if he would reduce the number of hogs produced to a level below production for past years. On most farms, the reduction could be made by reducing the number of sows through marketing. However, the farmer could not control the number of pigs a sow would farrow, and on a few farms the pigs farrowed exceeded the number allotted for the farm. In order to comply with the contract and receive payment, the excess pigs were destroyed. This action received a lot of opposition from non-farm families across the country who criticized farmers for killing baby pigs. Public sentiment, in fact, was a big reason why AAA began giving baby pigs to non-farm families through one of the many relief programs in Virginia and the rest of the United States.

The Agricultural Adjustment Administration helped restore better conditions to farm life. Writing in 1936, Hutcheson stated that the federal administration, combined with adverse

weather conditions, restored parity prices for farmers for a brief time:

> **...100 units of farm products are again exchanging for 100 units of the goods and services of other groups, and we not only have agricultural progress but industrial progress. Just how long this progress will continue will depend on how long we maintain the proper balance between agriculture, industry, and labor.**[4]

The balance, however, could not be maintained. It was too unstable, depending as it did on artificial government controls. Also, two disastrous droughts in 1934 and 1936 put an estimated one million farmers throughout the United States on relief.

In May 1933, the same week that President Roosevelt signed the Agricultural Adjustment Act, the two houses of Congress compromised on the Muscle Shoals Bill. This culminated a 15-year Farm Bureau-led fight to determine use of the government's two nitrate plants and Wilson Dam at Muscle Shoals, Alabama. These two War Department projects had been left unfinished at the time of WWI, but with passage of the Muscle Shoals Bill they were transferred from the War Department to the newly created Tennessee Valley Authority (TVA). Extension cooperated with the TVA to help build up that part of Virginia included in the Tennessee River Watershed (the Clinch, Holston, and Powell Rivers in Virginia, which are headwaters of the Tennessee).

The Extension-TVA agricultural program was initiated when the TVA called a meeting of leading agriculturalists from each state in the watershed. T. B. Hutcheson (brother of John R. Hutcheson), head of the Agronomy Department of VPI, represented Virginia. As a result of this meeting, committees from counties and local communities selected, with the approval of TVA, 40 or more test-demonstration farms and one or more special areas (for community development projects) in each TVA watershed county. Demonstration farms were selected in 50 other Virginia counties as well. Once farms were selected, Extension inventoried each farm and included such things as crop yield, livestock, and equipment information. It also prepared a detailed farm map and made a soil survey and soil tests. Then the Extension agent, specialists, and owner of the farm established a five-year plan for that farm. The manager of the farm had to agree to develop practical ways of building up his complete farm operation, including restoring soil fertility and improving his standard of living.

William W. Lewis, formerly of the Agronomy Department at Virginia Tech, worked in the nine TVA counties in southwestern Virginia to help farmers fulfill their agreements. At the beginning of the program, very little fertilizer or lime was being used on the poor soil. Considerable erosion was taking

place, and crop and pasture yields were low; it was impossible to raise good beef cattle. Tests indicated that soil fertility was low and acidity high, so the use of fertilizer and lime was emphasized. The TVA furnished large quantities of phosphatic fertilizers and developed extensive lime programs. At one time, B. Connelly, Extension agent in Russell County, reported 28 carloads of superphosphate were on rail sidings to be used by farmers in that county.

Along with the lime programs, crop rotations were shortened, varieties improved, and acreage of legumes and corn silage increased. Higher yields meant that a farmer needed less crop acreage and that the steep slopes could be utilized for pasture. Besides improving beef cattle herds, higher soil fertility created other advantages for the farmer, such as increased dairying and a change from mainly grass-fed cattle to cow-and-calf herds. This change meant that feed cattle could be produced in the watershed counties and feeder calves sold to other areas.

As a result of the work of both the TVA and Extension, the Southwest Virginia Agricultural Association was organized in 1936. It was an organization of test-demonstration farmers, with Walter Stuart, Russell County, as its first president. This association, still active, has helped initiate many beneficial programs for the area; for example, it has made high analysis fertilizers available to farmers and has also been very influential in getting a plant breeding program started at VPI in the Agronomy Department.

It is impossible to evaluate the giant TVA watershed demonstration project, but agronomists do know that in many areas where broom sedge once flourished, lush pasture grass now grows. Where crop yields were once low, they are now high. The standard of living for many farmers increased. Undoubtedly, Extension-TVA, supported by research and practical demonstrations, has contributed greatly to the much-improved farming that exists today in Virginia, particularly in the southwestern part of the state. As of July, 1942, 554 farm-unit demonstrations were active in the nine TVA counties in Virginia, 771 in 50 other counties in the state, and 1409 area demonstrations in 24 communities in the TVA counties. These figures represent the peak of the total programs.

In 1936, the Soil Conservation and Domestic Allotment Act (SCDAA), a land conservation policy designed to help farmers with payments and grants for soil and water conservation practices, was passed. Demonstrations were soon started to show farmers how to combat soil erosion. The first such demonstration in Virginia was conducted on the Bannister River watershed near Chatham. The Soil Conservation Service (SCS), a federal agency established in 1935, administered these demonstrations. Soil and water conservation districts were an outgrowth of this effort.

Extension employed a conservation specialist and an assistant to help landowners organize conservation districts, administer them, and carry out the technical programs. The salaries, of these two individuals were paid by Extension, the Soil Conservation Service, USDA, and the state Soil and Water Conservation Commission, which was created to help conservation districts carry out local programs.

In the early days of the conservation program, farmers thought of erosion as a natural process. Extension's job was to show them different methods of conserving soil and water, and to impress upon them that erosion had to be minimized if they were going to provide food and fiber for a rapidly growing national population. For example, researchers at Virginia Tech discovered that under poor management as much as 94 tons of soil might erode from an acre of land within a year.

In 1936, Extension workers were also cooperating fully with the Rural Electrification Administration (REA) to bring electricity to rural homes. Only 16% of all rural homes throughout the United States had electricity by that year. This situation plus America's spread-out rural countryside and few roads made it impossible for most American farmers to keep up with the agricultural production of farmers in small countries like Holland and Germany, where well over 90% of all rural homes had electricity.

Hutcheson stated that, in addition to cooperating with federal programs, Extension agents and specialists kept at their long-standing farm demonstration work. They helped farmers with crop production and conservation as they always had, and they helped farmers secure loans from the federal government, as well as from local sources, to finance the planting of crops.[5] By helping farmers produce more, agents were not contradicting the AAA program of eliminating surplus food from the market; they were just dealing with different crops. Whereas the AAA dealt with a farmer's cash crop, demonstration work helped farmers with their home food and feed crops.

Extension agricultural engineers in the 30s helped farm families with problems other than crop production. In the early days, visits to farmers sometimes lasted from one to three days at a time in each county. In later years, however, problems became more complicated, and not more than one day could be spent in a given county. Sometimes, two or three counties were visited in one day.

Sometimes, the engineers dealt with structural problems on dairy farms. Since each city in Virginia had different health regulations, dairy barn structures in nearby areas were designed and built by local sanitarians or milk inspectors according to

what was required. It was hard to get uniform plans with that kind of situation, so one of the objectives was to standardize dairy barn plans for the entire state. For example, the Washington, D.C., market had more stringent requirements for Virginia dairymen than other outlets. It required more air space in the barn and stipulated that every cow milked must have a stall, a regulation which meant that a farmer had to bring all his cows into the barn at one time and milk them. Some markets within the state, however, allowed farmers to have fewer stalls and milk cows in relays. For example, if a dairyman had 30 cows and wanted to milk them in one hour, he would have 10 stalls and would milk in three relays.

Another dairy problem centered around the Richmond-Petersburg area. Richmond required that each cow have a stall with a window in it and a ventilator underneath the window; in the wintertime, the ventilator was covered with burlap to regulate air coming in. Richmond was the only market that required this type of ventilation system. So, if somebody sold milk in the Petersburg market and wanted to switch to Richmond to get a better price, he couldn't do it because of the type of window required by sanitation officials in Richmond. Extension helped straighten out that problem and continued to assist with standardization plans for all markets.

Another interesting project with which Extension engineers worked in the late 30s was assisting farm folks with water systems fed by gravity from a spring or by a hydraulic ram. G. D. Kite, one of the engineers, often traveled to Patrick County since the agent there wanted to improve conditions for his people. The agent once pointed out to Kite, as they rode up a particular road, a home where the farmer had run a pipeline from his spring to his backyard. The county agent asked him why he hadn't run the pipeline into the house--an easy thing to do. The farmer replied, "That was better than I had it before and better'n my family ever had it; so it's good enough for me."

Home demonstration agents also played an important part in helping people throughout Virginia during the Depression.

> **Following the crash in 1929, the home demonstration staff was again faced with an emergency. Almost overnight, the emphasis of the program was shifted to [subsistence] production. The home garden, canning, and storage of food took first place, with the remodeling of clothing second. The relief agencies called for help in directing the management of subsistence gardens.**[6]

Helen Alverson, like other home agents throughout Virginia, was involved in a number of projects to help destitute farm people. When interviewed, she recalled:

During the early 30s, when I worked in Prince Edward County, I helped farm people open a Saturday morning market in Farmville so that these country people could sell their produce and canned goods. The market served the county families well during the beginning of the Great Depression and lasted about four years. It finally closed because Extension could not get anyone to operate the market. Conditions were so poor everywhere that no one could afford to use time that way.

Shortly, I left Prince Edward and started working in Halifax County. It seemed that as I rode into South Boston all the banks were closing. Something needed to be done for the country people there because many could not afford to bring their produce into town to sell. It was quite a problem. We decided to open canneries. A farm wife could bring her products in, get them canned, and take them home. We also opened a sewing room for country people who wanted to learn to remodel clothing or sew new clothes if they could afford to buy material. Opening these canneries and the sewing room were two of the most important things that Extension did to help out the Halifax County people.[7]

Also in Halifax, Extension gave free seeds and fertilizer to country people who wanted to plant gardens. The practice was for some farmer to volunteer a truck for the home and county agents to use. The truck was then parked at designated places and the seeds and fertilizer given to area farmers.

Home Demonstration Club members also helped out greatly during the Depression. In Campbell County, where there was no welfare nurse or social worker, county officials set up a special organization through which the home demonstration agent, as well as the county Red Cross unit and other relief groups, could work. The agent's role was many-sided. She was an active member of the county Red Cross and other relief committees and helped demonstration clubs in her county make needed contributions. Besides sponsoring garden work, teaching farm women how to can and dry food, and showing them how to cut, fit, and make clothing, home agents encouraged each club to take a special relief project. One club took as its project "Keep Three Families Going for the Winter Without County and Red Cross Aid", and, as a result, kept eight families going. In Buchanan County, practically all the relief work was done through the Home Demonstration Clubs. They had what was known as the "Neighbor Project", and individual club women assisted needy families to help them become self-sustaining. In Fairfax County, the home demonstration agent directed hot lunch programs in 18 of the 24

schools. She also directed the sewing program that demonstration and 4-H clubs conducted for the welfare department.

Four-H Club work was active throughout the depression years, also. Hutcheson's annual report for 1932 stated, "Four-H work...progresses along all lines... Increased interest was manifested in the work by club members and their parents." But Hutcheson went on to qualify his optimistic statement:

> **There was necessarily some curtailment in the work, due to lack of adequate financial aid from appropriations. Another handicap was that agents were called on to give much of their time to emergency and relief work just when they were most needed in securing their club enrollment, getting project work started, and strengthening their local and county organizations.**[8]

Nevertheless, three-fourths of Virginia's counties had 4-H Clubs in them; if a county had an agent, it also had 4-H clubs. Altogether, 75 counties had 985 clubs, whose members worked on projects in agriculture and home economics.

By 1939, as the Depression lessened, 4-H work increased. Extension agents had already organized 1,519 clubs, and they could be found in nearly every Virginia county. Clubs sponsored judging and demonstration teams and county achievement-day programs, and took part in short courses, camps, and fairs; a few boys and girls took out-of-state trips to such places as the National 4-H Club Camp in Washington, D.C., Camp Vail in Massachusetts, the National 4-H Club Congress, and the International Livestock Exhibition in Chicago. The trips were awards for outstanding achievement in project work and for showing existing or potential leadership abilities in club-, county- or state-level work. Also, by the late 30s, agents in every county had begun to work with older youths and conduct meetings to train local leaders.

WORLD WAR II
And Its Aftermath

During the first half of the 40s, Extension was active in several World War II programs, especially those developed to increase agricultural production. During the last few years of the decade, it was involved in postwar adjustment programs.

From 1942 to 1945, while Allied forces fought the Axis powers, American civilians on the home front produced tremendous amounts of food and goods for the war. In fact, many historians believe that large-scale war production was the major reason the

Allies defeated the Axis armies. While a large number of Americans, working in mines, factories, and corporations turned out war materials, farmers produced food and fiber. The effort was not unlike the farmer's role in World War I. Of that time, Farrar said, "During the strenuous period of the great conflict, the American farmer practically fed the world."[1] Certainly in both wars "the men with the hoes" raised the food, and Extension played important roles in helping them to do it.

When the United States entered World War II in late 1941, Virginia farmers began to work toward meeting production quotas set by the Department of Agriculture as part of the war effort. The USDA wanted Virginia farmers to increase their production of milk by 3%, eggs by 7%, pigs by 15%, and certain crops that made oils and fats by as large a percentage as possible. Still hurting from the Depression of the 30s and early 40s, farmers were guaranteed 85% parity through December 1942 by being able to get loans to buy certain items. The federal government also used other financial means to offset the sudden higher costs farmers faced in producing more food. Hutcheson stated at that time: "Virginia farmers, as well as those nationwide, must make certain adjustments in production if they are to make their full contribution to national defense."[2]

Because farm labor was scarce, trying to meet production quotas was not easy. Rural men eligible for the armed forces either enlisted or were drafted; others turned to war industries for higher wages. It was a nationwide problem. In April 1943, Congress passed Public Law 45, known as the Farm Labor Bill. Its enactment assigned certain responsibilities for supplying farm labor to the Agricultural Extension Service. Consequently, during harvest seasons in Virginia, Extension gave almost full time to the program in several counties.

Virginia Extension workers helped supply the state's farmers with many kinds of laborers: Bahamians, migratory workers, Boy Scouts, British and American sailors and soldiers, men and women from urban centers, local people, vacationers, mountaineers, conscientious objectors, convicts, and school youths. In a few sections of the state, through an Extension-administered program, labor was provided by prisoners of war.

Another way Extension helped farmers recruit laborers was through Virginia's network of county agricultural boards, formed as a result of the recommendation of the Virginia Agricultural Advisory Council started by Extension in 1922. A county board was made up of representatives of farm and home agencies, farm organization leaders, and one man and woman from each community in that county. These men and women in turn worked with neighborhood volunteer leaders--18,000 took part in 1943. Through the numerous neighborhood leaders, a county agricultural board was able to get information to farmers about how to recruit

laborers. Direct communication was through "the neighborhood leaders digest".

Extension's efforts to help recruit laborers were successful. In 1943, for example, nearly 9,000 farmers requested over 42,000 laborers during the harvest, and well over 55,000 placements were made. These were crucial to meeting production quotas set by the Department of Agriculture.

State and county defense boards (often called war boards) were established to explain production quotas and help farmers attain them. Extension cooperated fully with the boards and the farmers. To assure that county boards would have the best information, Hutcheson assigned Extension specialists at VPI to determine methods farmers should use to reach goals set by the Secretary of Agriculture, and, at the same time, not go into debt. He feared the Virginia farmer would put out too much capital in order to produce more food, that he would prosper until the war ended, and then find himself deeply in debt in a post-war deflationary economy just like the one after World War I.

Information supplied by the specialists to defense boards would help prevent this problem. One example of Extension's help can be seen in the following recommendations made to increase chicken and egg production:

1. Encourage better feeding and management of existing flocks.

2. Provide suitable houses for old flocks. Encourage new houses only where the operator would expand under normal conditions.

3. Carefully consider the advisability of producing hatching eggs, particularly of the heavier varieties for broilers.

4. Consider carefully the advisability of growing more feed grains for chickens.

5. Encourage a larger percentage of the farmers to keep chickens and all farmers to produce the eggs and chicken meat for home consumption.

6. Provide temporary houses out of building not being used at present or that can be used for other purposes when no longer needed for laying houses.[3]

Both specialists and county agents worked with the war boards. Agents were secretaries of the boards, and since they were the only members whose full-time jobs were in the county

office, they had to handle much work of a rationing and regulatory nature. The problem cleared up, however, when the rationing and regulating jobs were given to the Agricultural Adjustment Administration to handle. (The AAA, discontinued in 1936, became an active federal agency again in 1938 and exists today as the Agricultural Conservation and Stabilization Service [ACSS].)

Home demonstration work, like farm work, was an essential war program and made its contribution on the home front. The work load for home demonstration agents was enormous. According to Extension's Annual Report for 1943, the agents:

> **...helped tremendously in the important food production and conservation program; in conserving clothing; in promoting better health; in helping rural women to meet their managerial problems and to keep their home[s] as attractive and comfortable as possible even under war conditions; in helping rural women to understand the war and all that it means to them and their families; in promoting the war bond and stamp sales; in assisting in salvage campaigns; in fighting inflation and in many other ways.**

Shortly after the outbreak of the war, supervisors (both white and Negro) of all public agencies employing home economists met in Lynchburg with a representative of the Office of Civil Defense (OCD) to discuss problems created by the war, determine the most vital services home economists might render, and develop plans for pooling resources. Following this meeting, home economists in each county and city were organized with a chairman through whom the OCD, the Red Cross, and other organizations might present requests for educational services.

Red Cross chapters were assisted by both the home demonstration agents and the Home Demonstration Clubs. In cooperation with the local health departments and Red Cross chapters, an attempt was made to have one member of each family trained in first aid and another member in home nursing. Home demonstration agents served in organizing this work by securing enrollments and locating instructors. Red Cross work rooms were sponsored by Home Demonstration Clubs in some communities, and members assumed responsibility for supervising the making of garments and surgical dressings. Rural homemakers who had never knitted and had done very little sewing were stimulated to action when appeals from the Red Cross were heard. As early as 1940, one county reported 2,110 Red Cross garments were made by Home Demonstration Club members. In 1941, 45 counties reported participation in Red Cross programs, while 31 counties reported that Home Demonstration Club members had made a total of 35,701 garments and knitted 1,324 garments. Members also aided in publicity and the recruiting of volunteers for Red Cross mobile

blood donor units; many were donors themselves. They contributed by mending and hemming sheets and by reconditioning furniture for local hospitals and camps. Armed with ironing boards, irons, and sewing machines and equipment, these women went to various service centers, camps, and hospitals and actually made draperies and slipcovers, mended linens, repaired and refinished furniture, and supplied small accessories such as pictures, ashtrays, and new magazines.

The most popular program by far that agents carried out during the years of the second World War was the Victory Garden Program. The purpose of the program was for each rural family to raise enough food for itself and for its livestock. Cooperative Extension managed the program on the state level. The director of Extension formed a State Extension Garden Committee in 1942 and promoted the need for Victory Gardens. Consequently, through a statewide Victory-Farm-Food-Supply Campaign, over 5,000 volunteer neighborhood leaders took food production information to families in their neighborhoods. Fifty thousand families agreed to increase food production.

Next to food production, the conservation of food took the greater portion of the time of the home demonstration workers. They spent an average of 45 days in 1943 on food conservation work. In spite of the severe drought and early killing frosts that ruined practically all the fruit, more than twice as much food was canned, dried, and stored by Virginia farm families as any other year on record. Over 35,000,000 quarts of canned food were reported, in addition to over 600,000 pounds of dehydrated food and 3,500,000 bushels of stored food. Home demonstration agents served as advisors for the rationing of pressure cookers, and they held special educational programs on the care and use of the 10,000 cookers being used in Virginia homes at that time.

Poultry, vegetable garden, and dairy specialists worked closely with home demonstration agents in the food production and conservation program. In all cases, training meetings were open to representatives of other agencies. Of special interest was the work on poultry culling, cheese making, and vegetable storage. Vegetable garden and agricultural engineering specialists held training meetings on vegetable storage throughout the state in groups of four to five counties. Mound storage was demonstrated, and each person being trained assisted with the work. Poultry specialists gave 187 culling demonstrations in 1943 at meetings arranged by home demonstration agents; the overall attendance was 2,182. Dairy specialists gave 20 cheese-making demonstrations at meetings arranged by home demonstration agents, and approximately 100,000 pounds of cheese were consequently made in homes.

The food program helped farm families meet their production and conservation requirements. One of the biggest gains,

however, was in the general recognition that food had nutritional value. More emphasis was placed on increased production of milk, eggs, and vegetables because of the increased knowledge of their nutritive value. Overall, farm families began to see that food not only fought for freedom on the battlefront, it also fought malnutrition on the home front.

Home demonstration agents recruited and trained volunteer local leaders to help get the jobs done; in 1943 alone, 15,703 local leaders in Virginia carried out programs under the direction of agents. White agents and local leaders worked long, hard hours in 80 Virginia counties; Negro agents worked in 10 counties; and supervisors and specialists developed programs in the 20 counties where there were no home agents.

Some of the local leaders were trained to carry home economics subject matter information, as well as messages on wartime programs, to their neighbors. The rural women were led to recognize that each had a part in the total effort, and that each could help. Great tribute must be paid to these farm women who gave unstintingly of their time and energy helping keep farms operating at peak production and, at the same time, looking after the welfare of their families, doing Red Cross work, and participating in the accelerated food production and conservation program. Additionally, many responded to the critical need program for used kitchen fats. An average month in 1943 yielded a collection of 63,000 pounds, largely because of intensive drives made through religious, civic, and educational organizations. While twenty-six home demonstration agents served officially in the 1943 Fats Salvage Campaign, all home agents cooperated. In one county, the money realized from the sale of fats was contributed toward the purchase of an ambulance for the armed forces.

Farm families of Virginia began to purchase defense savings stamps and bonds early in 1941. News of the defense savings program was carried to rural Virginia by approximately 7,500 neighborhood leaders chosen by the County Boards of Agriculture. Every neighborhood of from 20 to 40 families was represented and served by one man and one woman. By means of house-to-house canvases, the leaders solicited pledges for purchase of defense bonds. It is impossible to estimate the value of bonds purchased by farm families.

Four-H Clubs also participated in the war effort. Club leaders promoted food production and conservation, and members conducted projects in 97 of the 100 counties in Virginia. Boys carried out agricultural projects in crops, livestock raising, and dairy and poultry work. Their projects were examples of efficient ways to produce farm products. The girls' projects, however, applied more directly to the war efforts of Home Demonstration Clubs, mainly because the projects dovetailed with

the work of the clubs. The goals of the 4-H Club girls were to raise and conserve enough vegetables and small fruits to take care of their families for months, and to help their mothers make clothing for family members. Both goals were considered patriotic duties.

Besides the 4-H Clubs' agricultural and home projects, Virginia club members raised enough money to donate a fully equipped ambulance to the American Red Cross. According to Hughes and Gordon Elcan, state directors of the 4-H Clubs at that time, club members could donate to the Red Cross a station wagon ambulance for overseas service and fully equip it if they gave a little more than five cents each. Through personal contributions and salvage sales of old phonograph records--in great demand because shellac was scarce and new records could be made only from older ones--clubs competed against each other and raised $1,898.34. They were motivated by Hughes' reminder: "Remember that in salvaging old records you are not only making some money for your club, but you are also helping cheer up people everywhere through the music that the new records will bring."[4] The presentation was made in front of the U. S. Department of Agriculture Building in Washington on September 4, 1943, by Carolyn Steek and Richard Fleming of Fairfax County who represented 37,000 4-H Club members of Virginia. The gift was accepted by Major Bernard Sobol, representing the Surgeon General's Office of the United States Army. Director M. L. Wilson of the United States Department of Agriculture Extension Service attended the presentation.

Another homefront activity in which Extension was involved during World War II was the collection of scrap metal. "Every old farm is an iron mine," wrote Douglas S. Freeman in the Richmond News Leader.

> **The entrance to the iron mine is the barnyard gate. No shafts have to be sunk to reach the iron. The "seam" is on the surface. Into the barnyard, or close to it, old machinery has been moved and abandoned. Plowshares were dropped there. Tires of wheels that collapsed on the road were rolled into the barnyard. Motor cars too nearly worthless to "trade in" for new cars have weathered and rusted there. On American farms the government estimates there are at least 3,000,000 tons of recoverable iron and steel. In Virginia the total must run to 200,000 at the lowest, perhaps twice that weight. Immediately, the government asks Virginia rural dwellers for 87,500 tons. This collection begins tomorrow and continues for two months."**

Farm families all over the state responded to the call for the collection of scrap aluminum, iron, and tin cans. It was impossible to estimate the tons of metal salvaged by rural people

of Virginia. A report by 4-H Club boys and girls who brought 2.5 million pounds of metal to collection stations in 1943 gives some indication of how much may have been gathered. During that same year, a quarter million pounds of paper and more than a half million pounds of rubber were collected by 4-H Club members. The Virginia State Salvage Committee estimated that 181,500 tons of scrap iron and steel were reclaimed from Virginia farms during the last six months of 1943.

Because of the helpful educational program carried on by the Extension Service, sufficient gasoline was made available to county agents for travel on official business during the war. Programs were adjusted and careful planning was done in each county to make the best use of agents' gasoline. At the time when pleasure driving was banned, there was grave danger that Home Demonstration Club members would not be allowed to drive to meetings. The State Office of Price Administration (OPA), recognizing the importance of the home demonstration program, classified Extension meetings as definitely essential. In addition to conducting educational programs, county agents and rural leaders helped issue gasoline rationing cards, and their assistance was most valuable when truck gasoline rationing books were issued. County agents also cooperated with war boards in the rationing of farm machinery, pressure cookers, and other rural necessities, and assisted with the distribution of livestock feeds and the making of dairy feed payments.

Besides working with war boards, specialists and agents worked with the Agricultural Adjustment Administration, the Soil Conservation Service, the Tennessee Valley Authority, and other farm organizations such as the Farm Security Administration and Farm Credit Administration. They also continued the fine work being conducted through the Rural Electrification Council.

The TVA's program to stop soil erosion in the Tennessee Valley watershed is an example of a kind of complex cooperation which demonstrated that outstanding teamwork existed between experiment station researchers and Extension workers. Agronomists at VPI's experiment station had learned as early as 1922 that farmers needed to top-dress their pastures with commercial fertilizers if they wanted to increase efficiency in the production of beef and dairy products. They tried to reach farmers with this information through newspapers, bulletins, and public meetings--all standard ways to teach--but the end results were discouraging. Fewer than 5% of the cattle growers in southwestern Virginia were top-dressing pastures in 1922.

Then in 1933, 11 years later, TVA asked for advice from the Virginia Extension Service for the best way to conserve soil and water in southwest Virginia, since that part of the state is in the Tennessee Valley watershed. Extension specialists said that fertilizing pastures would stop erosion, so they asked TVA to

supply at least 50 farmers in each county with sufficient quantities of high-analysis phosphate to make real demonstrations. With the help of county agents, TVA responded. By the end of 1941, in roughly half the time used by Extension to teach in standard ways, more than 60% of all farmers in southwestern Virginia top-dressed their pastures with phosphates or other fertilizers. Both TVA and Extension were satisfied. Farmers became convinced through demonstrations that they could nearly double the number of cattle grazing in their pastures and make much bigger profits. The cooperation between TVA and Virginia Extension had worked well, and continued to work during the 40s.

Agencies like TVA, Soil Conservation Service, Farmers Home Administration, and AAA were, according to L. B. Dietrick, director of Extension at that time, staffed with people on a par with Extension workers, so far as their training went. Up-to-date training helped Extension work well with these agencies. During an interview, Dietrick said:

> **Many of them drew upon VPI graduates for some of their staff, a practice that created a common bond in having taken the same line of work. Extension's chief purpose with the agencies were what they could do for them and how the farmer could cooperate with them. And as a whole, over the years, I think that Virginia has a pretty good record of cooperation among agencies. That doesn't mean that there wasn't at times some jealously among a few individuals within different organizations. When I became director, Dr. Jack told me to try to keep up good relationships among all agencies working with farmers in Virginia. "Creating good relationships,"he said, "was one of Extension's most important objectives."[5]**

Extension's post-war activities centered on the maintenance of high production levels for farmers and an assessment of its own programs, since the national crisis created by the war no longer existed.

In 1946, the Federal Extension Service prepared a report called Scope of Extension's Educational Responsibility. The committee, made up of staff members in the federal office, felt that Extension had reached a transition period in its development. The report stated that, "Past programs and operating procedures need to be weighed carefully against the demands and opportunities of the future... ." The demands and opportunities of the future, however, were not always clear. Then, too, World War II and the crises before it had made many demands on Virginia's Extension Service. Clarke County agent C. C. Funkhouser wrote in March 1943:

> **We hardly know what the status of Extension work in the county is at present. With all the emergency programs increasing and changing from day to day, it is impossible to carry on constructive long-time Extension projects and more.[6]**

D. T. Painter, supervising agent for Grayson County, was also confused and frustrated:

> **Frankly, the thing that has alarmed me most during the past eight years, or prior to Pearl Harbor, has been the definite trend away from the fundamentals of Extension work. It seems to me we have allowed our basic long-time Extension program to be disrupted by too many "fad programs" of so-called prophets who claimed that their particular plan would save agriculture overnight, and as a result the foundation on which effective Extension work depends has been badly neglected. Furthermore, a number of agents and others employed during this period have entirely overlooked these basic principles, and haven't the slightest conception of the Act creating Cooperative Extension work, which states that, "It shall consist of giving instruction and practical demonstrations in agriculture and home economics...and imparting such information through field demonstrations, publications and otherwise.[7]**

Painter was referring, of course, to Roosevelt's "alphabetical" days of the New Deal. As director of Extension during those years, Hutcheson knew that Extension's county agent system would be the network for many "disruptive" federal emergency programs. In 1933, when New Deal programs were beginning, Hutcheson wrote to all county and home agents:

> **The whole Extension Service is on trial at this time, and we are going to be called on during the next few months to do many things that are not in our regular Extension program. I am going to ask that you do these things to the best of your ability and hold on to your program as closely as possible. I feel confident that if we do an outstanding job in this emergency that our appropriations will be continued.[8]**

Writing again, this time in 1941, shortly before the attack on Pearl Harbor, Hutcheson accepted the inevitability of constant change in Extension's programs. He realized from previous experience that another national crisis meant Extension would become the network, once more, for national programs. "Extension," he said, "never stays the same for more than two years in a row. Its work moves like marching men, and the Extension which does not change its program to meet changing

conditions is soon out of step. And so far as an Extension agent is concerned, he has to either adjust or adjourn."

So persons in Extension expressed different and conflicting views, ranging from loss of Extension's purpose to Extension as an ever-expanding and changing network. The USDA published a report in 1946 about the present status of and future prospects for agriculture in the United States. Titled SCOPE 46, this report confirmed that Extension was going through a transition period.

In 1948, when Hutcheson was chancellor of VPI, it was clear to him what was happening. He sent a letter to Congressman John Flannagan, Ninth District, Virginia, in which he spoke against Bill 6054. As Hutcheson pointed out, the bill:

> **...authorizes the Secretary of Agriculture to conduct surveys, investigations and research...and to publish and disseminate information concerning any such surveys, investigations or research, and to conduct demonstrations relating to conservation, improvement and development of agricultural land and water resources....In other words, under the terms of this bill this new division of the United States department of Agriculture will be permitted to do both research and Extension work directly with farmers and independently of the Land-Grant Colleges.**[9]

Hutcheson traced this sort of federal intervention back to the early 30s, but such direct intervention could have been traced to the federal emergency programs that started in World War I. The problem just became more critical during the Great Depression. A number of new agencies were created at that time to deal with different aspects of a critical agricultural situation, and they were given vast appropriations with which to carry on their work. Some of the agencies were created by Congress, but many of them were created by executive order. All of the agencies operated under straight-line federal control which ran from the Secretary of Agriculture to local communities.

Thus, a great deal of duplication was taking place, and land-grant colleges saw that the USDA was gradually taking over authority that the Smith-Lever Act had given to land-grant institutions. It was time that Extension looked objectively at itself.

SCOPE 46 tried to direct the historic charge given to Extension in 1914: "...to aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics, and to encourage the application of the same." Demonstrations were one way to spread the information; and instruction, as the Smith-Lever Act stated,

was a second way. All people in the United States were considered potential receivers of Extension's services. As one Virginia Extension newsletter stated, "The ultimate objective of [the] Virginia Agricultural Extension Service is more fruitful lives and better living for all people."

SCOPE explained what the transition period meant for Extension. In its first years, demonstration work dealt with specific farm and home operational problems. By the 40s, the Extension Service had to deal with the changing needs and desires of farm people, which were brought about by World War II, and it needed to recognize that it had to deal with farm people caught up in forces more complex than those of 1910. The report pointed out that two forces, not just one, had acted on Extension: the Smith-Lever Act, which focused on helping farmers and farm women, and the historical development of Extension, which had helped not just farm families but the people of the United States as well through demonstrations and instruction. As a result, Extension's responsibilities, as determined by several groups of farm people nationally, and by representatives of land-grant colleges and the United Stated Department of Agriculture, had expanded by 1946 into the following fields:

1. Economic problems and public policies, with international, national, and local effects interacting.
2. Marketing and distribution, especially since farmers stepped-up food production greatly during World War II.
3. Social relationships, adjustments, and cultural values, which were deeply affected by the war.
4. Farm homes and buildings, two-thirds of which, nationwide, needed either to be fixed extensively or torn down.
5. Health, which had become worse in rural areas " in recent years."
6. Conserving natural resources, which "have been declining at an increasing rate for many years."
7. Farm and home management, an important emphasis because of the sudden shift from a wartime to a civilian economy.
8. Rural organization and leadership development, since "at present the organizational situation in rural America is confused."
9. Agricultural production.

The expansion of work into new areas meant that Extension was becoming more and more complex. Increased complexity meant that Extension workers had to get more training if they were to keep up with continually expanding services. In the next several years after Hutcheson's quarter-century as director, Extension's new director, Dietrick (1945-1962), started in-service training and educational leave programs. The associate director during most of these years, Daughtrey, recalled this advancement in these words:

> During my period of service as associate director, I felt proud of Extension's development in in-service training. Up until that time, staff members had very little opportunity to get in-service training to stay up-to-date on Extension's expanding programs except for what they got from specialists' visits and from bulletins and educational material of this type. So far as the subject matter of the material was concerned, we were in better shape because we did have up-to-date publications giving the latest information. But the problem was getting agents to give the time, thought, and study to it that was needed. So the Extension administration developed an outstanding program of bringing our people together for varying periods of training to keep them up-to-date not only in subject matter but on methods and approaches to Extension's educational work.
>
> Workers attended some of the more informal programs, which lasted from ten days to two weeks. For these training sessions, we would bring in personnel and give them intensive training for that period in new methods of educational work and the latest developments in the various subject matter fields in which they had the greatest needs. We tried to have a double-barreled approach: We strove to improve our educational approach to people of the state and to bring our people up-to-date in what they were trying to teach.
>
> We also developed a system of leave which would give our folks opportunity to go to other institutions for additional formal training.
>
> So, I think when we started in-service training in an organized way, we began to make real progress.[10]

THE LATE 40s
And Expansion into the 50s

The USDA sponsored another SCOPE report in 1958 that showed Extension had "fanned out" since the end of World War II into many different areas, each of which related to agriculture and home economics in some way. The report, referred to as SCOPE 58, pointed out, for example, that scientific agriculture, once a dubious experiment in the eyes of most farm people, and home economics were expanding greatly. Extension leaders realized that their services would also have to expand in order to keep up with the more complex ways of farm living. A farmer needed to know more than how to till the soil, grow crops, and produce healthy farm animals because events and activities happening "beyond the fence line" affected his welfare. He had learned in the 20s, but had to relearn in the late 40s and early 50s, that increased production alone could not be counted on to solve his problems. In fact, it could make problems. Over-production of farm items created surpluses, and surpluses lowered prices; hence, a farmer's purchasing power dwindled. And, as farm life grew more complex, more organizational work became necessary on local, state, and national levels.

In agricultural production during the late 40s, grasslands and forage crops were developed considerably. "With the development," Daughtrey pointed out, "of such things as hybrid corn, soil fertility, and disease control, agriculturalists really began to improve the yield of corn in the state of Virginia. We didn't think about 30-bushel yields any longer; we were talking about getting 100-bushel yields and more."[1]

Research in Virginia and North Carolina had shown that corn yields of 100 bushels or more per acre could be produced on farms having "normal" yields of 15 to 20 bushels. Implementation of this information was needed on farms to support an expanded livestock production as a method of increasing farm income. Extension needed, therefore, a sure way to get this information to Virginia farmers.

Extension agronomists believed that use of the same successful teaching methods begun by Farrar with the Boys Corn Clubs in 1909 could be used to put the current research information into practice through a 100-Bushel Corn Club Program for both adults and youths. To create more interest, a certificate signed by the dean of agriculture, director of Extension, and head of the Agronomy Department would be given to all farmers producing 100 bushels or more per acre.

The Extension Service published a small leaflet titled "How to Produce 100 Bushels of Corn Per Acre", and county agents distributed it widely in the spring of 1947. Newspapers and radio stations used the information in the leaflet in their

respective communications. Publicity needed to be extensive because most farmers did not accept the possibility of producing 100 bushels of corn per acre. For example, at county meetings some of the most progressive farmers would state, "No one has ever produced 100 bushels per acre, and the only way you can produce 50 bushels per acre is talking about it at a country store." Fortunately, 1947 was a good corn year, and farmers throughout the state who followed the instructions in the leaflet produced 100 bushels or more per acre.

In 1948, increased interest in the program was stimulated through a mass corn production demonstration program in Prince George, Lunenburg, and Montgomery counties, in cooperation with the Barrett Division of Hopewell, Virginia, a manufacturer of nitrogen fertilizer. The supply of nitrogen fertilizer was very limited, and this company made available to their dealers a special allocation of nitrate of soda for sale at the regular price to farmers who were conducting demonstrations in these counties. The three counties, representing three different soil types and systems of farming, increased their average yields as follows:

County	1945 Average Corn Yield	1948 Average Corn Yield
Prince George	21 bushels per acre	35 bushels per acre
Lunenburg	21 bushels per acre	35 bushels per acre
Montgomery	34 bushels per acre	45 bushels per acre

The 100-Bushel Corn Club program was successful in many other counties. A Goochland County farmer remarked, "I have been growing corn for over 30 years and have never made over 40 bushels an acre until this year." His yield was 131 bushels per acre at a cost of 38¢ per bushel. In Charles City and New Kent counties, a 100-Bushel Corn Club was organized with 16 members. During the harvest season, the farmers were so interested in the program that they sold 125 tickets to a $2.50 banquet that climaxed the program. After the banquet, tables were pushed aside and everybody took part in an old-fashioned dance. The club was reorganized that night with a goal of 100 members. In other counties, banks and other businesses provided banquets for club members and their wives at which county Extension agents presented 100-Bushel Corn Club certificates to those producing 100 bushels or more per acre. A typical statement made by farmers and businessmen was that this program did more in one year to show farmers how to produce high corn yields than any other corn program could have accomplished in 10 years.

The 100-Bushel Corn Club program also created more interest and support from all segments of the agricultural industry than any previous program. However, those involved in the corn program recognized that enthusiasm would decline unless something new could be added.

The new impetus came from the Extension agronomist P. H. DeHart, who was chairman of the War Finance Committee for Montgomery County and the City of Radford during World War II. He had been cleaning out the war finance files when he noticed a memorandum that the Governor of Virginia had once challenged the Governor of Indiana to a contest in war bond sales, the winner to receive a purebred pig. The contest had created much interest and resulted in increased sales of war bonds. Virginia had won the contest. It seemed to DeHart that this idea of a contest between two states might be the "something new" needed in the corn production program.

The idea was discussed with the head of the Agronomy Department, appropriate members of the agronomy staff, and the administrative staff of the College of Agriculture. Everyone thought it was a good idea and approval was given to move ahead. It happened that a conference had been scheduled the next day with a representative of the Barrett Division who was working closely with the Extension agronomist in Virginia and North Carolina on the corn programs. His first comment when he arrived was, "Virginia has a much better corn production program than North Carolina, but North Carolina gets most of the national and regional recognition." The Extension agronomist replied, "If the Governor of Virginia would challenge the Governor of North Carolina to a corn production contest, do you think he would accept?" The representative of the Barrett Division answered, "I don't know, but I'll follow through in North Carolina and find out. A corn contest is the stimulus both states need." The conference adjourned with an agreement that immediate action would be taken by both states to find out what the governors would do.

In Virginia, a meeting was called of the heads of all agricultural agencies in the state, the editor of the Southern Planter, and the president and executive secretary of the Virginia Farm Bureau Federation. The idea was presented to them. They accepted it enthusiastically and organized a state corn production committee to assist with the program: the editor of the Southern Planter was elected chairman; and Maury Hubbard, executive secretary of the Farm Bureau Federation, was elected secretary. The chairman contacted the Governor the next day; he was pleased to challenge the Governor of North Carolina. A few days later, North Carolina's Governor accepted the challenge with pleasure.

The community building in Hopewell was selected as the place to have a public meeting to announce the challenge because the experiment station had conducted two outstanding corn research demonstrations in Prince George County. The news media received advance information on the meeting, at which the dean of agriculture would speak on corn production and Virginia's Governor would challenge the Governor of North Carolina, and have

the challenge accepted. The media dubbed this friendly confrontation a "Corn War", since such a dramatic caption would create more interest and also relate to how the idea originated.

The Corn War lasted for two years, 1949-1950, and Virginia won both years. The Governor of Virginia received a trophy, which is still displayed in the office of the Commissioner of Agriculture. The 1950 average corn yield was 49 bushels per acre compared with 30.8 for the 10-year average from 1939 through 1948. This increase of 18.2 bushels over a 10-year average was the largest increase of any state in the United States. A few comparisons are:

Virginia:	18.2	Maryland:	5.0	Ohio:	3.7
North Carolina:	12.8	West Virginia:	2.5	Indiana:	1.3
South Carolina:	6.4	Iowa:	5.6		

Although the friendly Corn War ended, enthusiasm for 100-Bushel Corn Clubs and corn production continued. Most counties had an organized club which, in many cases, continued for 20 years or more.

In 1978, Virginia's average corn yield was 86 bushels per acre, a considerable improvement over the 1939-1948 ten-year average of 30.8. It is difficult, in fact, to find a farmer now who will admit that his corn yield is as low as 86 bushels, except in a drought year. Yields of 150-180 bushels are common. However, the most important values of the 100-Bushel Corn Clubs and the Corn War were not in bushels of corn per acre but in the fact that farmers learned the importance of soil management for maintaining high fertility levels for the production of all crops, and a firm foundation was established for increasing farm income through increased agricultural production and adding corn as another cash crop.

Not all farmers figured their corn yields in bushels. According to DeHart, one farmer measured his yield in barrels. A few others had still another measurement. Ann Frame, home agent in the 40s, tells the story of a farmer in a Virginia county well known for its moonshining. "One day," she said, "the farmer was visited by the county farm agent who came to see about the farmer's orchards. While visiting there, the agent spotted a field of corn on a hillside and asked, "What do you figure that to yield?' The farmer replied, 'About 15 gallons.'"

The Virginia-North Carolina Corn War was not the only promotional campaign used by Extension to increase agricultural production in Virginia. The pasture improvement was another. Research into pasture improvement had been gaining a great deal of momentum from 1947-1950, and results of this research had been used in a number of successful pasture demonstrations. Consequently, in early January 1951, the Extension agronomist and

the pasture research staff of the Agronomy Department of Virginia Tech decided that the opportune time had come to launch a statewide pasture program.

Briefly, according to the plan as it was carried out, the primary objective and method of approach were discussed with the administrative staff and approved. Then, the director and associate director of Extension submitted the plan to Virginia Tech's president who approved it. A meeting was held to discuss the plan with the district Extension agents, heads of federal and state agricultural agencies, and farm organizations. The plan was approved and a committee was selected to contact the Governor, who approved the plan and appointed a state Pasture Improvement Committee composed of representatives from 60 different commercial, civic, and agricultural organizations and agencies. Walter S. Newman, president of Virginia Tech, was named chairman, and he called a meeting of the committee in the Senate chambers in Richmond. The Governor at that time, William Tuck, met with the committee and gave a very strong statement on the need for better pastures to support the expanding livestock industry. Each member of the state committee was given some suggested activities that would promote better pastures through their local county representatives.

Immediately after appointment of the state committee, county agents formed county pasture committees made up of local agricultural workers and certain other key people whose organizations were represented on the state Pasture Improvement Committee. Then representatives from the College of Agriculture at Virginia Tech worked with each member of the state committee to define some things his respective organization could do. Finally, the program was explained to the entire Extension staff.

A direct outgrowth of the pasture program was the network of Virginia Pasture Clubs. These clubs began in 1950 in 10 counties and had spread into 47 counties just one year later. Members of the clubs who met the program's requirements received Virginia Pasture Club certificates. The recipients had to keep their pastures in a mixture of grasses and legumes that would provide adequate grazing for one animal unit to the acre for the equivalent of at least 200 days. At least five percent of the open land on a farm, or one acre, whichever was larger, had to be prepared this way.

The Governor's pasture program continued to gain interest and momentum. Eventually, 38 different organizations got involved in some phase of the program; but after four years, the state Pasture Improvement Committee disbanded. The program, however, continued. It provided a strong foundation for adequate feed production required for the expansion of the livestock industry in Virginia.

In 1950, there were 452 head of cattle--other than milk cows--on farms in Virginia. In January 1979, nearly 30 years later, there were 1,224,000 head of cattle, excluding milk cows. This expansion and the wealth it created would have been impossible without improved pastures and increased hay production.

Whereas the Corn War and pasture improvement campaigns stressed increased livestock production for the white farmers, an outstanding program for Negro farmers stressed increased agricultural production and overall farm improvement through conservation practices. "Conservation on Parade" was a one-day series of farm demonstrations carried out in 1951 in Lunenburg County. This type of program had been held in other parts of the state on white men's farms; but Negroes had never been exposed to it, and their fields and agricultural practices indicated that they needed conservation measures badly. Milton Harding, who provided the leadership for "Conservation on Parade," said:

> **I approached a few county leaders with the idea of a series of conservation demonstrations. They accepted it immediately. I then went to one black farmer in the county who had the right kind of farm for the demonstrations I had in mind. He agreed to use his land for the project. I made the many necessary arrangements, and on the day of the demonstrations, in July, 1951, visiting farmers and I started out about 6:00 a.m. to do such things as thin forestry land, run terraces, plant orchards, and paint the house. We were doing all kinds of things, according to the technology available at the time, to facelift the farm property. Within a radius of 50 miles, there was evidence that farmers had applied one or more of the Conservation-on-Parade practices to their situations.[2]**

The farm became a teaching model. For at least 10 years afterwards, Harding scheduled annual meetings for people to return to see the results of the effort expended on the farm that day. Media feedback was good and came from as far away as California. However, as Harding noted:

> **If I had been aware, as I am now, of the political and social constraints at that time, I probably would not have gone through with the project. I would have thought of too many things that I could not have accomplished. But at that time, my basic orientation helped me carry it out. At Hampton Institute, students, including myself, had been instilled with the family approach to making a living on the farm; so I just never stopped to think that some people would not get involved.[3]**

Home demonstration work was also growing during the late 40s and early 50s under the leadership of Maude Wallace, who had become Virginia's third state agent in charge of home demonstration work. Her career in Extension, from 1929 until 1958, markedly influenced the steady progress that the home demonstration program made despite the Great Depression and World War II. Wallace was a strong and able leader. Her appointment as state agent proved to be a most fortunate and propitious one for the next 30 years. During this time she, with able assistance from her staff, developed home demonstration work in Virginia to a high level of effectiveness and efficiency. "Under her leadership," commented Laura J. Harper, dean emeritus of the College of Home Economics at Virginia Tech, "the Virginia Homemakers Association of 1929 became the Virginia Federation of Home Demonstration Clubs, with a membership of around 40,000, the largest organization of women in Virginia." This growth--from 13,673 in 1935 to about 40,000 members-- is significant because "Much of the work with women," Wallace noted in 1954, "is done through organized Home Demonstration Clubs." And the counties in which the clubs operated had increased from 36 to 96 since the organization was formed.

Not only did she greatly expand club membership and programs; Wallace, along with administrators at Virginia Tech who believed she was right, also eventually enabled women in Extension work to get paid the same amount of money that men got for doing equivalent work. Women prior to 1944 were classified one grade below the farm demonstration agents.

Getting equal pay for equal work was a struggle. Wallace once wrote a letter to a member of the Albemarle County Board of Supervisors in which she requested that the board help pay for a home agent's merit salary increase. The increase would have made the home agent's salary the same as the farm agent's in that county, a fact that apparently did not make sense to the Board of Supervisors since the home agent's salary had always been less. Wallace, however, was using merit increases as a way of helping home agents catch up. Although the agent had done good work for over 30 years, the board members' response was blunt: "In view of . . .the fact that the county is now and will be paying in excess of one third of Mrs. Huff's salary after the merit increase. . ., our board has declined to appropriate additional local funds for this purpose."[4]

The organizational structure of Negro home demonstration work also advanced in the 50s. Local clubs were organized into district committees and became affiliated with the important Negro State Agricultural Advisory Board in 1951. Negro home demonstration leaders, home agents, and district agents Blanche arrison and Thelma Hewlett realized that Negro women in Home Demonstration Clubs needed a state organization. Harrison and a number of home demonstration leaders started plans in 1948 for

the organization. Since women were too widely scattered throughout Virginia, however, to start a one-day state meeting, district groups were organized instead in Richmond, Charlotte County, and Petersburg. They were called District Home Demonstration Committees.

The district committees increased women's awareness of the breadth and importance of the home demonstration program and helped women recognize their mutual problems. They also gave women an opportunity to exchange ideas. Harrison recalled the keen sense of fellowship that such women experienced, whether they were attending a club or district committee meeting.

> **The women appreciated so much that somebody was paying attention to them. Rural women had few opportunities to talk with other adult women. It was their joy to attend meetings. Sometimes part of a meeting would be given over to them just so they could exchange ideas. Home agents learned considerably about how the women were living at home and how they were benefitting from home demonstration work. The women profited so much from such informal exchanges and participation. Later, they were able to give direction to the more formal group discussions and activities.[5]**

In 4-H work, an important development that began gradually in the late 50s under the leadership of W. E. Skelton, state 4-H agent, was the construction of 4-H centers. P. B. Douglas, district agent in southwest Virginia at that time, spearheaded the development of the first of these centers, a camping and educational site where 4-H club members and other community groups could spend a period of days for recreation and instruction.

In the late 40s, according to Douglas, the Appalachian Electric Power company deeded to Virginia Tech 90 acres of land on the South side of the New River just across from Claytor Lake State Park. Appalachian Power wanted 4-H and the Future Farmers of America (FFA), an agricultural club for boys organized within the public school system, to develop it into an educational and recreational center for both youths and adults. Later, Virginia Tech designated about seven acres of this site for a YMCA and faculty retreat.

But, the project slowed during the early 50s. Except for the salaries of professionals, 4-H programs rely on donations; and the Korean War, a mild recession, and lack of an adequate access road to the donated land had impeded further development. Also, Virginia Tech officials, although they strongly supported 4-H, did not feel they could approve a policy that would permit Skelton to launch a building program that depended upon contributions. As a consequence of all these difficulties, the

district 4-H Advisory Committee recommended a delay of further fund raising until it could be decided if 4-H Center Incorporated, composed of persons interested in building a center, might assume control.

Interest again picked up after Skelton reorganized the entire 4-H program, a reorganization that included plans for construction of 4-H centers in each district. Southwest District 4-H leaders wanted a center close to Abingdon. The Claytor Lake site, originally planned to serve counties from Roanoke to Lee, had been deeded to Virginia Tech. Since this was Virginia Tech's property, the independent 4-H corporation could not own this facility, and people in the Southwest District did not want to put donated money into state-owned property. Douglas mentioned the idea of a 4-H center near Abingdon at a meeting held in the winter of 1957. He and W. H. Groseclose, Extension agent in Washington County, had visited George and Arthur Hutton in the Glade Spring community to talk about financial needs of Extension work in general throughout the district, and soon found themselves talking about a 4-H center for southwestern Virginia instead. The Huttons suggested that the Washington County Poor Farm, located on Hillman Highway just outside Abingdon, would make a good site. It had several natural features that a center could use, and it had many old buildings on its grounds: a six-room frame house, two wooden and six brick cabins, and a livestock and hay storage barn.

The Hutton brothers became very much interested in the possibility of using the poor-farm site for a 4-H center. So did many other people throughout the district during the next few months. Other sites were also considered, but the decision was unanimous: persons interested in developing a 4-H center wanted to go ahead with the old poor-farm property, a site owned by Washington County. In February 1958, the General Assembly provided for the transfer of the land from Washington County to Southwest Virginia 4-H Center, Incorporated.

P. B. Douglas became the first president of the Board of Directors. H. B. Eller, agent in Smyth County, was elected vice president; L. B. Russell, Abingdon, treasurer; and Mrs. Irby L. Arnett, Abingdon, secretary. Skelton was asked to continue as advisor. Eller, Russell, and Douglas also formed the center's executive board. They worked-out a formula for a fund raising drive aimed at bringing in $150,000; each of the 15 member counties would contribute.

The fund raising went well, and the executive committee, assured of enough financial backing, went ahead with the development of the center during the summer of 1959. The committee made plans to remodel the frame house for the center's manager, the six brick cabins for the boys' residence, and the two wooden cabins for the staff members. They also made plans to

remodel the livestock and storage barn--later named "The Dutch Palace"--to house a canteen, handicraft shop, manager's office, classroom, and a few storage areas; and to erect two large buildings, one to serve as a recreation and assembly hall and the other to be the kitchen and dining hall. The committee also authorized construction of a junior olympic-size swimming pool.

Russell purchased the building supplies wholesale for the center, so one of the main buildings was called Russell Hall in his honor. Burley Hall, the kitchen and dining area, was named after the center's largest donor at the time, the Virginia Burley Tobacco Association. The swimming pool was named Douglas Pool. Russell Hall continues to be used for recreation, while a new building, Ratliff Hall, named after John Ratliff of Tazewell County, later became the main assembly hall.

The center was designed to handle 225 campers, although it has accommodated up to 300 overnight. Busy as it is with 4-H groups, the center yearly handles two to three times as many adults as it does 4-H'ers. It has become the educational center for the people of southwestern Virginia. Companies, businesses, and special-interest groups often use the center during weekends. Often, two or three hundred people are involved. Sleeping and eating accommodations, of course, are not large enough to take care of so many overnight guests. But, the spacious grounds, easy parking, and other facilities make the center ideal for large picnics, barbecues, and a variety of other outdoor activities. Ratliff Hall now can be used throughout the winter because it is completely heated.

SCOPE 58 pointed out six more areas on which Extension needed to concentrate: marketing, conservation of natural resources, farm and home management, leadership development, public affairs awareness, and community development.

Marketing. Before 1914, farmers marketed their own products; but, by the 50s, thousands of highly specialized marketing firms, with little or no direct contact between the producer and the consumer, were marketing their goods. Extension had assumed a small educational role in marketing as far back as the early 20s, but had met with stiff opposition. Even during the Great Depression, W. W. Drinkard, director of the VPI Experiment Station, in responding to Hutcheson's analysis and solutions to the farm problem, could say, "We should certainly strive to avoid efforts at cooperative marketing in case of commodities for which there is little or no hope of obtaining results comparable with the case of organizing."

In the late 50s, however, marketing was by far the largest single segment of the modern agricultural industry. Over a million marketing firms doing 60 billion dollars worth of business handled such services as collecting, grading,

transporting, processing, packaging, storing, pricing, crediting and financing, and distributing and merchandising. Besides these firms, there were businesses and persons who never handled the actual product at all, such as the commodity exchanges, futures markets, speculators, banks, courts, and advertising agencies. SCOPE 58 stated that the Extension Service needed to concentrate more on marketing problems. It needed to establish educational programs that would show farmers how to get the most for their money, help them expand into other markets, determine ways to sell products in the world market, and encourage consumers to try different products.

Conservation of natural resources. In Virginia, Extension began to get involved with conservation when TVA, in the early 30s, asked specialists and agents to help stop soil erosion in the Tennessee Valley watershed through educational programs. Conservation activities associated with the development of a watershed were complicated because programs included many farms in different areas. State governments had to get involved. "Such action," SCOPE pointed out, "will necessarily have a large element of group action." The report also pointed out three other major conservation areas, besides water and grass croplands, with which Extension needed to help: forests, fish and wildlife, and minerals. All five resource areas affected all people. All people, state governments, and the federal government, therefore, had to cooperate if the resources were to be used wisely. Extension helped assure cooperation by educating people about them.

Farm and home management. "The management education goal of the Extension Service is to help people improve their ability to make decisions that achieve goals with the most efficient expenditure of resources," the SCOPE 58 report stated.

Farm and home management had been stressed in Virginia for many years before 1958. Home management, for instance, was one of the titles in Extension's annual report for 1927 used to describe work being done in the home. At that time, home management consisted of making a home more comfortable and beautiful. But the annual report for 1934 stressed management, not beautification or comfort, for both farmers and wives. And 20 years later, in a paper entitled "What is Home Demonstration Work?", Wallace stated that home agents and specialists had been trying to help farm women budget their families' money, time, and energy through "planning, directing, guiding, coordinating and evaluating the use of the family resources for the purpose of attaining family goals."[6] Concerning money, Wallace said:

> **Virginia farm homemakers in 15 counties have decided they need to have an understanding of how to spend and save money intelligently. On this depends the financial stability of the individual and the family as**

well as the maintenance of their cherished freedom. Homemakers realize that what you do with money is one of the most important aspects of living today. This wise use of money is the responsibility of every Virginia homemaker.[7]

As for time and energy, home agents and specialists helped farm wives with such problems as washing clothes. Many homemakers reported that doing family laundry was the heaviest job they had. Consequently, the home demonstration program in 1954 helped more than 9,000 women improve their laundry equipment and the methods of doing the job.

Leadership development. Since its beginning, Extension in Virginia had been interested in identifying individual leaders in communities, chiefly because they made good farm demonstrations. Extension had also worked through individual leaders in Home Demonstration and 4-H Clubs who introduced programs to club groups and helped carry them out. However, specialists and agents had done most of the program planning for the volunteer leaders. In the early 50s, Extension began to realize that groups of people needed to be involved in planning and developing programs that affected them if the programs were to be fully implemented and successful. It felt responsible for developing citizen competencies through the democratic group process.

In 1952, Don Fessler, Extension sociologist, came to Virginia Tech from Iowa State University to help Extension develop more effective leadership through groups. He did this basically through Extension Community Improvement Clubs where he used the concepts of group dynamics to help rural communities achieve their goals. He stated:

Community improvement was a major Extension program in the counties of southwest Virginia and in one or two other places. My job was to help organize Community Improvement Clubs at both the state and county levels and to help club members carry out improvements that they wanted.

Extension's major concern was to motivate people in rural communities to take part in improvement clubs and become involved in bringing about changes which were in line with Extension objectives as well as in the interests of the local communities.

A new idea of leadership was needed, one that would be shared by all members of the club, not by just a few individuals who would tell the community what it needed to do. Extension realized that people support goals only when they are part of the decision-making process.

Group dynamics also worked well in Home Demonstration Clubs. Most of the home agents, as well as farm agents, attended regional workshops in group dynamics. So, they had a general feeling for the way to go about organizing their clubs to get truly democratic decision making on one hand and motivation from club members on the other.[8]

Ethel L. Grubbs, Extension specialist, family resources, explained in the following words what this new leadership emphasis meant in her home demonstration work:

Shortly after I became an agent in Patrick County in 1938, Extension began to emphasize a democratic type of leadership. It was needed. Early in the 50s, agents started to encourage Home Demonstration Club members to be responsible for two or three programs each year, and by the time I left Patrick County in June, 1955, members were handling as many as six club meetings per year.

Such democratic type leadership freed agents for their other responsibilities. Besides attending Home Demonstration Club meetings, 33 4-H, and 6 community club meetings each month,I conducted special interest and special emphasis programs, prepared materials for programs, wrote news articles, trained agents, and made home visits. More than 50 meetings each month left little time to do these other jobs. Sometimes after going to six 4-H Club meetings in one day and a community club meeting that night, my voice would give out. I was delighted to see Extension emphasize leadership development.[9]

The SCOPE 58 report reiterated the continued need for "devising... better ways of recognizing the potential for leadership, and better means of developing and using these abilities effectively."

Public affairs awareness. A SCOPE 58 definition read: "Public affairs education is education for citizenship." During the agricultural depression of the 30s, farmers had begun to realize that they could not control poor economic conditions by just producing more food. They needed and wanted to know the public issues that affected the markets; so Extension, at that time, helped farm organizations, marketing firms, public officials, and farm-city groups to become better informed. When the SCOPE 58 report was prepared, it asserted that Extension had to be ready to reach out to every group of people who asked for public affairs information. "The legal mandate implicit in the Smith-Lever Act, reinforced by the insistent demands of people

for help in understanding public problems, amply justifies everything now being done and more," the report stated.

Community development. Community development was the important new creative direction Extension work took in the early 50s. Paul A. Miller, Extension director in 1958 at Michigan State and an authority on Extension work, wrote an article for Agricultural Leader's Digest called "The Evolution of Extension". In it he divides Extension history into three stages of growth: The pioneer era; involvement in the 20s, 30s, and 40s with governmental programs; and the period of the 50s and the near future. The latter was a period of expansion, Miller believed, in which Extension workers, having developed organizational know-how through earlier connections with governmental agencies, were ready to go into community services besides agriculture and home economics. An Extension community development program would provide the planning, coordination, and information necessary to expand educational services to help citizens solve community problems. In 1954, the Secretary of Agriculture provided the impetus needed to launch a community development program by initiating an extensive rural area development plan.

THE 1960s
And Three Monumental Developments

Three different years in the 60s were particularly memorable: 1964, 1966, and 1968. In 1964, the federal government passed the Civil Rights Act, and, within a year or so, the Extension Service had integrated offices and programs throughout the state. Then, in 1966, as a result of state legislation, Virginia Tech created the Extension Division. Separate Extension programs had previously existed: Cooperative Extension, Technical Resources, Engineering, and off-campus instruction. The newly created Extension Division combined all of them into one complex system. During the third memorable year of the 60s, 1968, the Donaldson Brown Center for Continuing Education (CEC) was completed and put into operation.

When the Civil Rights Act of 1964 became law, Extension's main concern continued to be service to the people. Skelton, Director of Cooperative Extension at that time, explained the service position in this way:

> **Extension's main purpose has always been to serve people; they take part in its programs voluntarily. In Virginia, prior to the Civil Rights Act of 1964, Extension accommodated itself to the prevailing social arrangement: blacks served blacks, and whites served whites--generally, but in many instances meetings were**

integrated and whites served blacks and vice versa. Such racial segregation was true in most settings--in public schools, churches, and public parks, and participation in programs of Extension was influenced towards segregated meetings because of these social customs. Both races often worked together, however, even against public social pressures for separation. Four-H camps, for example, were integrated before the Civil Rights Act was passed.[1]

Although Negro Extension work had its own staff who first worked out of Hampton Institute and then out of Virginia State College (VSC) after 1930, Extension in Virginia did not have two separate budgets. Federal and state appropriations for both Negro and white work were handled through Virginia Tech because the Cooperative Extension Service was administered by Virginia Tech.

In order to serve Negro clientele at this point in time and to use the limited resources then available at Virginia State, Program direction and administration were the responsibility of the director of Cooperative Extension at VPI.

Because Extension had to accommodate itself to work within the prevailing organizational structure, Extension workers at VPI and Hampton (and later, Virginia State College) communicated with each other infrequently. Newsome, state supervisor for the Cooperative Extension Service and located at Virginia State College from 1945 to 1966 before becoming assistant to the dean of the Extension Division at Virginia Tech, pointed out that prior to 1964 most Negro Extension workers never visited VPI and most white Extension workers never visited Virginia State. However, if Negro and white agents got along well in the field, they, of course, helped each other. But, Newsome said:

No matter how much whites may have wanted to help, they could not give their co-workers the impression that they were being overly nice to blacks. And blacks, thinking about their co-workers, could not be too nice to whites. So, they just had to manage to work together in ways that were not too obvious. And some did want to work together.[2]

Milton C. Harding, Sr., administrator, 1890 Extension Programs, was a county agent from 1946 until 1975. He recalled the relationship between the black agent and white farmers in his county in this way:

If a black agent through his friendliness, interest, and drive, identified with local white farmers, some thought he might be trying to bring them into his

program. However, such thinking was not a regular path. It was based on local sentiment.[3]

This sort of local sentiment also accounted for cooperation between black and white workers.

There were no specialists [Harding continued] in men's black agricultural work. However, in isolated instances, based again on the black agent's spirit of interest and cooperation, white specialists would support the black agent's program.[4]

Harding also recalled the farm credit agency's annual meetings, which many blacks often attended. But, as he pointed out:

I was never invited, during my first years as county agent, to hear the credit agency's reporting. I knew about the services offered in terms of loans to participants, but I did not get an official invitation to attend this type of meeting. Later, however, starting in the mid-50s, I began to be invited to the meetings.[5]

D. T. Rogers, county agent and district agent in Southside Virginia, from 1940 until he retired in 1977, talks about cooperation between blacks and whites in the following passage:

I was assistant agent in Southampton County during 1946. While I was there, Extension vaccinated many hogs for farmers in the county, and of course, the white agent, Extension specialists, and I worked with Negro farmers as well. Then, when I became agent in Brunswick from 1947 to 1952, specialists and I invited all farmers, blacks and whites, to our tobacco meetings in local public schools. Half of those attending were white, the other half, Negroes.

During these years, there was considerable exchange in programs. I helped the Negro agent in Brunswick with programs, and he would help me. And when I moved to Greensville County, the Negro agent and I took part in the same kind of exchange.[6]

Negro Extension work developed differently from white Extension work, although both groups began with the same educational programs. To understand how Negro Extension work developed, one must start with Hampton Institute. From its inception in 1868 until 1920, it was the center of agriculture and the "mechanic arts" for blacks in Virginia. In 1920, however, Governor Davis recommended to the General Assembly that federal money be withdrawn from Hampton and given to the State

Normal School (Virginia State College) in Petersburg. The legislature confirmed the recommendation, and Hampton was no longer a land-grant college. Ten years later, the Negro Extension headquarters moved from Hampton to the college in Petersburg.

After 1914, VPI began the administration of both Negro and white demonstration work, and called it Extension work instead. VPI multiplied the resources for programs emanating from it, for white Extension work mainly, through the use of experiment station researchers, specialists, and increased vested funding from sources within the state. Although VPI at this time was handling administrative matters, black Extension programs continued operating, as they had from the beginning, through Hampton.

While white Extension work could expand, owing to VPI's advantages, Negro Extension work, having only its share of the Smith-Lever appropriation, had to continue its traditional concentration: working with the family as a whole. This differed from Extension work because VPI's resources enabled programs to concentrate on the farmer and his interests, on the wife and her interests, and on the children and their interests. Farmers belonged to production and marketing associations, their wives to Home Demonstration Clubs, and the children to 4-H Clubs. But this division of interests was not possible for Negroes. Lizzie Jenkins, in her 24th annual report (1935) on Negro home demonstration work, wrote:

> **Since it is impossible for our women to get the necessary financial and sympathetic backing for developing a well-rounded, live-at-home program, and since no local home agent works in a county having a local farm agent, it has been considered wise to have community clubs composed of farm men and women.[7]**

And, as she pointed out in her report for 1943, these disadvantages "often served as an advantage," because:

> **So few of [the] home agents worked in counties having farm agents...home agents were assisted in planning county and community programs that included the whole family. For the farmer, [and for getting] representatives on the county advisory boards, home demonstration clubs invited outstanding men to represent the communities.[8]**

Harding encapsulated the black family-unit approach when he said:

> **The black system had limited resources, a hard-nosed fact which forced its agents to cast strategies in a**

comprehensive family approach. But, limited resources do not explain everything. Negro agents were trained at Hampton Institute, and Booker T. Washington, Tuskegee's president, was of course a stalwart at Hampton. Agents would have been influenced by Washington's belief in the importance of common labor. He stressed that one must learn to dignify and glorify occupations and that meant labor for the entire Negro family. So, it took the whole family to make whatever improvements could be made for the enrichment of farm life. Obviously, Negroes used a family approach to education.[9]

By 1964, changing times had led to changing plans for a traditional event on the VPI campus--the Institute of Rural Affairs, an annual event of 30 years' standing.

Daughtrey, Director of the VPI Agricultural Extension Service at the time, explained that the Institute had to be held during the summer months when student dormitories could be used to house those attending. Summer, however, was the time when farmers and businessmen serving farmers (who made up the majority of those in attendance) were needed at the sites of their operations.

Farming had become more specialized, less labor was used on farms, and the capital investment in farm production had increased tremendously. These factors necessitated close and immediate attention to farming and related businesses during the growing season, and were the major reasons that attendance at the Institute of Rural Affairs had begun to decline. Consequently, a decision was made to discontinue the Institute until conference facilities were available in non-summer months.

The decision to terminate the Institute of Rural Affairs, which annually had drawn hundreds of farmers and homemakers to the campus, was made only after careful study and consultation with many professional and lay leaders in Virginia. The study indicated no opportunity to increase the attendance of active farmers and agricultural leaders during the summer months.

Daughtrey said he and other university officials hoped and anticipated that the Virginia Federation of Home Demonstration Clubs and the Agricultural Conference Board would continue to hold their annual meetings at VPI. In the past, these two organizations had convened immediately prior to the Institute of Rural Affairs. The Federation was composed of around 27,000 Home Demonstration Club women, both rural and urban. The Agricultural Conference Board was composed of representatives of more than 50 farm organizations.

Daughtrey, while expressing regret that circumstances had led to the action taken, reported that plans were underway to develop conferences and short courses for specialized groups. Such conferences and short courses would be held at the times most convenient for the groups to participate.

The proposed continuing education center at VPI would facilitate greatly such activities. The center, to cost approximately $1,700,000, would provide for substantial strengthening and expansion of VPI's extensive program of conferences and short courses. The Capital Outlay Study Commission recommended that $850,000 be raised for the center from private gifts and that $850,000 be appropriated in the 1964-66 biennium from state funds.

"During the past several years," T. Marshall Hahn, Jr., VPI president, reported, "tens of thousands of Virginians have contributed slightly more than $850,000 for the center. Governor Harrison's recommended budget did not include funds for this facility, VPI's highest priority request for a new building, but we have entered an urgent plea that the appropriation be made available so that the center could be ready in 1966."

In 1966, the second significant year of the decade for Extension, Virginia's General Assembly enacted a bill creating the Extension Division at Virginia Tech. The bill read (in part):

> **Be it enacted by the General Assembly of Virginia: There is hereby established with the Virginia Polytechnic Institute a division to be known as the Extension Division...which shall encompass the Cooperative Extension Service, Technical Services, and General Extension...**
>
> **The Division shall provide the people of the Commonwealth information and knowledge through instruction and practical demonstration in such fields as agriculture, business, industry, home economics, resource development, 4-H Club work, and subjects relating thereto.**[10]

For many years prior to 1966, Extension programs had been expanding. The act of the Virginia General Assembly, approved April 1, 1966, recognized just how much Extension work had expanded in the state since its inception. It had its beginning as a service to farm families in the areas of farm production, home economics, and club work for boys and girls. However, work with farm production began to change when the farm dollar was deflated in the 20s. It became necessary to expand programs at that time to include marketing and to help form many kinds of

cooperatives and other organizations of benefit to the farm economy.

Home economics had also expanded its programs. Although homemakers were still taught such basics as how to sew and prepare food, the program for some time had included such things as how to furnish and manage a home. The expanding program had begun to attract women in non-rural areas of Virginia, and, gradually, home economics began to move into these areas also.

Four-H clubs had grown in numbers, too, and attracted youths in urban areas, an attraction which meant that clubs had to expand projects beyond the agricultural ones. Additionally, Extension had moved into urban areas with community development programs. This came about basically as a result of the "alphabetical days" of Roosevelt's New Deal, when Extension had become involved with federal agencies in such areas as conservation, farm management, and part-time employment for farmers in communities. And, following WWII, the rural population decrease in Virginia and the urban population increase helped move community development programs into urban areas.

Continued expansion in all program areas had contributed to changing the Cooperative Extension Service. However, its base for reaching out to Virginia's people was well established, and its mission clearly stated that Extension was to "aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics. . .and subjects relating thereto." Cooperative Extension, in spite of change, was still by far the best educational network for helping people throughout the state.

General Extension, which had been a second Extension program at VPI, conducted off-campus credit and non-credit programs, involving VPI's branch colleges. One was located at Danville, another at Clifton Forge, and a third at Wytheville. (All three are now independent community colleges.) In addition to these branch colleges, General Extension had arranged with Richmond Professional Institute for its students to transfer to Virginia Tech for their last two years of undergraduate work in engineering.

And Technical Services, a third kind of Extension program, which was started in 1965, had enabled Virginia Tech to provide businesses, industries, and commerce throughout the state with scientific and engineering technology. Skelton explained that it became a program because

> **...state and federal governments wanted to provide business, industry, and commerce with the same type of assistance that agriculture, home economics, and 4-H were getting. Congress had created a State Technical**

Services (STS) program with funds to be matched by state governments. Each state then designated an institution to be responsible for the operation of its STS. Governor Godwin designated VPI as the institution in this state to handle the program.

In Virginia, STS was highly successful. We included it in our Cooperative Extension program, since Extension already had a delivery system reaching into every county and most cities. In other words, we "plugged" STS into this network. Other states set up a completely separate organization to administer their STS programs and used up too much time, labor, and money to get a delivery system going. Consequently, they did not have enough resources left over to concentrate on subject matter. But, in Virginia, since we used Extension's delivery system, we were able to concentrate on subject matter for STS.

Since other states had to put so much money into administration, programs became too costly. Therefore, the federal government, when it evaluated STS, discontinued all appropriations. However, Virginia's program was so good that the state continued it under a shortened title, as Technical Services.[11]

Creation of the Extension Division required important organizational changes. A structure had to be developed that would make operable the Division's programs. Skelton, the first dean of the Division, related how the changes were made:

Rather than establish a large organizational structure when the Division was created, I preferred to have the program expand first and then respond to that development with an adequate structure. Otherwise, I would have been guessing as to the type of person needed in each administrative spot. Seeing how the program was expanding and then responding to it in terms of necessary organization was my method of administration.
I needed to make certain immediate changes, however. Prior to creation of the Division, I was director of the Cooperative Extension Service and had an associate director, Pat DeHart. I also had a state leader of administration, Bill Lavery [now president of VPI]. Then, when the Extension Division was created in 1966, I became the Division's dean, and to help in the administrative structure, I established associate deans. And Lavery became state leader for the program areas. But as the Extension Division expanded, I created several separate program directors to replace the state leader post.[12]

The year 1968 marked the third important year of the decade for Extension. The first significant year dealt with the ramifications of the Civil Rights Act, the second with the creation of the Extension Division, and the third with the completion of the Donaldson Brown Continuing Education Center.

Construction of the Continuing Education Center at Virginia Tech was a development linked, since its inception, with Extension, although it never received funding from Extension. The idea of a continuing education center originated with leaders of the Virginia Federation of Home Demonstration Clubs who wanted to build a club or guest house at Virginia Tech in which to stay when they came to campus to study. In 1943, the Federation (now called Virginia Extension Homemakers Council) voted to purchase a one-thousand-dollar war bond toward the construction of a club house at Virginia Tech. Five years later, the Federation had expanded the idea of a club house and was thinking of building a guest house for the Federation's use at Virginia Tech. John R. Hutcheson, Virginia Tech's president at the time, further expanded the idea of a guest house into a short-course building. Obviously, on-campus programs for adults required on-campus housing.

The evolution of the idea of an adult education center continued as the demand for adult programs grew. Following the 40s and World War II, the Virginia Tech faculty talked about a short-course dormitory. If built, this dormitory would house adults coming to the campus for periods of six weeks to two years. Faculty discussion further refined the dormitory idea, and Virginia Tech officials began to think in terms of a resident education center to provide lodging, meals, and program space.

Finally, by 1953, Hutcheson and the Virginia Tech staff, along with the Federation of Home Demonstration Clubs, talked about building a continuing education center. Hutcheson asked the Federation to spearhead solicitation for it. Actually, everybody involved was thinking about enlarging an already existing faculty apartment building, built in 1935. The Federation accepted. Hutcheson, Maude Wallace, Mrs. Will S. Dickinson, president of the Federation, its executive board, and past presidents worked hard to inform Home Demonstration Clubs throughout Virginia about details of the proposed building project.

Extension played an important part in spreading information about the need for a continuing education center. Besides Mrs. Dickinson and the Federation of Home Demonstration Clubs, other strong supporters were Hutcheson, former director of the Virginia Cooperative Extension Service and, at that time, president of VPI, and Wallace, assistant director of Extension. These three persons, along with several others, were pivotal in keeping the

idea of a continuing education center alive. Keeping the idea alive was not easy, especially since space at Virginia Tech was already so limited for classrooms, laboratories, dormitories, offices, and recreation facilities. But Extension continued to press for a center for a strong reason. In spite of work done on farms and in farm homes, there had been an insistent demand during recent years for continuing education on the VPI campus. Farm men and women, industrialists, scientists, and businessmen, had expressed desires to come to the VPI campus for refresher courses, short courses, and conferences. They had asked that VPI establish a place to bring people and the college together, to learn, to share, to build, and to seek answers to problems of today and tomorrow.

Meanwhile, Hutcheson established the VPI Educational Foundation to generate funds for developing the campus, and one early purpose of the Foundation was to build a continuing education center. Information about the center and money to build it continued to be of primary interest until the building was completed. The Educational Foundation solicited funds from several foundations like the Olin and Ford Foundations. Alumni contributed. And the 100th anniversary of the Federal Land-Grant College Act was used to raise funds. One of the honorary co-chairmen who helped raise money during this year-long anniversary observance was Donaldson Brown, in whose honor the continuing education center eventually was named.

The year-long fund-raising drive was well organized. The state was divided into six regions, which were broken down into a total of 25 "shopping" areas. Each area had two workers: one who solicited major gifts, the other special gifts. The regional chairmen were:

Southwestern region:	David P. Minichan
South Central region:	Eugene Rowe
West Central region:	Del Simmons
Northern region:	Kenneth Robinson
East Central region:	Herman B. Hawkins
Southeastern region:	James B. Hawkins

A VPI Continuing Education Center Campus Committee was formed. These efforts, plus a number of other drives, enabled the center to open January 2, 1968.

Many VPI faculty and citizens throughout the state had supported the development of a VPI continuing education center. A number of them supported it for 10, 15 or more years before the center was built, in many different ways, and with varying degrees of involvement.

Frank Ellmore, Extension program leader, agriculture, developed the first program conducted in the continuing education

center. The group involved was the Farm Labor Recruiters for the Virginia Employment Commission. The center staff members were not quite ready to host the group but the commission's recruiters wanted to use the center even if it was not completed. So, the center's beginning was auspicious. After 25 years of planning, pressure to house adult programs was still there and manifested itself when the center opened, almost before it was ready. Following its opening, the administration of center programs was assigned to the Extension Division.

The center's popular name is CEC, but its official name is Donaldson Brown Continuing Education Center. A question that staff members at the CEC have been asked hundreds of times is "Who is Donaldson Brown?" Brown was the youngest student, at age 17, to ever graduate from Virginia Tech; he was an electrical engineer who became powerful in two giant corporations--E. I. DuPont and General Motors. He retired as an Executive in 1946 but remained active in both corporations until he died in 1965. He was among several Virginia Tech alumni to receive the first Distinguished Alumni Citations in 1959, was co-chairman of the 100th anniversary drive to raise money for construction of the CEC, and was the largest individual contributor.

Directors for the CEC since its construction have been Maynard Heckel, 1968 to 1971, who resigned to become dean and director of Cooperative Extension in New Hampshire, his native state; Bill Flowers, 1971 to 1977, who assumed other administrative duties in the Extension dean's office; and Norris Bell, 1978 to the present.

THE 1970s
Decade of Complexity

John R. Hutcheson once said, "Extension is never the same two years in a row," and certainly its history has proved this to be true. By the 70s, many changes had taken place and Extension's organizational structure bore little resemblance to its beginning. Its unique system of maintaining agents throughout the state, however, remained its structural backbone and an unchanged part of the organization.

The Extension Division in the 70s was administratively headed by a dean who also was director of the Cooperative Extension Service. Several persons assisted the dean: four associate deans (two for programs, one for field staff, and one as liaison between Virginia Tech and USDA); a director of off-campus credit programs; and an administrative assistant. Six district agents were administratively responsible for the total Extension program in their respective districts. Program leaders were responsible for the four program areas--agriculture and

natural resources, family resources, 4-H, and community resource development. Programs were operated jointly by Virginia Tech and Virginia State, with administrative heads at both institutions assuming equal roles.

Another segment of the Extension Division in the 70s dealt with its instructional programs: off-campus credit courses and on-campus non-credit courses. Off-campus credit courses were offered by the seven academic colleges, mainly at Extension's branch center at Dulles. Some, however, were offered in the Richmond and Norfolk areas, and at the Naval Surface Weapons Laboratory at Dahlgren, King George County.

In 1973, the General Assembly enacted House Bill 1054, which divided Virginia into six regional consortia to avoid unnecessary duplication of course offerings by colleges and universities within a defined area. Each consortium had one state institution that was the focal institution for the region. Virginia Tech served the Western Consortium, which consisted of 17 member institutions, in this capacity.

The consortia worked together in granting graduate degrees. Not only did such cooperation cut out needless duplication in courses, it also benefited the students. A person moving from one area of the state to another would not lose academic credits and could get a degree by attending a nearby cooperating university. And, of course, the state benefited because graduate programs located in proximity to students contributed to the professional development of business, educational, and industrial leaders throughout the Commonwealth.

Dividing the state into six regional consortia also meant that the heretofore unrestricted growth of the Virginia Tech off-campus degree effort could, at best, expect a leveling or a carefully measured expansion of enrollments and programs. And it was expected that a gradual rollback of off-campus credit programs would occur in certain areas remote from the Western Consortium.

At least 60 percent of the off-campus credit courses in the 70s were offered by the College of Education, formed in 1971 as Virginia Tech's seventh academic college. The College offered seven degree programs in all six regional consortia and three cooperative doctoral programs with Old Dominion (Tidewater Consortium), James Madison (Valley Consortium), and Virginia Commonwealth (Capital Consortium) universities.

In addition to the College of Education, Virginia Tech's other six academic colleges participated in the Extension Division's off-campus credit program. The College of Home Economics offered master's degree programs at Dulles in management, housing, and family development; clothing, textiles,

and related arts; and human nutrition and foods. The college also developed a cooperative program with Virginia Commonwealth University in human nutrition and foods.

The College of Business offered two master's programs, one in economics and the other in business administration, both at Dulles. The College of Architecture and Urban Studies also offered a master's degree program in urban affairs at Dulles. From this program grew a doctorate in public administration, sponsored in part by the Department of Urban Affairs and Regional Planning, the Department of Political Science, and the Colleges of Education and Business.

The College of Arts and Sciences had programs at Dahlgren, mainly in statistics, physics, and mathematics, but also in geology and computer science. It also offered computer science courses at Dulles.

The College of Engineering had master's programs in all three sections of the state where Virginia Tech concentrated its off-campus degree work: Dulles, Richmond, and Dahlgren. Students in these programs had the opportunity to pursue engineering options in fields such as electrical, nuclear, mechanical, systems, industrial, civil, and engineering science and mechanics.

In the latter part of the 70s, the College of Agriculture and Life Sciences began to design a master of agriculture degree. Although it had never offered a complete degree program off campus, the college had served a valuable function by fulfilling requests from the field and acting as a cognate area for other disciplines.

The segment of the Extension Division that complemented the off-campus credit course work was the non-credit program. This self-supporting program was "by any measure...among the top accomplishments of [the] decade."[1] It provided a means for all three university missions--Extension, research, and resident teaching--to reach the citizens of Virginia through conferences, workshops, and institutes. According to a 1978 Task Force report:

> **Civic organizations, service clubs, and other citizen groups interested in better government and improved communities are those principally involved in these activities. In addition, adult leaders in youth organizations such as the Scouting movement regularly seek to avail themselves of this facet of the university's services. Academic and professional organizations having widespread impact upon our state are especially involved with this aspect of the Extension effort.[2]**

Initially, the program was to be only a small part of the Extension Division. The Continuing Education Center was to house the effort on campus and to direct the effort off campus at locations where citizens' needs demanded. But the program grew so much, both off and on campus, that it became a major part of the Extension Division. In fact, Continuing Education Center program staff continued to have to schedule increasing numbers of programs off campus in the 70s. For instance, in 1971 the educational center held only 13 of 121 non-credit programs off campus, but, by 1978, it had to hold 172 of 375 programs off campus.

Off-campus non-credit programs were divided into community education and community service offerings, both similar in content. However, community education offered Continuing Education Units (CEUs), which made its programs "quantifiable and qualifiable". The Gilley report stated:

> **CEUs are certified for those who meet the program criteria established for the CEU, one CEU being awarded for each ten contact hours in an organized educational program. This system promotes public recognition and provides a record of participant achievement in continuing education programs.[3]**

Non-credit community education was connected with occupations. Its programs involved management, labor, and local, state, and federal government agencies. Such programs as "New Electronics for Automation and Instrumentation", "Corporate Cash Management", and "Legal and Policy Issues in Education" are examples of those developed.

As with off-campus credit courses, each of the seven colleges was connected with the non-credit program.

The third program segment of the Extension Division in the 70s was Technical Resources. Formed in 1966 as State Technical Services (STS), the major objective of this program was to offer scientific and engineering assistance to businesses, industries, and commerce throughout the state. When STS first began operating, it was funded by federal money and matched with state or private funds or both. It offered mainly short courses with minor activities in field visits and information dissemination. However, Virginia Extension's evaluation of STS activities in its own state indicated that short courses were not valuable in transferring technology, but personal contact through field visitation was extremely important.

In 1970, the federal government terminated its STS program. However, it was considered by many individuals in Virginia to be an asset to the state, so it was transferred to Cooperative

Extension and continued to operate as a state program. Its name was shortened to Technical Services at that time. A 1978 report stated:

> **The termination of the national program provided an opportunity to modify the state program so as to be more responsive to state needs. At that time, the concern for the environment was paramount, and environmental regulations were creating increased needs for technical assistance in both the public and private sector. As a result, program activities were expanded to include pollution abatement and noise control, and local and state governmental agencies were added as clientele.[4]**

Technical Services continued to develop programs in such fields as occupational safety, employee health, and energy conservation. It was through Technical Services that the seafood technology and wood products studies began. Bob Pusey, director of Technical Services at that time, stated that these two programs were similar to other Cooperative Extension programs and should be handled like them. Consequently, they were transferred to Cooperative Extension in 1973, where they had direct access to Extension's delivery system.

Technical Services, renamed Technical Resources (TR) in 1976, became "a leader in the nation in the development, implementation, and evaluation of a program for technology transfer."[5] It has worked on well over one thousand problems. Annually, it has benefited not only Virginia businesses and industries but also governmental agencies and private citizens. It has saved them more than three million dollars every year. Also, TR has given technical advice and made referrals to over four thousand clients. "These efforts have resulted in new jobs, higher produce quality, safer worker conditions, increased efficiencies, conservation of energy, and abatement of pollution."[6]

Pusey recalled one of the more unusual requests to which TR responded. In 1976, a request came from a racetrack in New Jersey:

> **As you are probably aware, the inside fence or railing at most racetracks is covered with a soft, rubber-like material for the protection of horses and riders. During the spring of the year, sea gulls were pecking away pieces of protective covering, presumably to use as nesting materials. The owners of the racetrack asked how they could prevent the sea gulls from destroying this protective covering.**

I discussed the characteristics of sea gulls with a faculty member at Virginia Tech in the School of Forestry and Wildlife, College of Agriculture and Life Sciences. One important fact came to light. Certain colors and odors attract sea gulls, but others act as repellents.

The obvious solution was to apply one of several chemicals, which had an odor repelling to sea gulls. However, the chemical had to be one which would not react with the covering. Several chemicals with these two characteristics were identified. TR provided this information to the owners of the racetrack. Presumably this recommended action was successful since the racetrack owners did not ask for additional assistance.[8]

Support programs are another important part of the Extension Division. They directly benefit Extension employees and are called management support, fiscal support, and faculty and staff development.

The management support program directs such operations as purchasing, inventory control, space management, penalty mail, personnel records, and employee benefits. It also advises the deans, directors, and supervisory staff on appropriate federal and state laws and regulations.

The fiscal support system is designed to meet state and federal accountability standards and provide support for educational programs. It allocates local, state, and federal funds to the Extension Division's various program areas, with 80 percent of the funds going into salaries of personnel. Also, it is accountable for the way funds are spent and serves as the Division's fiscal watchdog.

Another support program is faculty and staff development (FSD). The story of its progress begins with an earlier decade. In the late 40s and early 50s, the federal Extension Service began to emphasize faculty and staff in-service training. Among the early advocates of such training in Virginia were Extension Director Dietrick and Associate Director Daughtrey (who became director in 1962).

What are some future directions that Extension might take? Extension will no doubt continue to move into Virginia's urban areas, and it can expect to play a larger role internationally.

Al Steiss, former Extension director of the College of Architecture and Urban Studies, has stated that the primary concern of the Extension Division "should be with existing or potential university public service outreach activities directed

specifically to the broad social needs that people have as a consequence of living in contemporary urban society."[9]

Steiss pointed out that Extension in Virginia's urban areas might function in several ways. These several methods, familiar to workers over Extension's 75-year history, need to be concerned primarily with urban issues, not with transplanted rural ones. The demonstration technique, successfully used by Extension in agriculture throughout its entire history,

> **might conceivably range from demonstrations that show newcomers to urban society where basic services and commodities may be secured, to highly complex programs for mobilizing numerous social, economic, and intellectual resources that demonstrate their potential impact as change agents on a community in need of substantial improvement for sound urban living.[10]**

But, besides performing urban demonstration, Extension can function as a clearinghouse for knowledge coming from Virginia Tech and needed by urban communities. It can also act as a counselor, a consultant, or moderator. These roles can also:

> **range anywhere from answering a relatively simple inquiry by mail, telephone, or in person, to engaging in an Extension process of providing information, technical assistance, and guidance, including the presentation of alternative courses of action with respect to larger problems...[11]**

It can bring together interested persons for discussions on important issues and can also conduct seminars and conferences as a way of providing in-service training programs for high-level policy makers. And it can offer special educational programs on the nature of urban society, development, and problems and issues, including programs presented through the public media.

Extension's role in international agriculture also will increase in the future. The Marshall Plan, considered the forerunner of all international agricultural programs, was established by the United States government following World War II as a way to keep agricultural and industrial production high without reducing the value of the dollar. The Plan opened up a whole new philosophy and commitment on the part of the United States to help countries ravaged by World War II and led to Extension's involvement in international agriculture.

During the early years of the Marshall Plan, neither the Virginia Extension Service nor USDA Extension planners seemed interested in international involvement. In fact, no mention whatsoever was made of international Extension. The idea did not even appear in SCOPE 58. However, certain international programs

undertaken by both agricultural colleges and Extension Service Personnel were in progress and even then were an integral part of total university programs.

On the Virginia Tech campus, the first recorded visit of a foreign agriculturalist was in April 1953. The foreigner was a Bolivian interested in cattle breeding and dairy management. This visitor came a good five years before SCOPE 58 was written and over 10 years before the Agency for International Development (AID) was established.

AID now is largely responsible for much of the international training taking place within the United States. AID requires that each university, through its college of agriculture and state Extension service, sign an agreement with USDA for participant training. This agreement can be renewed, for periods not to exceed five years, in accordance with the amended Foreign Assistance Act of 1961 and Executive Order 11223. The agreement is based upon:

> **"certain services and facilities [which] shall be provided by the contractor (the Cooperative Extension Service) in connection with the Foreign Assistance Programs administered by the Department of Agriculture for the Agency for International Development (AID) and for reimbursement to the contractor by AID for such services and facilities."**

A new USDA and AID agreement was renewed with Virginia Tech in 1978.

USDA-AID and the Department of State have sponsored over 700 foreign visitors to Virginia Tech. These agriculturalists have included professors, scientists, governmental officials, cabinet officers, and provincial governors from 79 countries of the world.

The diversity of their interests is noted in the following list of selected learning requests made over the years. They wanted to know something about:

agricultural credit
animal pathology
apple production
biometrics
face fly
farm mechanization
food and nutrition
forestry
grain storage
insecticides
irrigation
cattle breeding
community improvement
crop production
dairy processing, marketing
poultry production
program development
radioactive elements
seed products
soil, fertilizer, and lime
soybeans
tobacco products

peanut research visual aids

Many of their learning interests take the visitors away from the Virginia Tech campus onto farms and into local county units. Lay professionals, businessmen, farmers and farm managers, and farm families help the visitors acquire the information they want. In order to recognize the valuable aid these local people give, Extension awards them certificates of appreciation. To date, 19 certificates have been given throughout the state.

While a number of Extension personnel from Virginia have accepted overseas assignments, most of the international training has taken place on the Virginia Tech campus and in Extension field units.

Unlike SCOPE 58, a 1968 report prepared by USDA, titled A People and a Spirit, listed international peace and economic development as one of seven priority issues. No doubt this written statement of concern for international development helped lay the groundwork for passage of the 1975 Famine and Its Prevention and Freedom from Hunger Amendment (Title XII) of the Foreign Assistance Act. This Act gave universities greater latitude to assist in international development; it also enabled the Secretary of Agriculture and land-grant institutions to work together to help underdeveloped countries establish colleges of agriculture and Cooperative Extension programs.

Virginia was asked to supply data on the international activities of both the university and Extension to assist Congress in passing Title XII. Virginia's report was put in final form and sent to the sponsoring land-grant university authorities. Title XII passed. As a result of its passage, an international program called "International Development: A Working Conference on University Action" was held on the Virginia Tech campus, September 1976. Representatives from 35 states and 10 countries attended.

With passage of Title XII and with the commitment of universities, the future looks promising for more and greater efforts in international Extension programs both at home and abroad.

REFERENCES

Section I

Chapter One

1. Philip Alexander Bruce, Virginia: Rebirth of the Old Dominion, Vol. II (New York: Lewis Publishing Co., 1929), p. 219.

2. Ibid., p. 221.

3. Letter from Charles W. Wampler to T. O. Sandy, 10 May 1910.

4. Duncan Lyle Kinnear, The First 100 Years: A History of Virginia Polytechnic Institute and State University, (Blacksburg: Virginia Polytechnic Institute Educational Foundation, 1972), pp. 3-4.

5. Source of reference unknown.

6. Cornelius J. Heatwold, A History of Education in Virginia, (New York: The Macmillian Co., 1916) pp. 308-14.

7. Ibid., pp. 315-16.

8. J. D. Eggleston, Extension Work in Virginia 1907-1940, A Brief History (Blacksburg, Va.: Alpha Gamma Chapter of Epsilon Sigma Phi, 1940).

9. Joseph Cannon Bailey, Seaman A. Knapp, Schoolmaster of American Agriculture, (New York: Arno Press and New York Times, 1931), p. 190.

10. Letter from J. D. Eggleston to W. S. Green, Jr., 24 April 1939.

11. Insert included in a letter from Eggleston to L. B. Dietrick, 22 April 1947.

12. Virginia Cooperative Extension Service, Bulletin 2 (July 1915), p. 3.

Chapter Two

1. Joseph Cannon Bailey, Seaman A. Knapp, Schoolmaster of American Agriculture, (New York: Arno Press and New York Times, 1931), p. 247.

2. Ibid., pp. 449-50.

3. Ibid., pp. 260-61.

4. U. S. Congress, House of Representatives, Hearings, Report and Debate, Smith-Lever Act of 1914, p. 1966 (reproduced from the Congressional Record by the Agriculture Extension Service, Blacksburg, October 1959).

5. Duncan Lyle Kinnear, The First 100 Years, (Blacksburg: VPI Educational Foundation, 1972) p. 197.

6. Ibid., p. 230.

7. Virginia Cooperative Extension Service, Three Years of Extension Work in Agriculture and Home Economics in Virginia, (Blacksburg, VPI: May 1919), p. 9.

8. Joseph Cannon Bailey, Seaman A. Knapp, p. 276.

9. U. S. Congress, House of Representatives, Hearings, Report and Debate, p. 1966.

10. Virginia Cooperative Extension Service, Bulletin 2 (July 1914), p. 37.

11. Ella G. Agnew, "The Story of the First Decade," p. 15.

Chapter Three

1. Jesse M. Jones, Three Years of Extension Work in Agriculture and Home Economics in Virginia, (Blacksburg, VPI), p. 9.

2. Ibid., p. 65.

3. Ibid., p. 68.

4. Ella G. Agnew, "The Story of the First Decade," p. 16.

5. Ibid., p. 16.

6. Home Demonstration Report from a home agent to Helen Ricks, 12 October 1918.

7. Interview with Hallie Hughes, 8 September 1978.

8. Home Demonstration Report from a home agent to Helen Ricks, 12 October 1918.

Chapter Four

1. Virginia Cooperative Extension Service, Bulletin 101 (December 1926), pp. 17-18.

2. Virginia Agricultural Advisory Council, A Five-Year Program for the Development of Virginia's Agriculture, (Blacksburg: Extension Division, Virginia Agricultural and Mechanical College and Polytechnic Institute, 1924), p. 3.

3. John R. Hutcheson, "Virginia Agriculture Leads the Way," p. 14, (Typewritten).

4. Virginia Agricultural Advisory Council, A Five-Year Program, p. 10.

5. Ibid., p. 18.

6. Bertha P. Wailes, History of the Virginia Federation of Home Demonstration Clubs, 1923-1960 (1960), p. 9.

7. Thelma T. Hewlett, "Rachel R. Carter," Master's Thesis.

8. Franklin M. Rick, The 4-H Story: A History of 4-H Club Work, (Chicago: National Committee on Boys and Girls Club Work; Ames, Iowa State College Press, 1951), pp. 26, 96-98, 210-11.

9. Patrick H. DeHart, "The Development of the All Star Program," in "Fiftieth Anniversary of the Virginia Chapter of 4-H All Stars 1922-1972," a program for a 4-H conference held at VPI, Blacksburg, 23-25 June 1972.

10. Interview with Ross Newsome, 14 July 1978.

Chapter Five

1. John R. Hutcheson, "Some Results of Extension Work in Virginia in 1931" (1932), p. 4, (Mimeographed).

2. Interview with W. H. Daughtrey, 11 September 1978.

3. Ibid.

4. John R. Hutcheson, "Virginia's Agricultural Process," (1936), p. 1, (Typewritten).

5. John R. Hutcheson, "Some Results of Extension Work," p. 3.

6. "History of Home Demonstration Work in Virginia" (1938), p. 2, (Mimeographed).

7. Interview with Helen Alverson, 13 September 1978.

8. Virginia Cooperative Extension Service, Bulletin 132 (March 1933), p. 31.

Chapter Six

1. Lynchburg News, 14 December 1919.
2. Virginia Cooperative Extension Service, Bulletin 160 (March 1944), p. 59.
3. John R. Hutcheson, "Meeting Virginia's Production Goals," p. 3, (Mimeographed).
4. Interview with Hallie Hughes, 14 September 1978.
5. Interview with L. B. Dietrick, 12 September 1978.
6. Letter from C. C. Funkhouser to D. T. Painter, 30 March 1943.
7. Letter from D. T. Painter to John R. Hutcheson, 16 April 1943.
8. John R. Hutcheson, in a memorandum to all county and home agents, 24 July 1933, (Mimeographed).
9. Letter from John R. Hutcheson to the Honorable John W. Flannagan, 6 May 1948, p. 1.
10. Interview with W. H. Daughtrey, 11 September 1978.

Chapter Seven

1. Interview with W. H. Daughtrey, 11 September 1978.
2. Interview with Milton C. Harding, 29 September 1978 and May 1979.
3. Ibid.
4. Letter from D. A. Robinson to Maude E. Wallace, 26 March 1952.
5. Interview with Blanche Harrison, 29 September 1978.
6. Maude E. Wallace, "What is Home Demonstration Work?", p. 4, (Mimeographed).
7. Ibid.
8. Interview with Don R. Fessler, 9 November 1978.
9. Interview with Ethel L. Grubbs, 3 November 1978.

Chapter Eight

1. Interview with W. E. Skelton, 16 October 1978.
2. Interview with Ross Newsome, 14 July 1978.
3. Interview with Milton C. Harding, 29 September 1978.
4. Ibid.
5. Ibid.
6. Interview with D. T. Rogers, 14 October 1978.
7. Lizzie A. Jenkins, "Cooperative Extension Work in Agriculture and Home Economics, State of Virginia, 1935," Twenty-fourth Annual Report (December 1935), p. 4, (Typewritten).
8. Lizzie A. Jenkins, "Cooperative Extension Work in Agriculture and Home Economics, State of Virginia, 1943," Thirty-second Annual Report (December 1943), p. 12, (Typewritten).
9. Interview with Milton C. Harding, 29 September 1978.
10. Virginia General Assembly, Regular Session, An Act to Amend the Code of Virginia, Approved April 1, 1966, S324, Ch. 379, p. 577.
11. Interview with W. E. Skelton, 16 October 1978.
12. Ibid.

Chapter Nine

1. "The Extension Division of Virginia Polytechnic Institute and State University, Decade of Development 1965-75" (Blacksburg, 15 August 1975), p. 150, (Mimeographed).
2. Virginia Polytechnic Institute and State University, Extension Division, "Report Prepared for the Extension Budget Guidelines Task Force," October 1978, p. 100.
3. Ibid., p. 98.
4. "The Extension Division of Virginia Polytechnic Institute and State University, Decade of Development 1965-75" (Blacksburg, 15 August 1975), p. 92.
5. Ibid., p. 93.

6. Ibid.

7. Ibid., pp. 94-95.

8. Interview with Robert Pusey, February 1979.

9. Alan Walter Steiss, "Urban Extension: An Approach to University Public Service Outreach," paper prepared for Title VIII workshop "Consolidation-Service Districts or What and How?", Virginia Commonwealth University, 15-17 September 1970, p. 17, (Mimeographed).

10. Ibid., p. 12.

11. Ibid.

Pictorial Annals

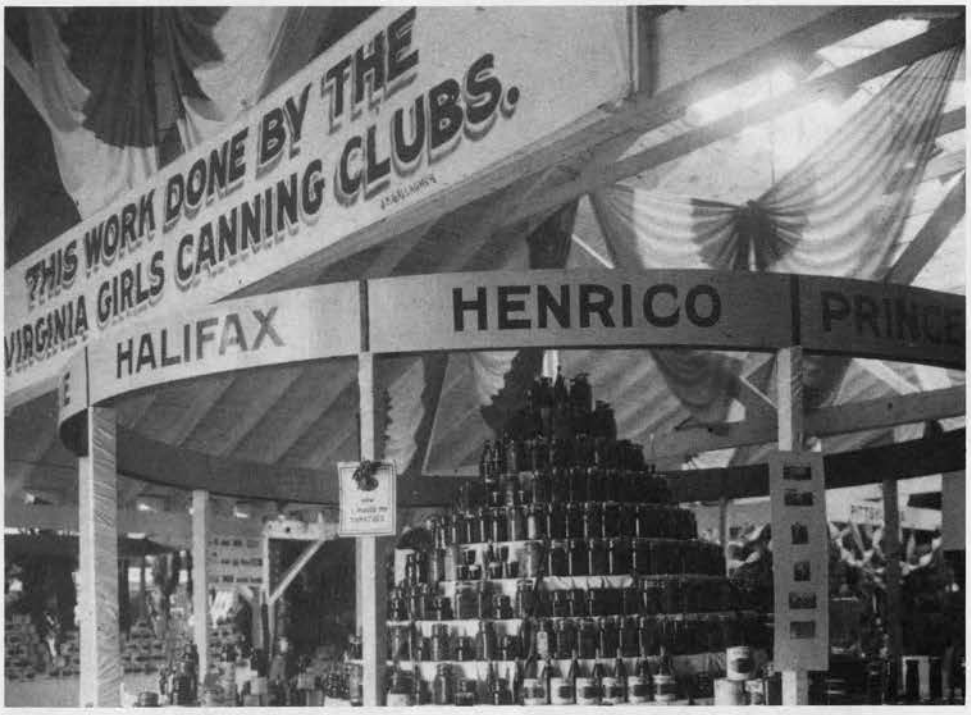
This home demonstration club member practices the cheesemaking techniques she learned from a home economist.

Help with home poultry flocks aids not only family nutrition but sometimes family finances.

Food preservation results are displayed by a home demonstration club member.

Mechanical skills are needed by home economists as they teach about repairing sewing machines.

The Institute of Rural Affairs, which brought farm families to the university to learn, always included social activities.



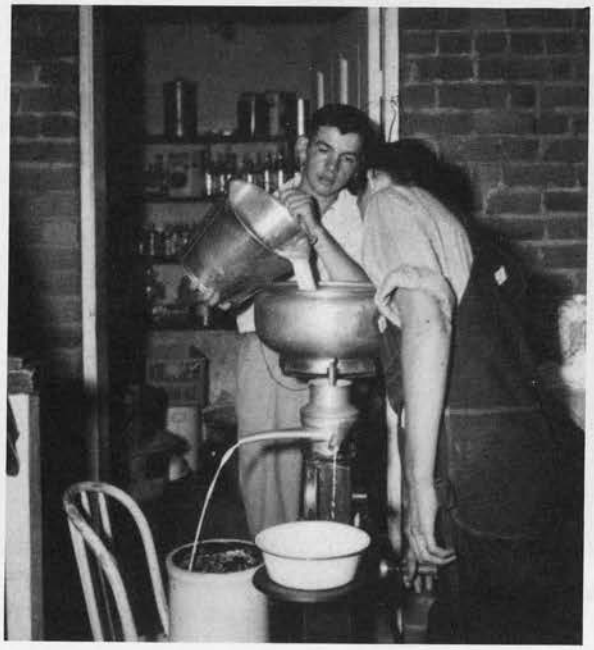
Skillful work by members of the canning clubs brought the honor of being a part of the state fair.

Home agent Lillian Livesay shows a 4-H member what to watch for when doing home food preservation.

The lawn chair is part of a 4-H home improvement project.

The many steps in clothing construction are taught in this 4-H session.

Sheep shearing skills have to be practiced.



Specialized equipment is usually a part of dairy operations, and Extension helps farmers learn about it.

Proper storage of home-preserved produce is taught by home agent Eva Minniz.

Group photographs have always been a tradition for 4-H.

Beside the tractor is often the best place for agent to talk about farming practices.

An agriculture Extension specialist teaches farmers how to vaccinate hogs.

SECTION II

Development of Extension Programs

AGRICULTURAL ECONOMICS

In his 1920-21 report, President Burruss cited a statement from The Report of the Commission on Country Life to President Roosevelt as a foundation for his proposal quoted below:

> **We have done much for better farming in Virginia, but we have yet to do much for better business on the part of farmers in Virginia, and also for better living in our rural districts. A department of rural economics, including agricultural economics and rural sociology, is badly needed here.**

The Board of Visitors acted favorably on President Burruss' proposal, and Gustav Paul Warber joined the faculty in 1921 with the rank of associate professor of agricultural economics and specialist in marketing. Consequently, the beginning of agricultural economics in the Extension program was devoted to marketing problems, probably because of declining prices of agricultural products following World War I.

Clifford C. Taylor joined the faculty in 1923, after Professor Warber's resignation, with the same faculty rank and responsibilities. Although Taylor's Extension program primarily focused on marketing farm products, he allocated some time to farm tenure, especially share-rental agreements.

In 1926, a full-time Extension farm management specialist was employed to conduct programs on the economics of producing farm products. Primary emphasis of this specialist was helping farmers keep production records on crop and livestock enterprises from which they derived their main source of cash income. Analyses of the records were made in an effort to find ways of reducing costs. County agents were kept informed of the results and some mimeographed summaries were prepared and distributed.

That same year, a Department of Agricultural Economics was established in the School of Agriculture, and Taylor was appointed head. Prior to this change in administration, the agricultural economics Extension staff was directly responsible to the director of the Extension Division. Thereafter, they were responsible to the department head. In 1929, the department became Agricultural Economics and Rural Sociology in conformity with President Burruss' earlier recommendation to the Board of Visitors.

The agricultural depression during the 20s created an interest in the organization of buying-and-selling cooperatives that would provide greater bargaining power for farmers. In response to this nationwide interest, a full-time Extension specialist was employed in 1930 to conduct an educational program

on farmer cooperatives. This specialist worked extensively with farm leaders throughout the state on the organization of buying-and-selling cooperatives and the management problems that arose in operating them.

Taylor resigned in the fall quarter of 1930 and Harold N. Young, who had joined the faculty on July 1, 1930, became head of the department. As head, Young held an appointment that divided his time equally among teaching, research, and Extension. Prior to the 30s, the agricultural Extension programs in farm management were primarily enterprise cost analyses. Young initiated an Extension demonstration farm program under which farm operators agreed to keep total farm income records to provide data on the complete farm businesses. An effort was made to include farms for each major type of farming in the state. The records were summarized and several measures of income were calculated. In addition, various factors related to income and efficiency of operation were calculated. The summaries were returned to the cooperating farmers and discussed with them.

In 1934, the Tennessee Valley Authority started a demonstration farm program in the Tennessee River watershed, which included nine southwestern Virginia counties. The program was known as the test demonstration farm program. The Department of Agricultural Economics participated in analyzing complete income records of the farms. An agricultural economist was hired and assigned to the department in 1937 to work with the agents full-time as a farm management specialist. Later, this Extension faculty member worked with TVA farm demonstrators in the nine Virginia counties of the Tennessee Valley watershed. After World War II, he became a full-time Extension farm management specialist to assist farmers and county agents in determining, through partial economic budget analyses, whether numerous new farm production practices would be profitable on their farms. After 1950, several subprojects were initiated as a part of the program. These included demonstration no-plow farms with no use of herbicides, rapid adjustment farms in adoption of modern farm production practices, and management of small farms.

In 1931, a faculty member of the department, who joined the staff in 1927 with teaching and research assignments, was transferred to part-time employment on the Extension staff for programs in marketing. The exact nature of his first Extension programs is not known, but later he devoted much of his time to assisting farmers and local government officials to develop or improve farmers markets where products were sold directly to consumers.

During World War II, significant changes in the department's programs became necessary. Some faculty members were on military leave, and others were shifted from their regular duties to preparation of reports on the wartime needs for food and fiber

and the expected adjustments in the nation's agricultural industry after the war when Allied countries would restore their production. After the war, a short supply of qualified faculty made it difficult to fill vacant positions. It was not until around 1950 that adequate Extension staff became available to serve the needs of the agricultural industry that was arising from peace-time adjustments and adoption of improved technological production and marketing practices.

During the 1950 and 1960 decades, the department achieved strength in all of its programs--teaching, research, and Extension--in both quality and quantity, at an increasing rate. Full-time Extension specialists were employed to develop separate programs for the marketing of dairy products, poultry products, livestock, tobacco and grains, and peanuts and soybeans. The programs included changing economic conditions, how these changes affected the sale of farm products, innovations in processing and selling, consumer demand, increased competition from new products, and comparative advantages of Virginia producers. These were years of adjustments in methods of production, products produced, and getting the products from the farm to the consumer.

A mail-in farm record program was initiated under which farmers sent monthly statements of their receipts, expenses, and other financial data to the department. They were edited and coded for punching on computer cards. At the end of the year, summaries were obtained from the computer in time for the farmers to file income tax returns. In addition, analyses of each year's records were made and meetings were held to discuss necessary adjustments in farm practices required for profitable operation. In the 70s, this program was transferred out of the department to a non-profit corporation which charged a fee for services rendered.

In the mid-60s, a special program was prepared and presented to seven groups of county agents over a two-year period. The objective of the program was to teach agents some basic principles of production economics and how to use budgeting to analyze problems farmers faced in adoption of new technological practices. At the conclusion of the program, the Extension Division hired 20 farm management agents to work with farmers and others in the agricultural industries. Each agent was assigned responsibilities in several counties. The agents or their replacements are still an important group among the Extension field personnel, but, after the mid-70s, the department gradually decreased its allocation of specialist time assigned to the program.

After World War II, capital requirements for farm businesses grew rapidly due to the increased size of farms required for efficient operation and an increase in purchased inputs. The

department secured the cooperation of the Virginia Bankers Association in developing and presenting a yearly program of several days' length on financial management and its importance in the total management of a farm business. This program, attended by bank loan officers and farmers, usually consisted of a visit to and discussion of an actual farm operation where available capital was critical to decision making regarding future changes in the business. An effort was made to make loan decisions less dependent on borrowers' collateral assigned as security for a loan, and more dependent on net income expected to be derived from the additional capital invested in the business.

During the two decades, interest in the effectiveness of federal farm price support programs became widespread. An Extension program was developed to show how the regulations, such as allotment of acres, base allotments for milk, etc., affected efficiency of production and farmers' freedom. The presentations were made to civic clubs and local and state government officials throughout the state, but were discontinued when the specialist retired around 1968.

One specialist, who had worked earlier on farm management programs, developed a program on federal and state income taxes. With personnel from the Federal Internal Revenue Service and State Department of Taxation cooperating, the objective was to teach persons who prepared income tax forms for farmers any changes in the laws, and how to handle items like the value of growing animals and the benefits of inputs, such as lime, which are received over a period of years. The specialist also presented a lecture on the inheritance of farm property and the effect of such transfers on the future ownership of farm land.

During the 1970 decade, many of the Extension programs were changed. Less attention was given to "service work"; and the programs, where appropriate, were directed toward more business and financial analysis.

The income tax program remained approximately the same in its objectives, but the number of people enrolled grew rapidly. Also, the lectures and discussions dealt more specifically with details of some regulations. The other phase of the specialist's program in this area--the transfer of property through inheritance--was changed to a broader base of estate planning. Thus, the interested audience was expanded and the program's content included many topics previously omitted. The program on farm price supports was continued, especially for tobacco and peanuts, but the contents of the programs were shifted to a "pro-con" nature and analyzed over both a short-term and a long-term period.

The specialist with responsibility for public policy extended his program beyond price policy to include land-use planning and regulation and real estate taxation. The Virginia General Assembly passed legislation authorizing counties to assess farm land on its value for farming rather than market value. This legislation was controversial and required an educational program to explain its pros and cons.

The record-keeping phase of the mail-in computer farm record program was transferred out of the department in the 70s, but one specialist continues to spend much of his time analyzing the Tennessee Valley demonstration farm records and others from the Virginia Farm Bureau. During the decade, a Farm Management Institute was initiated for commercial farms operated by relatively young farmers. The three-week program involved a broad coverage of business organization and management principles in an endeavor to teach the farmers how to analyze their businesses for weak points and to make decisions on whether changes in farm practices and purchase of additional capital inputs would be profitable. In addition, a farm management tour was held once each year to demonstrate successful practices under given farm situations.

There has been no attempt in the 70s and 80s to have a marketing Extension specialist for each type of farming such as dairy, tobacco, livestock, fruit and vegetables, etc., as existed in previous decades. Each professional specializes in agribusiness management, which includes financial analysis, personnel management, market analysis, etc..

Under the provision of a USDA electronic marketing grant and three supplements, a computer program has been developed for livestock trading, under which livestock auctions, with the producer's consent, list market descriptions of animals they wish to sell on a given sale date. Buyers receive computer printouts of the lists, and at a predetermined time they bid through a computer terminal until the lot is sold to the highest bidder. At the present time, the computer network interconnects 16 market lamb buyers in the U.S. and Canada to several selling points in the East and Midwest. However, plans are underway to expand the program to include other types of livestock.

Agricultural economics Extension specialists have extended their areas of responsibility to industries such as seafood processing and the retail food businesses. The programs are primarily oriented to business management practices, financial analyses, marketing, and merchandising. One specialist spends a significant portion of his time providing assistance to managers of farm supply businesses. One or two workshops for 100 farm supply managers have been held annually since 1972 and have stressed financial management, human relations, operations, and

other management topics. An annual two-day program for farm equipment dealers, which began in the mid-60s, addresses one or two management concerns each year. A new program in marketing, which involves "Ways of Doing Business", for 4-H Club and FFA members is conducted annually. A second new program explains the operation of "futures trading" of farm products, especially grains and livestock. How to remove some price risk through futures trading is presented to farmers, bankers, and farm cooperative managers.

The department has one specialist who spends a part of his time on economic growth and planning. A major objective of his program includes identification of sources of economic growth and the effect of growth upon the quality of life in local communities. The impact of industrial location on communities receives attention. Also, local economic decision making, regarding importance or rejection of specific proposals, is reviewed thoroughly in order to prepare local populations to be more objective in their attitudes toward changes in the economy of their regions.

AGRICULTURAL ENGINEERING

The Early Years

The pioneer developers of Extension programs in Virginia recognized the importance of engineering in agriculture when they established the position of drainage engineer and employed Charles E. Seitz to fill it in 1914. His office was first located in Burkeville, Virginia, but was moved to the VPI campus in 1915. By the end of 1915, Seitz had made surveys for and designed 18 land drainage systems in nine counties for use as demonstrations. Interest in the drainage of wet agricultural land grew rapidly. Both underground tile and open ditch systems were used. Training drainage system installers in the use of the newest technology was an important part of the specialist's work.

The need for engineering work in other facets of agriculture and for improving rural living quickly became evident to Seitz. Problems relating to soil erosion, farm mechanization, buildings, lighting systems, water supply, and home improvement all had engineering implications. As time permitted, Seitz expanded his program to include work on some of those problems. When military service interrupted his work in 1917 and 1918, Mark L. Nichols was employed to replace him. When Seitz returned to Extension duty, his program was expanded to include other aspects of land reclamation and terracing.

The success of his Extension work resulted in Seitz's taking steps to establish a department with a four-year curriculum leading to the bachelor of science degree in agricultural engineering. By the end of 1919, plans for the new department, including Extension, resident instruction, and research, had been approved with Seitz as department head. The new curriculum was the first of its type east of the Mississippi River.

John S. Glenn was employed in 1920 to work with educational programs in the development of small hydroelectric plants, gasoline-driven farm light plants, farm water systems, and other projects to serve individual farms and rural communities. Henry B. Boynton joined the staff in 1920 and began developing a farm building plan service. The plans included USDA designs, along with new ones he had designed, to meet specific farm needs in the state. The plan service was well established when Boynton resigned in 1922 and was replaced by M. J. Markuson who handled the work until 1925. Glenn resigned in 1922 and was replaced by James A. Waller, Jr., who was destined to be involved in many facets of the agricultural engineering Extension program during the ensuing four decades. Joseph B. Cole served on the staff during 1924-25 to handle some of Waller's work while he directed a special rural electrification field study.

After the first ten years of agricultural engineering Extension work, the programs evolved into four nationally recognized areas of specialization within the profession. These were soil and water conservation, farm structures, rural electrification (later electric power and processing), and farm power and machinery.

Administration and Program Leadership

Seitz served as department head and administered its programs in Extension, resident instruction, and research until his retirement early in 1954. Earl T. Swink was appointed department head in 1954. Swink immediately established the position of Extension project leader in the department and appointed Garland D. Kite to fill it. Swink resigned as department head in 1967 to accept the position of Extension leader, special programs, where he served until he retired in 1970. J. Philip Mason, Jr., became department head in 1969 and served until 1979 when he stepped down to devote full time to teaching and research. C. Gene Haugh was appointed department head in 1979. When Kite retired in 1969, J. Lawrence Calhoun succeeded him as Extension project leader. Upon Calhoun's retirement in 1976, Harold A. Hughes was named to the project leader position.

Interest in agricultural engineering-related subjects began to develop in 4-H Clubs during the late thirties. To meet those needs, the Extension specialist in the technical area most

appropriate to the related subject developed the activity or project in cooperation with the 4-H Department. This specialist then had leadership responsibility in the department for conducting the technical aspects of the project in the state. In 1974, Richard A. Spray was appointed Extension specialist for 4-H engineering programs. He served in that capacity until his resignation in 1978. Bernard L. Parsons was appointed to this position effective January 1, 1980.

The position of Extension safety specialist was established in the department in 1976, and Glen H. Hetzel was appointed to it. The program developed by Hetzel was planned to identify the complete range of common hazards to which farm people are exposed and to stimulate action by all Extension workers to help them avoid injuries. One of his first programs trained rescue squad members throughout Virginia in farm hazards, and taught them procedures for extricating injured persons from the machine in which they were entangled.

The philosophy that specialists in agricultural engineering would always seek to collaborate with their counterparts in other departments who had concerns with the subject problem was promulgated and practiced in the department.

Farm Structures

The farm building plan service begun by Boynton consisted primarily of plans for buildings to house livestock and farm crops. In 1926, R. H. Chestnut replaced Markuson to handle the buildings work. Chestnut introduced the farmstead planning concept that related the location and orientation of buildings to farm lots, fields, and roads. Howard H. Gordon replaced Chestnut in 1928, and under his leadership the plan service expanded rapidly to include plans for processing and storage structures for fruits and vegetables. Gordon also developed new designs for livestock, poultry, and dairy structures. In spite of the Depression, he reported that farmers had requested and been furnished 2,641 building plans in 1932.

In 1934, Gordon and the farm management specialist in agricultural economics introduced a farm development program that involved new concepts in farmstead planning. To implement this program, 23 demonstration farms were established in 13 counties that year. Gordon was granted a leave of absence late in 1934 and was replaced by Melvin M. Jones in the structures work. Jones resigned upon Gordon's return to duty in 1936. The farmstead planning program grew rapidly, and Jennings J. Bass was employed in 1936 to assist with it. Frank B. Payne was employed as draftsman. The first farm building plan book was issued in 1936 for county Extension agents' use when they assisted farmers with the selection of plans to meet specific needs. Upon Gordon's resignation in 1937, Kite was employed to take charge of

the structures and farmstead planning program. Bass and Payne both resigned in 1937, and A. G. Foster was employed as draftsman.

Farm building construction increased at a rapid rate. Kite reported that in 1938 plans for buildings estimated to cost more than $1,000,000 were distributed to farmers requesting them in 94 counties. Regulations to meet newly required dairy production standards and the need to improve production efficiency resulted in new building designs. Clopton F. Wilkinson, Jr., replaced Foster in 1939. The structures program was expanded to include plans for small lime-grinding plants, stationary spray systems, and work on termite control. In 1939, farmers requested over 1,100 plans for dairy buildings alone.

World War II brought disruptions and change in the program. Kite went on military leave in 1941 and Wilkinson handled some field work along with the plan service until he entered military service in 1942. W. H. Dickerson's work in the TVA watershed counties was expanded to include farm buildings service in that area. John W. Sjogren of the resident teaching staff was employed part-time to handle the building service until the war ended.

Kite and Wilkinson returned from military service in 1946. Major changes had occurred in corn and grain harvesting during the year, creating a demand for new types of storage facilities. Mechanization in poultry, dairy, and swine production created needs for building design revisions for those enterprises. A new building plan book was produced in 1946-47, and the plan service was swamped to meet changing conditions. Wilkinson resigned late in 1946 and was replaced by Cecil D. Wheary. In addition to the plan service work, Wheary began developing a program to meet increasing requests from the counties for assistance on rural housing.

Wheary was appointed housing specialist in 1948, and Paul W. Stoneburner replaced him to handle the building plan service. Kite and Stoneburner pioneered the development of pole-type buildings for farms. These new structures were more economical to build and maintain. In some cases, construction cost did not exceed one dollar per square foot. By 1951 pole-type building plans were available for livestock and poultry housing, and over 5,000 plans of all types were requested that year. Stoneburner resigned in 1951 and was replaced by Herman Glover. Kite began establishing farm fencing demonstrations in 1952, using improved methods of installing woven wire fences and gates. Plans for horizontal or trench silos were introduced that year and became popular.

Wheary began establishing home improvement and remodeling demonstrations in 1953, and requests for house plans greatly

increased. Glover resigned in 1953, and Herbert H. Gee replaced him to operate the building plan service. Through the remainder of the 50s and into the 60s, insulation and forced air ventilation of poultry and swine buildings made higher population densities possible. Building designs were updated to incorporate plans for ventilation and mechanical feeding systems.

Gee died while on educational leave in 1956, and L. Bynum Driggers was employed in 1957 as his replacement. By 1960, the building plan service contained 355 production and service building plans and 70 designs for rural residences. The thrust of the Extension effort was to assist farmers in making production system changes to reduce costs. Also, in 1960, Kite was designated to promote the infusion of safety information into all Extension specialists' activities as a continuing practice.

Through the decade of the 60s, increased emphasis was given to more exacting engineering design of buildings to reduce construction cost and improve production efficiency. Examples were new structural designs to improve pig litter size and quality and to prevent or reduce mastitis in dairy cows. During this period, plans for fully mechanized systems for storing and feeding ensilage and grain to beef and dairy cattle were developed and came into popular use. Driggers introduced new ideas in the design of structures for swine and sheep. He also developed more appropriate designs for barns and associated facilities for the rapidly growing horse industry. Driggers resigned and was succeeded by Barry H. Bingham in 1966. Bingham worked on designs for slotted floors for swine, the use of flush gutters in swine structures and the use of lagoons for animal waste.

The trend toward the use of interdisciplinary teams of Extension specialists to improve production efficiency in specific commodity enterprises continued in the 70s. Kite retired at the end of 1969, and William H. Collins and Eldridge R. Collins both joined the staff in 1971. W. Collins had primary responsibility for the engineering work in beef, dairy, and sheep production systems. His improvements in dairy facilities raised production efficiency to superior levels in Virginia. E. Collins concentrated on agricultural waste management, and he continued to make design improvements in swine production systems after Bingham resigned in 1973. Hughes joined the staff in 1973. Hughes and E. Collins developed and field-tested improved designs of slotted floors for swine buildings. The engineering work in poultry production systems became Hughes' main responsibility. He also initiated a program on energy management in 1973. During the remainder of the 70s, energy conservation and the quest for new energy sources became a new challenge to each member of the department staff. Field studies to develop and test new technologies increased in importance during the 70s. Wheary retired in 1976 and was replaced by Jerry R. Smith in 1979. The

emphasis of Smith's program was on the retrofitting and remodeling of existing homes to manage and conserve energy.

Soil and Water Conservation

The early work of Seitz and Waller on drainage systems for the wet-land and terracing systems to reduce soil erosion led to the eventual development of a comprehensive program on soil and water management for Virginia agriculture. Terracing work expanded rapidly, especially in the Southern Piedmont Region. In 1926, Waller held 60 terracing demonstrations in 32 counties. By 1934, county terracing associations were being organized to plan educational programs on the construction and management of terracing systems. The newly established Agricultural Adjustment Administration of the USDA, with its incentives for soil conservation, provided additional stimulus. About the same time, Congress created the Tennessee Valley Authority. Virginia counties in the Tennessee River watershed would later benefit from cooperative TVA-Extension demonstration programs.

Beginning in 1935, Waller devoted most of his time to soil and water conservation activities with greater emphasis on land terracing. Terracing associates were functioning in nine counties. The Soil Conservation Service was created within the USDA and working relationships between the SCS and Extension were established in the state. During 1936, county terracing associations started reorganizing into soil conservation associations to expand the scope of their work. Waller reported that 16 such associations had been formed by the end of 1936. His 1937 report stated that 420 miles of land terraces had been constructed that year. In the meantime, interest in both surface and overhead irrigation systems for fruit orchards and truck crops had started developing in 1927. Requests for engineering information and assistance on irrigation increased steadily. In later years, new types of rotating overhead sprinklers were widely used for high-value field crops such as tobacco and peanuts.

A giant step forward occurred when the General Assembly of Virginia enacted the State Soil Conservation District Law in 1938. This legislation provided for the establishment of the State Soil Conservation Committee and the formation of soil conservation districts throughout the state to plan and implement soil and water management programs. It also provided a good mechanism for inter-agency cooperation, with the roles of Extension and the Soil Conservation Service indicated. Waller was named secretary of the state committee and served in that capacity until 1946. By the end of 1940, 13 soil conservation districts serving 46 counties had been organized.

In 1942, Floyd P. Trent was appointed soil and water conservationist to assist the district staff with the engineering

aspects of the program. Trent's work had hardly begun when he was called to active military duty. He was replaced by Edward W. Mundie, and the duties of the position were expanded to include educational work with all concerned public agencies to promote the effectiveness of the program. Immediately after the entry of the United States into World War II in 1942, all such programs in Extension were adjusted to emphasize food and fiber production to support the war effort. In 1944, Mundie was transferred and given overall leadership for Extension's role in the soil and water management programs in the state. Seitz was appointed chairman of the engineering sub-committee of the state group in 1945.

As the cooperative TVA-Extension unit test demonstration farm program developed, Dickerson was employed to handle the engineering aspects of it. His work later included some small watershed run-off studies. Ralph E. McKnight replaced Dickerson in 1945 and J. W. Propst succeeded McKnight in 1946, but he resigned in 1947. James H. Lillard was employed for a short time in 1945-46 to develop ways to give greater emphasis to the soil and water management aspects of the unit test demonstration farm program. Richelieu C. Hines, Jr., joined the staff in 1946, under a cooperative agreement with the TVA, to handle the Extension and field study work in the TVA watershed counties of Virginia. Hines resigned in 1947, and the position was terminated.

Interest in overhead irrigation for high-value field crops such as tobacco and peanuts developed rapidly during the post-war years. Waller initiated a series of annual short courses and conferences for agricultural leaders and equipment suppliers in system design and management. He retired in 1959 after having been involved in nearly all phases of agricultural engineering Extension work during his 37 years of service.

Edward B. Hale succeeded Waller in 1960 to handle the technical aspects of the soil and water program. Mundie was transferred back to the department in 1960 to conduct the education phase of the program and to serve as liaison to the soil conservation district staffs. During the 60s, Mundie popularized the "natural resources conservation" theme in his state educational program. Special features included annual leadership training short courses for public school teachers and other leaders. He initiated a land appreciation program for youth, and young people from approximately 25 counties enrolled in it each year. Through these activities and his work with the district staffs, Mundie had become widely known in Virginia as "Mr. Conservation" when he retired in 1973.

Hale's work in irrigation during the sixties helped make it an important soil and water management tool in the production of high-value crops. This also increased the demand for his

services in the development of water supply resources. Increasing needs for more adequate domestic water supplies led to emphasis on water quality and supply improvement. Concerns about the pollution of streams, lakes, and ground water from agricultural, forestal, and other rural enterprises resulted in programs to abate non-point sources of pollutants and the adoption of best management practices. Hale made significant educational contributions to these efforts during the 70s. Following the Hurricane Camille disaster in 1969, he worked with the USDA in the development of noteworthy publications and other media materials on the protection of people from catastrophic floods.

The introduction of no-tillage and minimum-tillage practices in the production of some field crops in the early 60s was an important milestone in the use of new technologies in soil and water management in agriculture. Hale's work in this area contributed to the effectiveness of inter-disciplinary team efforts in field crop production through the 60s and 70s.

Rural Electrification and Electric Power and Processing

Gasoline-driven farm lighting plants were the only readily available sources of electrical energy for most rural people in 1920. In that year, Glenn began conducting short courses on individual lighting plants for farm families. He also provided engineering assistance on surveying small streams and by giving recommendations for small hydroelectric installations for farms and small groups of rural homes.

In 1923, Seitz, in cooperation with leaders of farm organizations and electric power companies, developed plans for the formation of the Committee on the Relation of Electricity to Agriculture (CREA). The committee planned and constructed a 4.8-mile experimental rural power line in Henrico County in 1924 to serve the rural homes and farms along its route. The purpose of the study was to evaluate the performance of the line and the use of the service by those families it served. Waller directed the project. The results of the study were published in 1926. It was estimated that in 1926 approximately 1,500 rural homes and businesses, of which about 500 were farms, had central-station electric service in Virginia.

Seitz encouraged the two largest power companies in the state to establish rural departments and place an agricultural engineer in charge of their rural development programs. By 1928, two companies had adopted his recommendation. The CREA worked with the State Corporation Commission to develop a uniform rural power line extension policy. Such a plan was announced in 1929. It proposed that the companies would finance and build rural lines where the customers served would guarantee a certain minimum revenue for a stated period of years. The first Virginia

Rural Electrification Conference and short course was held at VPI in 1929.

Even with the serious economic depression of the 30s, by 1935 the power companies had built approximately 5,800 miles of rural lines to serve some 38,000 customers in Virginia. Widespread national interest in rural electrification was developing, and in 1935 Congress established the Rural Electrification Administration (REA) in the USDA. The agency was to stimulate rural line extensions and to provide employment. Swink was employed in 1935 to conduct the rural electrification phase of the department's program in Extension and resident instruction. Congress made the REA a permanent agency of the USDA in 1936 and announced plans for low-cost loans for financing rural power lines. The first REA-financed electric power system in Virginia was energized in Caroline County in 1936. Intense competition developed between the power companies and the newly forming REA-financed electric cooperatives. New developments in line design lowered costs and spurred construction throughout the state.

The Extension program was planned to provide information to people on how to obtain electric service, plan farmstead wiring systems, and how to use the service to improve rural living and reduce labor in agricultural enterprises. Swink developed effective working relationships with the REA and maintained the already good cooperation of the power companies to make the Extension program move forward. The power companies already had agricultural engineers and home economists, and the electric cooperatives added such people, as they became established, to work with educational programs.

The first work in electrification with 4-H Club members in Virginia began in 1939. Swink developed plans with the 4-H Department to enable club members to participate in a National Rural Electrification Contest sponsored by a large electrical equipment manufacturer. In 1939, Swink worked with TVA agricultural engineers and others in designing a forced-air hay-drying system for a Pulaski County Farmer. This installation was used as a result demonstration in 1940. This was the first such installation in the state, and it marked the beginning of a new technology in using forced air in the processing of agricultural crops.

In 1940, Swink assembled an informal advisory group of power supplier representatives to assist in planning educational programs in which they could cooperate. By the end of 1941, 15 electric cooperatives had been organized and were serving rural people in 75 counties. The power companies had also been expanding rapidly, and the combined systems were serving 105,000 rural customers, of which nearly 45,000 were farms.

During World War II, program emphasis was shifted from large-scale expansion of power systems to the utilization of electric service to save labor, increase food and fiber production, preserve and conserve food, and to maintain equipment. Clinics and demonstrations on these topics were the order of the day with Extension and power supplier personnel cooperating. Considerable specialist time was spent on the establishment of community frozen food locker plants, and 35 were in operation by 1945. Joseph E. Collins was employed in 1945 to assist with Extension programs.

The advisory planning group that was formed in 1940 functioned well. In 1945, Seitz and Swink worked with that group to organize the Virginia Farm and Home Electrification Council. The purpose of the Council was to coordinate and expand the education and research activities of all appropriate agencies and organizations concerned with the use of electric service on the farm and in the home. Each participating organization was represented in the Council membership. Member power suppliers provided funds for establishing an office in Seitz Hall and for employing an executive secretary. The person filling this position became an adjunct staff member of the Agricultural Engineering Department. In 1978, the status of the position was changed to enable the person filling it to be a regular Extension appointee. Calhoun was employed in 1946 to be the first Council secretary. The Council has been in continuous operation since its inception. The many special-emphasis programs and publications it has sponsored have been significantly effective in helping rural people derive maximum benefits from electric service. Since 1946, the Council has co-sponsored the annual Virginia Rural Electrification Conference with the department. Calhoun resigned from the executive secretary position in 1949 but continued to serve in an acting capacity until 1954. Others who have served include James H. Strickler, 1955-58; Donald R. Burrowbridge, 1958-62; Harold R. Lezotte, 1963-66; J. Lawrence Calhoun, acting 1967; Richard A. Spray, 1968-69 and Richard H. Trice, 1970-.

Collins resigned in 1949 and Calhoun was appointed to replace him on the Extension staff. Calhoun worked with the 4-H Department to change the electrification activity to a full-fledged project in 1949. The first Virginia 4-H Electric Congress was held in 1951 to honor outstanding achievement winners in the project. It continues to be a premier event and an important highlight of the program. The 1951 state winner also won national honors, as have several others since then. State enrollment in the program rapidly grew to a plateau of approximately 12,000, where it has remained for many years.

Approximately 93% of Virginia's farms and rural homes had electric service by the end of 1951. Modernization of rural homes had been made possible and the service was having a growing

impact on agricultural enterprises. Under Calhoun's leadership, farm demonstrations of forced-air drying systems for corn and small grains were begun in 1950. Such drying facilities made it feasible to mechanize completely the harvesting of small grains and corn. New drying technology and equipment evolved during the 50s and 60s. It was estimated that by 1979 Virginia farmers had on-the-farm facilities for drying and storing 65% of the total grain crop.

Seitz retired in 1954, and Swink was appointed department head to succeed him. Calhoun replaced Swink in the electric power and processing work. Andrew J. Lambert was employed in 1955 to fill the position vacated by Calhoun.

State programs given emphasis during the 50s included improving wiring and lighting systems, environmental control in the home, pressure water systems and water use equipment, materials handling, feed processing and handling, and crop drying. The first field-test demonstrations on forced-air peanut drying were established by Lambert in 1957. This paved the way for the complete mechanization of peanut harvesting. Lambert was granted educational leave for one year in 1958-59, and James H. Strickler was employed to serve during his absence. Complete mechanical harvesting was estimated to require only about 20% of the labor needed with the stack-pole system. In 1977, Lambert designed and started field testing a peanut drying system using solar energy and partial recirculation of air to conserve energy. Approximately 99% of Virginia's commercial peanut crop was mechanically harvested in 1979.

Calhoun and Lambert began an intensive program on modified environmental control for poultry buildings in 1961. This practice greatly increased the capacity of buildings, improved production efficiency and became generally adopted by producers during the 60s and 70s.

Field-test demonstrations using forced air in bulk tobacco curers were conducted by Lambert beginning in 1962. Forced-air curing of tobacco gradually led to more complete mechanization of tobacco harvesting during the ensuing years. Engineering design refinements and improved control devices contributed greatly to progress in the widespread use of forced air in agricultural production.

Farm Power and Machinery

Extension work with agricultural machinery was very limited during the early years of the agricultural engineering program because of the lack of staff. The resident instruction staff conducted special short courses on campus for 4-H groups and others during the summer months. Assistance was also provided in

response to special requests on specialized problems such as lime grinding equipment, seed harvesting, and cleaning machines.

One of the major adjustments made in 1942, due to wartime needs, was the development by Waller of a state program on the care, repair, and maintenance of agricultural machinery. This intensive program involved the training of vocational agriculture teachers, Extension agents, and other professional workers in agriculture to conduct machinery clinics for farmers. Most of Waller's time was devoted to this program until the end of the war.

In 1945, Waller initiated the 4-H tractor maintenance and operation program, which developed into a popular 4-H project. The 4-H Tractor Operators' Contest became an important part of the project. The first Eastern United States 4-H Tractor Operators' Contest was held in Richmond in 1951, and Virginia continues to host this annual event in which winners from as many as 23 states have participated. The Virginia 4-H tractor program has enrolled as many as 1,565 members in a given year.

During the post-war years, Waller expanded the machinery program to include fruit sprayer-duster selection and maintenance clinics. He also added schools for training corn and soybean combine operators in the adjustment and maintenance of these machines to reduce field losses and maintain product quality.

Easley A. Smith joined the staff in 1956 as the first full-time Extension farm machine specialist. Smith initiated programs to help farmers select equipment that would compose efficient and economical mechanical systems for crop production. His program goals were to reduce labor requirements, minimize field losses in harvesting, and maintain quality. Such programs were usually integrated with commodity production projects in cooperation with appropriate specialists in other departments. He also developed needed information on machinery rental and custom-operator charges.

Research on curing peanuts with forced air, and new developments in peanut dryers and combines, resulted in field-test demonstrations on the mechanical harvesting and curing of peanuts in 1957. The test demonstrations over a period of several years showed a potential saving of over 80% in the labor needed for mechanical harvesting and curing systems as compared with the traditional stack-pole method. The first combine peanut harvester was sold in Virginia in 1957; and by 1980 approximately 99% of the peanut crop was harvested, cured, stored, and handled by fully mechanized production systems.

Smith introduced the 4-H small engines project on a pilot basis in three counties in 1961, and 61 club members enrolled. Interest in this project grew steadily and there were yearly

enrollments of up to 4,870. In 1972, the Eastern U.S. 4-H Tractor Operators' Contest at the Atlantic Rural Exposition was expanded to include the 4-H small engines program. The 4-H automotive safety program, which had been introduced in Virginia in 1960 by Hale, became a feature of the Eastern U.S. 4-H Tractor Operators Contest in 1975, when the name of this regional program was changed to the U.S. 4-H Engineering Event, Eastern Division.

Plans for the first field-test demonstrations of wheel-track planting for minimum tillage of corn were developed and initiated by Smith in 1961. He also began similar field trials of mulch planting of soybeans that year. Extension programs included recommendations for no-tillage in corn production in 1962. These new planting and cultural practices reduced soil and water losses and improved yields, but required major changes in machinery and crop production recommendations. By 1980, it was estimated that no-tillage crop production practices were used on more that 30% of Virginia's corn and soybean acreage.

In 1962, Smith introduced a program of training fertilizer industry representatives and bulk fertilizer distributors in the calibration and adjustment of plant-food spreading equipment. The simple calibration method he developed, and the training program for equipment operators, resulted in much more uniform application of fertilizer on the land. The methods used became widely adopted in other states, and the bulk system of handling fertilizer increased in popularity in the next two decades.

Field demonstrations were begun in 1977 to evaluate the response of corn and soybeans to under-row ripping in the planting of those crops. The practice proved to be valuable with certain soil types and became a recommendation where such soils prevailed.

During the 60s and 70s, machinery requirements became an increasingly important economic factor in the production, harvesting, and handling of all field crops. As the interdisciplinary team system of conducting educational programs grew in Extension, Smith's work as a member of such teams working with field crops increased in significance.

Agricultural Engineering Extension
Staff Roster, 1914 to 1980

Bass, Jennings J., 1936-37
Bingham, Barry H., 1966-73
Boynton, Henry B., 1921-22
Calhoun, J. Lawrence, 1949-76
Chestnut, R. H., 1926-27
Cole, Joseph B., 1924-25; 1960-73
Collins, Eldridge R., 1971-
Glover, Herman W., 1952-53
Gordon, Howard H., 1928-34; 1936-37
Hale, Edward B., 1960-83
Haugh, C. Gene, 1979-
Hetzel, Glen H., 1972-
Hines, Richelieu C., Jr., 1946-47

Collins, Joseph E., 1945-49
Collins, William H., 1971-
Dickerson, Walter H., 1938-44
Driggers, L. Bynum, 1957-66
Gee, Herbert H., 1953-55
Glenn, John S., 1920-23
Mason, J. Philip, Jr., 1969-79
McKnight, Ralph E., 1945-46
Mundie, Edward W., 1942-44; 1960-63
Nichols, Mark L., 1917-18
Parsons, Bernard L., 1980-
Propst, John W., 1946-47
Seitz, Charles E., 1914-54
Sjogren, John W., 1943-46
Smith, Easley S., 1956-
Smith, Jerry R., 1979-
Spray, Richard A., 1968-78
Hughes, Harold A., 1973-
Johns, Melvin M., 1935-36
Kite, Garland D., 1937-69
Lambert, Andrew J., 1955
Lillard, James H., 1945-46
Markuson, M. J., 1923-25
Stanley, James M., 1946-47
Stoneburner, Paul W., 1948-51
Strickler, James H., 1958-59
Swink, Earl T., 1935-67
Trent, Floyd P., 1942
Trice, Richard H., 1970-
Waller, James A., Jr., 1923-59
Wheary, Cecil D., 1946-76
Wilkinson, Clopton F., Jr., 1939-46

AGRONOMY

Agronomy, the science of crops and soils, has been an integral part of the Virginia Tech Extension program in agriculture since 1872. The Agronomy Department was established in 1908 with Lyman Carrier as its first head. Since that time, four individuals have served in that capacity: Carrier, T. B. Hutcheson, J. L. Dunton, and T. B. Hutcheson, Jr. A major thrust of the department has been to provide new and useful information concerning soils use and crop production to the farmer and urban user as rapidly as possible.

The effort to provide new and pertinent information on crop production began before the formal organization of the Agronomy Department or the passage of the Smith-Lever Act. Farmers' meetings, at which crop production was discussed, were held before 1900, and corn clubs, forerunners of 4-H, were held as early as 1909. Publications were also made available to farmers during this period. An example is Virginia Agricultural Experiment Station Bulletin 204, "The Management of Bluegrass Pastures" by Carrier and R. A. Oakley, published in February 1914.

In 1918, E. R. Hodgson was appointed the first Extension agronomist, and, later that year, he reported work with corn, farm management, grass, green manure, tobacco, wheat, pasture, fertilizer, lime, crop rotation, manure, cotton, soybeans, cowpeas, and smut eradication. Since 1918, more than 50 persons have held full- or part-time Extension assignments in agronomy on

campus, at field stations, or at other strategic locations in the Commonwealth.

During many of the early years, there was only one Extension agronomist appointment. There were, however, assistant agronomists appointed from time to time. Between 1918 and the late 30s, at least nine individuals held appointments as assistant agronomists; usually, an individual served in this capacity for a period of less than one year to as many as five years. During the first 27 years after the position was established, the following individuals served as Extension agronomists: E. R. Hodgson, 1918-20; J. C. Hart, 1920; W. G. Wysor, 1921-23; G. W. Patterson, 1923-27; and W. H. Byrne, 1927-45. As the program expanded, the necessity for project leaders became apparent and Byrne served in this capacity. Since 1946, four agronomists have served as project leader: H. L. Dunton, 1945-46; P. H. DeHart, 1946-51; W. W. Lewis, 1951-74; and H. E. White, 1974 to present.

Significant events in the evolution of the Extension agronomy program include:

1. Organization of the Virginia Crop Improvement Association in 1921.

2. Appointment of the first soils specialist, G. W. Patterson in December 1922.

3. Involvement in the TVA Program in the 30s and 40s.

4. The Corn War with North Carolina in the late 40s and early 50s, won by Virginia, which introduced the 100-Bushel Corn Clubs. These clubs continued in some counties until the late 60s.

5. The Governor's pasture program in the early 50s. Significant developments originating in the pasture program were the County Pasture Improvement Clubs, the 12-month forage program, the corn silage program and the 20-Ton Silage Club. These activities were at their height in the late 50s and 60s, but some remained as significant county programs into the mid-70s. A major development resulting from the pasture-forage educational program was the formation of the Virginia Forage and Grassland Council in 1978. This organization contributes much to Virginia's livestock and dairy economy through its sponsorship of regional conferences, tours, and other activities.

6. Throughout the mid-century, the VPI soils educational program was received as a model for Extension soils programs. Virginia was among the first in soil

testing, soil mapping, and the interpretation of soils information for professional workers, farmers, and urban users. Two very significant events are emphasized in the dissemination and use of soils information: a) the extension of soil survey information into urban uses, which began with the Fairfax County soil survey in the mid-50s and led to the urban soils program, and b) the correlation of soil test results with soil type, which occurred in the early 60s and paved the way for computerization of soil test results, accomplished some 15 years later.

Support from the field developed quite early in the soils and soil fertility program. Soon after World War II, the Virginia-North Carolina Plant Food Institute was organized, and, for more than a decade, provided moral, physical, and monetary support to many projects involving soils and fertilizer. The pasture fertilization demonstrations serve as an excellent example of this period. As the influence of the Institute began to decline in the late 50s, a Virginia Fertilizer and Lime Advisory Group was formed. Membership of this group included individuals who had been active in the VA-NC Plant Food Institute. From these two groups primarily, the Virginia Soil Fertility Association was organized in 1964. It serves a very important function in putting research findings into practical use on the farms of the state. Concurrent with the growth of these organizations, the soils educational program also expanded. Since the mid-40s, increase in the demand for educational assistance has resulted in the establishment of two Extension soil fertility positions, one in soil testing and the other in computerization of lime and fertilizer recommendations based on soil test results.

7. The Extension turfgrass program, which began in the early 50s, was officially recognized in 1956 when 25% of the forage specialist's time was assigned to turf. This was increased to 50% in 1958, and as the program continued to expand, to a full-time position in 1966 and to two full-time positions in 1971. A significant event in the turf program included the formation of area turf organizations in the 50s and early 60s, action which led to the establishment of the Virginia Turf Council in 1962. Through conferences, short courses (unsurpassed by any state), and other educational activities, turf has developed into and remains an exceptionally strong segment of the agronomy Extension program. It maintains contact with and serves a segment of society not reached by the more traditional agricultural programs. The Virginia

Extension turf program has also served as a model for programs in other states.

8. The urban soils program developed rapidly during the late 50s and 60s, and like turf, involved a new segment of Virginia's people. Significant in the urban soils program has been the establishment of one full-time position at Virginia Tech and three part-time Extension positions for soils specialists working in and partially supported by counties.

9. The expansion of programs involving corn, small grains, soybeans, tobacco, and peanuts have all maintained sustained growth over the years. Progress led to the establishment of the Virginia Soybean Association in 1968 and the Virginia Corn Growers Association in 1977. The tobacco program was largely responsible for the establishment of the Southern Piedmont Research and Continuing Education Center at Blackstone, which now serves as headquarters for the tobacco specialists and other research and Extension personnel who work with crops other than tobacco. Similarly, the peanut and soybean programs contributed significantly to the expansion of the Holland Research Station to form the Tidewater Research and Continuing Education Center where specialists working with these crops are now located. Strong educational programs in crops have led to the establishment of two positions in tobacco and one each in peanuts and soybeans. Initially, one specialist was responsible for peanuts, soybeans, and cotton programs.

10. Good seed is the foundation of superior crop performance. The contribution of the Extension good-seed program and the Virginia Crop Improvement Association (VCIA) over the past 60 years cannot be overemphasized. This program has reached every agronomic crop of significance produced in Virginia from turfgrass sod to peanuts, and has also included some horticultural crops--sweet potatoes, for example. It is impossible to assess the value of this program to Virginia's agriculture.

In the mid-50s, W. W. Lewis, project leader, presented the profile of an Extension agronomist at a conference of the Agronomy Department. Lewis' following characterization was based on the statistical reports of the five full-time Extension agronomists.

* Had an M.S. in agronomy.
* Had served 6 years as a county agent.

* Devoted 141 days per year to field work, 139 to office activities, and took 12 days of annual leave.
* Traveled 22,598 miles by automobile, making 94 visits to 40 of Virginia's 100 counties.
* Wrote 1,222 individual letters.
* Made 25 long-distance telephone calls.
* Prepared 32 news articles for the VPI News Service.
* Recorded 17 radio talks.
* Prepared 5 Extension bulletins, circulars and/or leaflets.
* Gave 68 subject-matter presentations to farmers or other agricultural groups.
* Held 106 small-group conferences with farmers and 60 individual conferences with Extension agents.
* Conducted subject-matter training for agents in 11 different agent training meetings.
* Presented information at 13 field days.
* Made 55 individual farm visits.
* Did the above (and more) in 280 working days.
* Attempted to do no agronomic work between Christmas and New Year in order to spend time with family, and rest for a fresh start next year!

Persons with Agronomy Extension Assignments
1918-1980

E. R. Hodgson, 1918-19
J. C. Hart, 1920
W. G. Wysor, 1921-23
G. A. Jackson, 1921-24
G. W. Patterson, Jr., 1921-28; 1930-33
S. R. Bailey, 1924-?
H. W. Byrne, 1926-45
S. D. Preston, 1928-30
W. H. Daughtrey, 1930-35
S. F. Grubbs, 1933-44
S. S. Obenshain, 1933-36
H. L. Dunton, 1935-42; 1945-67
T. B, Hutcheson, 1936-45
J. D. Guthrie, 1938-42
W. W. Lewis, 1944-74
E. M. Matthews, 1945-59
P. H. DeHart, 1946-51
E. T. Batten, 1946-51
J. N. Worsham, 1946-47
P. B. Douglas, 1946
R. L. Shaw, 1947-57
G. R. Mathews, 1950-64
W. C. White, 1950-51
G. R. Epperson, 1952-77
M. S. Kipps, 1955-67
H. C. Porter, 1958-73
D. L. Kaster, 1958-81
H. C. Potts, 1959-64
G. W. Hawkins, 1962-
A. H. Allison, 1962-
R. L. Harrison, 1964-
J. L. Tramel, Jr., 1965-
H. L. Mathews, 1965-69
H. E. White, 1966-
E. F. Goldston, 1966-71
L. A. Link, 1967-
T. B. Hutcheson, Jr., 1967-
G. D. McCart, 1968-
G. Richardson, 1969-72
A. J. Powell, Jr., 1971-75
M. W. Alexander, 1971-75
J. P. Sutton, 1972-73
J. L. Jones, Jr., 1973-
R. S. Weber, 1973-
D. A. Lietzke, 1973-79
D. E. Brann, 1974-
S. J. Donohue, 1974
R. L. Mendenhall, 1974
J. R. Hall, III, 1976-

M. P. Lacy, 1952-59
J. F. Shoulders, 1952-80
H. M. Clark, 1952-69

P. H. Reid, 1976-

ANIMAL SCIENCE

The animal science Extension specialists (known earlier as Extension animal husbandmen) constitute a long list of dedicated individuals committed to supplying timely technical data and innovative production and marketing programs for the animal industry in Virginia.

The first Extension animal husbandman in Virginia was John R. Hutcheson, who served from September 1914 to April 1, 1917. Hutcheson then moved on to be Director of the Extension Service and later President of the University.

In 1917, Morton O. Cooper came in as Extension animal husbandman and was joined in 1918 by W. H. Burruss and A. H. Oshsner as assistant animal husbandmen. Records of Extension programs and accomplishments prior to 1920 are not available, but we do know this period of 1914 to 1920 did have some activities directed toward livestock improvement.

In 1920, J. P. Keen and George C. Herring started developing programs that provided a foundation for Extension livestock programs as we know them today. They started the 4-H livestock judging program in 1920, for example, and it is still active. When we think of the modern 4-H judging teams as being outstanding, we must remember Virginia placed first at the National 4-H Livestock Judging Contest held at the Chicago International Livestock Exposition as early as 1922.

Today's traveling specialist might be interested in knowing that Keen and Herring in 1920 traveled 1,308 miles by auto and 26,694 by train.

The better sires program, initiated to encourage the use of purebred sires, lasted about 35 years. The Extension agent who placed the most purebred bulls, rams, boars, and stallions in his county during the year received a trip to the Chicago International. An annual report revealed that Craig County was declared free of scrub bulls in 1926.

L. I. Case replaced Keen as Extension leader in animal husbandry in 1923 and served until 1929 when Herring became leader. Herring served in the position until 1952 when he became a member of the Extension administrative team. E. W. Lawson was a member of the staff during 1923 and 1924 and worked primarily

with sheep programs. In 1923, the first swine program of significance, the ton-litter contest, was started, along with swine worming demonstrations.

In 1923, intensive sheep production programs started, with 74 worming and 106 castrating and docking demonstrations. The 1927 annual reports tell of demonstrations in 31 counties for sheep management practices that resulted in average returns per ewe of $12.34. This seems small today compared with some returns of over $100 per head in 1979. In 1925, ram sales were held, with rams averaging $44.00 per head. These successful sales were forerunners of a program that is still active today.

The first Extension feeder cattle production demonstration was held in 1924 in Appomattox County. Little did anyone know that this meager beginning would be followed by innovative programs that resulted in today's Extension beef cattle programs.

By 1930, automobile travel by specialists equaled travel by rail. The animal husbandry specialist that year logged 16,219 miles by auto and 15,159 miles by rail. Thus, travel methods of specialists gradually changed, with rail travel phasing out entirely by the early 50s and air transportation phasing in.

The Extension sheep programs through the years have moved from one highlight to another. George Litton, who moved from the position of Extension agent in Tazewell County to that of specialist at Virginia Tech, organized the nationally prominent Eastern Stud Ram Sale in Staunton in 1942. During Litton's tenure, Extension sheep marketing programs moved from lamb pools to selling by grade on the weekly auction. In 1952, Litton took over as head of the Animal Science Department, and George Allen came in as sheep Extension specialist. In the 60s, such programs were begun as the performance-tested ram feeding trails and a new wool auction system of selling wool where all wool pools were sold in one day to assembled buyers. In 1970, the Tel-O-Auction lamb selling system was initiated because of marketing needs. All of the foregoing programs were of national prominence, and perhaps no Extension Service can boast more about innovative Extension sheep programs than Virginia.

In the late 30s, the beef Extension marketing programs, as we know them now were in the embryo state. Kenneth Litton and Paul Swaffar were the Extension specialists who worked with beef-cattle producers at the time. However, it was not until a couple of years later, at Ewing in Lee County, that calves were grouped according to quality and that calves of mixed ownership were penned and sold together. In 1939, sales were held at Tazewell, South Boston, Staunton, and Ewing; a total of 462 head were sold in the four sales, and calves averaged $47.96 per head.

In 1940, nine county sales were organized by committees composed of two cattle producers and the county agent. In these nine sales, 1,980 head of cattle were sold for an average of $45.98 per head and a gross value of $91,047. Forty years later, in 1980, there were 116,597 head of feeder cattle sold through 128 sales held at 24 locations throughout the state. The consignors in 1980 grossed over $49 million, an average of $421.25 per head.

M. L. Dalton, who served from October 1943 to March 1952 as Extension marketing specialist, contributed many innovative marketing techniques to the feeder cattle program. During his tenure, penning and packaging methods, coordinated advertising programs, and a state feeder-cattle organization were developed. The state sales organization required all calves consigned to Virginia feeder-calf sales to be sired by purebred registered bulls, a requirement that was a big advertising factor and boosted the purebred cattle business in Virginia. These events catapulted Virginia feeder cattle into the limelight.

In 1952, the beef marketing programs came under the leadership of K. C. Williamson. Since he has been on the staff, the sales programs have been expanded to include yearling feeder cattle, spring sales, summer sales, and sales for Holstein feeder steers. The assembling, grading, and marketing of finished cattle in special sales were developed during the late 50s and early 60s. Williamson also instigated the use of Tel-O-Auction procedures for merchandising feeder cattle and finished cattle.

Beginning in 1920, Extension specialists were involved with the purebred cattle business to support the growing feeder-cattle industry, but with the organization of the Virginia Beef Cattle Improvement Association in 1955, changes in beef-producing philosophy came about. Curtis Mast joined the staff in 1948. His program leadership resulted in selection of cattle for growth and reproduction and in the testing and selling of bulls on the basis of their production records. The first performance-tested bull sale was established at Culpeper in 1959 and met with immediate success both in price and changed attitudes of people toward bull production.

In 1961, A. L. "Ike" Eller assumed Extension responsibilities for beef-cattle performance-testing programs and initiated many innovative ideas. The Red House Bull Feeding Station was started in 1972, and it brought about a change in attitude by demonstrating that silage could be successfully used for feeding bulls. A third central bull-testing station was added at Wytheville in 1980. Over the past 23 years, the yearling weight of the bulls tested at these central testing stations has increased from an average of 840 pounds to 1,075 pounds per head.

The swine program was headed by Herring until 1952 when he left to join the administrative staff of the Virginia Extension Service. He had been Extension project leader since 1930 and was succeeded by Mast, beef specialist, who continued in the position until 1975. Other swine specialists were A. T. Lassiter, 1949-1952; Ralph Westing, 1953-1954; Roie Godsey, 1955-1965; and Charles Cooper, 1966 to date. John Henry Carter, Jr., was the first area specialist working primarily with swine. Carter has supervised the boar testing station at the Holland Research Station in Suffolk, a program that has had major impact on the swine industry. Barnes Allen joined the staff in 1960 as an area specialist for livestock in the northeast area.

Cooper has in later years developed performance-testing programs for "on-the-farm" selection, as well as programs for the central boar-testing station.

In 1947, Dave Brower was employed as the first 4-H Club livestock specialist to assist counties with junior livestock programs. Brower's successful beginning was followed by a line of most capable specialists: Hugh Henderson, 1952-1956; Arden Huff, 1956-1971; John Gerken, 1971-1976; and Tom Turner, 1976-1980. Probably, no program in Extension education can boast of such a roster of superior individuals. It is no wonder the junior livestock programs in Extension have done so well. Of particular, innovative significance is the beef carcass show started at Roanoke in 1960.

The horse Extension program was dormant from World War II until 1968 when George Morrow was employed to develop an educational program for both adults and juniors. In 1973, Morrow left and Huff took over the responsibility of the equine educational program, which is in its infancy as compared with the 60-year-old livestock programs. It has made remarkable progress from the standpoint of involving people and meeting their needs.

Adult programs have been focused on state and national seminars and the development of the Virginia Horse Council. The development and perfection of trail-riding programs has been one of the most outstanding innovations. The 4-H horse judging teams have consistently won or placed high in national competition.

DAIRY SCIENCE

The impact of a strong dairy industry on the Virginia economy was recognized at an early date. One of the first reports of T. O. Sandy, state Extension agent, carried the following statement: "The introduction of the dairy business into the state means more grass, more fencing, improved land,

homes, stables, and other farm buildings, and a general progressiveness of everything in connection with the farm."

Two outstanding agricultural leaders associated with VPI in the beginning of the century, W. D. Saunders in 1890 and Hutcheson in 1914, saw the need for improved management practices that would enable farmers to produce greater amounts of food products and energy, and enjoy reasonable profits in dairying. Saunders became a dairy Extension specialist, and Hutcheson an animal and dairy Extension specialist.

The Dairy Herd Improvement Association (DHIA) received an early start in Virginia under the leadership of C. W. Holdaway and Saunders. Holdaway, in 1910, set up a testing program, with eight herds supplying the VPI creamery with milk. This program laid the foundation for the first DHIA, which was organized in Prince William County in 1916.

Since its inception, the DHIA program has been one of the most important field activities for dairy Extension specialists and has provided a wealth of information essential to dairy farmers for conducting successful businesses.

During the years since its inception, the DHIA has greatly expanded, been reorganized, centralized, computerized, and today provides information for nearly every facet of the dairy business. Many of the changes took place during the 20 years while W. N. Patterson gave leadership to the program. In 1948, the local associations formed a Virginia Federation to centralize the program. High points of the program since that time include the initiation and use of computers to process the tremendous amount of data collected and a central milk testing laboratory established in Saunders Hall in 1970. Facilities for determining the somatic cell count of milk were added in 1978. Dairymen may now have farm-based computers to provide pertinent information for management decisions in seconds.

A number of dairy specialists were in charge of the DHIA program during its formative and stabilizing years. These men included L. E. Emmerich, C. E. Schrock, W. P. Sadler, J. N. Lechie, G. R. Pursley, R. W. Dickson, D. J. Young, W. A. Armstrong, M. F. Ellmore, and W. S. Griffith. All made valuable contributions to the program.

In addition to DHIA activities, the dairy cattle breeding program has also received high priority with dairy Extension specialists. The DHIA program demonstrated very early that increased milk production per cow would be essential to expand the dairy industry. Extension specialists began planning to make this happen. Individual milk and fat production records obtained through the DHIA program became the basis for this work. Sire evaluation programs, with an increase in the number and use of

high-quality bulls, became an important goal of the Extension breeding project. Project needs led to the Better Bull Campaign in the 20s, the Bull Register of the 30s and 40s, and finally the Artificial Breeding Association that was organized in the 40s and is still widely used today. R. G. Connelly, project leader during the 30s, 40s, and early 50s, was a leading figure in the development of this highly effective program for upgrading dairy cattle, which contributed to the present-day milk production capabilities of Virginia dairy cows.

In 1945, G. C. Graf was named dairy specialist to spearhead the initiation and development of the present-day artificial breeding organizations in Virginia. The first Cooperative Artificial Breeding Association was located in southeastern Virginia and began operations with the bulls located in Chuckatuck. Later, three other breeding centers, located in Rockingham, Culpeper, and Franklin counties, were also put into operation. Eventually, the breeding centers were merged into one and it was located in Franklin County.

As greatly improved techniques in the handling, storage, and shipment of semen became available, regional cooperatives were formed and the services of outstanding dairy bulls located throughout the nation became available to Virginia dairy farmers. During the 50s, 60s, and 70s, A. S. Foster, K. A. Huston, J. A. Lineweaver, and M. L. McGilliard, who were given the responsibility of conducting the dairy cattle breeding project, initiated a number of innovative practices to enhance the program and increase breeding efficiency of Virginia dairy cattle.

Dairy Extension work with rural youths has had its ups and downs over the years, but was probably at its lowest ebb during war periods. Priority for this endeavor has always been high, but, at times, availability of staff interested in rural youth Extension activities has been low. Despite obstacles, however, the scope of the program increased gradually and reached new heights during the 60s and 70s when the program became available to all youths in Virginia--not just rural youths. R. E. Buffington was an inspirational leader of the dairy Extension youth program during the mid-70s and initiated many worthwhile activities. Many leading Virginia dairymen were members of the rural youth programs and have since warmly supported the youths in their endeavors. Specialists assigned the responsibility for the 4-H youth project were all competent, dedicated, and sincere leaders. They included R. P. Keithly, E. E. Baylor, C. A. Brown, J. W. Foster, J. W. Howe, T. J. LaSalle, and, since 1978, D. A. Hartman.

Extension dairy herd management projects have always received high priority. Under this broad title are included not only dairy business economics but also disease control and prevention, proper and adequate nutrition, labor, and nearly all

other aspects of the dairy industry not covered by the other active Extension projects. Management has received the attention of all specialists since the initiation of the Extension dairy program. Emphasis on any one of the various components of the business has shifted from time to time as priorities dictated. Examples of this are the control of diseases such as Bangs and today's emphasis on mastitis. The nutritional aspects of dairy management have also undergone changes. The use of corn silage as an economical and highly nutritious feed for lactating dairy cows was actively promoted by Sandy early in the 1900s, but it never received the recognition it merited until the 60s when the forage evaluation program was initiated under the direction of Scott Carr. The amount of corn silage fed the milking herds was greatly increased over the years. The number of silos now seen throughout the Virginia countryside attest to this.

During the last 20 years, the use of computer programs has greatly increased and enhanced the economical production of milk by high-producing dairy cows. Saunders, Hutcheson, Holdaway, and F. A. Buchanan were the early promoters of sound agricultural practices on Virginia dairy farms through the Extension herd management program. I. C. Gibson, H. G. Iddings, G. H. Carey, W. R. Murley, G. M. Jones, and C. C. Stallings have made significant contributions to the activity. Murley, Jones, and Stallings were early advocates of the use of computer programs for guidance in making highly effective feeding recommendations to dairy farmers.

Quality milk production has always been a major project of the dairy Extension program. Its activity began with Saunders (employed July 1, 1916) who, for a number of years, strongly recommended the establishment of factories that would manufacture milk products such as cheese, butter, and dried milk. Many sections of the state were ideal for the manufacture of cheese, and many families in these sections had very limited income and could benefit from milk products (specifically cheese).

Along with the development of milk-products factories, the milk production potential was strengthened in the areas where the factories were located. The dairy herds provided a stable incomes for many families that did not have adequate sources of income from their farm lands.

As the demand and potential for the production of "Grade A" milk increased, more attention was directed toward the production of high-quality milk for the retail fluid-milk market. Cooperative activity with milk and milk-product processing plants became a major goal. Today, the milk and milk products programs are food science and technology Extension activities. The on-the-farm milk production interests are still the responsibility of the dairy Extension program. G. M. Jones has directed this activity since 1973.

G. J. Nageotte was the last dairy products specialist to be a member of the Dairy Science Department. He was a leader in the production of high-quality milk and initiated the use of a calendar as a very effective educational tool for quality milk production. This calendar eventually became a pattern used by Extension dairy specialists throughout the United States. Others who assisted in carrying on this important Extension activity were: C. L. Fleshmen, C. W. Pegram, C. C. Flora, W. R. Aull, Jr., and I. C. Gibson.

Project titles have changed very little over the years. During the early 20s, projects included cooperative cow testing associations, better-bull campaigns, general dairy development, cooperative dairy marketing associations, and dairy products manufacture. By 1950, these projects had assumed titles such as dairy herd records, feeding and management, dairy cattle improvement through breeding, 4-H Dairy Clubs and Rural Youth, dairy products and consumer education, and cooperative work with dairy organizations. More recently (1980), from the Long-Range Plan and Plan of Work of the Dairy Planning Unit, objective names such as feeding, quality milk, dairy reproduction, DHI records program, genetics, management, dairy youth, and program balance come into prominence as areas of activity. In the area of program balance, an educational objective was "for women to become aware of the employment opportunities available in the dairy industry and for them to become more knowledgeable about dairy farm business management and production technology."

The contribution of Cooperative Extension to Virginia's dairy industry has been an inspiring one, as indicated by the industry's growth, stability, and continued progress since the early part of this century. It is more difficult to evaluate the contributions of the individual Extension specialists. Some were in the program for a relatively short time, a few had part-time Extension responsibilities, and others devoted all or nearly all of their productive lives to the Extension Service. In any event, all specialists had a hand in the shaping of the Virginia dairy industry, regardless of their tenure, and should receive recognition for jobs well done.

ENTOMOLOGY

Service to Virginia citizens on insect and related problems began as early as 1888, although the Extension Service was not created until 1914 and the first Extension entomologist was not officially employed until 1945. William B. Alwood came to Virginia from Ohio in 1888 and began: 1) "collecting specimens of injurious insects for study and illustration," and 2) "studying the life histories of injurious species and

experimenting with remedies for their destruction." During the first several years, Alwood had to travel largely by bicycle at his own expense. It is not surprising that much of the dissemination of information was by letter and newspaper! Contributions in Extension also were made during this early period by Ellison A. Smyth, who was responsible for assembling an insect collection at the college.

In July 1899, the legislature passed the Crop Pest Law, which provided for the establishment of the Virginia Crop Pest Commission. Alwood was appointed state entomologist and plant pathologist, with J. L. Phillips and H. L. Price as assistants. After the resignation of Alwood in 1904, arrangements were made for the entomological work to be under the state entomologist (Phillips, 1904-1910; W. J. Schoene, 1913-1926) of the Crop Pest Commission. This arrangement, which provided for the Commission's being regulatory and investigational, and the involvement of Extension continued until the Crop Pest Commission was abolished in 1926. Afterward, Extension services in entomology were provided by the entomological staff of the Virginia Agricultural Experiment Station. A frequent comment was that over 100 percent employment was necessary in order to achieve the added Extension duties!

John O. Rowell was the first entomologist employed by the Extension Service. He began full-time work in Extension in 1945 and continued until his retirement in 1969. As the only official Extension entomologist, he attempted to service both crop and animal areas, as well as 4-H and other specialty areas. In 1949, John M. Amos was employed for one-half time in entomology and one-half time in plant pathology. He assumed leadership in developing apiculture and home horticulture programs and gave support to many others. Amos was later transferred to full-time work in entomology and served until his retirement in 1970.

In 1954, a position of survey entomologist was established as a cooperative program with the USDA and the Virginia Department of Agriculture and Consumer Services. The employees in this position have been: Arthur P. Morris, 1954-1960; William A. Tarpley, 1960-1964; O. W. Isakson, 1964-1967; and William A. Allen, 1968-present. The survey, detection, and identification agreement was continued until 1979 when it was terminated by the USDA and replaced by a program in which their own employee would be located at Virginia Tech. In 1980, Gary L. Clement was stationed in the Department of Entomology as a USDA, APHIS employee for work as pest survey coordinator. This permitted Allen to devote more time to coordination of integrated pest management (IPM) programs for forage and field crops.

In 1967, John A. Weidhaas came to Virginia Tech from Cornell University to initiate a new Extension entomology program for nursery crops, ornamental plants, and shade trees. Following the

retirement of Rowell, James M. Grayson (head, Department of Entomology) served as acting project leader for entomology Extension for about a year. James E. Roberts, Sr., from the University of Arkansas, joined the Extension entomology faculty in late 1969 and was appointed project leader the following year. His specialty was livestock insects, but it became necessary for him also to be responsible for insects affecting field and forage crops, vegetables, and stored agricultural products. Amos was succeeded by William H. Robinson, who was given responsibilities for structural and household insects, lawns and turf insects, and 4-H entomology.

In 1974, Robert L. Horsburgh from Nova Scotia filled the faculty vacancy arising from the retirement of Marvin L. Bobb in 1973. Horsburgh (60% Extension, 40% research) was located at the Shenandoah Valley Research Station, Steeles Tavern, the position having been moved there after the Piedmont Fruit Research Laboratory at Charlottesville was closed. His 14 years of experience in tree fruits in Nova Scotia helped satisfy the apple and peach growers who were disturbed by the combination of the two off-campus stations. Also in 1974, Paul J. Semtner, a graduate of Oklahoma State University, joined the faculty of the Southern Piedmont Research and Continuing Education Center, Blackstone. He replaced Clarence B. Dominick who retired that same year, and he was given a split appointment (75% research, 25% Extension) to work primarily on tobacco. In 1978, a new position for IPM on soybeans and small grains became available from federal Extension funds. Robert M. McPherson, a graduate of Louisiana State University, was employed and located at the Eastern Virginia Research Station at Warsaw. Additional federal funds for integrated pest management permitted the hiring of John Luna as a research associate in 1979 for IPM work on alfalfa insects. A specialist in apiculture, Richard D. Fell from Cornell University, joined the faculty in 1979. Although employed for resident instruction, he responded to the needs of beekeepers in the state by initiating new programs of service for them. Also in 1979, it became desirable for John C. Smith of the Tidewater Research and Continuing Education Center, Suffolk, to take leadership of IPM programs on peanuts; therefore, adjustments were made for him to be employed 60% Extension and 40% research. He had previously been full-time research at this off-campus center for about 15 years. Following the retirement of Grayson in 1979, Sidney L. Poe was appointed head of the Department of Entomology. As department head, he continued to give administrative support to the Extension, teaching, and research missions of the university.

Most Extension programs in entomology have been cooperative with, and supportive of, other disciplinary groups in giving coordinated scientific service to agricultural commodities or businesses (e.g., entomologists have cooperated with agronomists, horticulturists, and plant pathologists in providing service

programs to tree fruit growers). However, in the two areas of structural pest control and apiculture, entomology has been in the leadership role. For over 30 years, short courses and other service programs have been provided for the structural and household pest control operators. Programs for assisting beekeepers were provided over a period of years; this effort was greatly strengthened in 1979 when an apiculture specialist was employed at Virginia Tech.

Currently, the predominant theme in pest control is integrated pest management, a program which is strongly endorsed by federal and state agencies. This concept requires a multi-disciplinary and multi-component approach designed to keep pest populations below economic threshold or health hazard levels. Obviously, IPM programs are much more complicated than previous pest control procedures, which depended heavily on chemical pesticides.

Entomologists in Virginia took resolute action as early as 1964 to remove persistent chemicals from recommendations in those cases where acceptable substitutes were available. Nationally, entomologists have given increased attention to finding alternative methods for insect suppression or control for the past 20 years or longer. This has resulted in many weapons being available for consideration in IPM programs, along with prudent use of chemicals. Much of the federal funding for implementation of IPM programs is going to the Extension services of the different states. Entomologists at Virginia Tech should continue to have leadership roles in these programs as they are developed because of their proven expertise and years of preparation.

FOOD SCIENCE AND TECHNOLOGY

On July 1, 1968, the Department of Food Science and Technology (FST) was created with 11 members transferred from other departments in the College of Agriculture at Virginia Tech. Until this time, all Extension efforts in food processing were provided by the departments of Animal Science, Dairy Science, Horticulture, and Poultry Science, in cooperation with some other campus departments. E. N. Boyd was chosen as the first head of FST and, when appointed associate dean of agriculture in 1969, was succeeded by R. V. Lechowich.

In 1968, F. W. Cooler assumed leadership of the fruit and vegetable processing area; Guy Nageotte (Dairy Science), the dairy processing area; and R. Lewis Wesley (Poultry Science), the poultry processing area. Later, P. J. Muldoon, G. J. Flick, and J. D. Baldock assumed leadership of the dairy, seafood, and meats processing areas. Muldoon was replaced by W. F. Collins in 1973

in the dairy area, and J. D. Baldock was replaced in 1979 by N. G. Marriott in the meats area. Wesley transferred to the poultry area of FST in 1973.

Poultry Processing

Until July 1, 1966, no formal Extension assistance was provided to the poultry processing industry in Virginia, although 12 processors were located in the Commonwealth. Several significant contributions, however, have been made during the past 17 years of FST programs to the poultry processing industry. Perhaps most notable is the establishment of a pesticide residue monitoring lab in Harrisonburg, which came into existence as a result of a polychlorinated biphenal (PCB) contamination crisis in 1971. PCBs were accidentally incorporated into fish-meal poultry rations, and, consequently, during the months of September through December, 1971, the USDA required all poultry to be tested for PCBs prior to sale. Virginia Tech and the Virginia Department of Agriculture, under the leadership of Wesley, tested more than 2,600 flocks during the crisis, and not a pound of poultry was condemned. When the crisis was over, the Virginia Tech Extension Service provided leadership to establish the lab, which now operates with a $150,000 annual budget and monitors all poultry and poultry feeds for chemical and pesticide residues.

The FST Extension effort has also resulted in great reductions in undergrade and condemned poultry. For the past 12 years, Virginia has ranked the lowest of all states in total condemned and total undergraded poultry. Assistance provided by Extension has also resulted in improved processing and mechanization of all processing plants. Virginia processors' cost for processing is about 1¢/pound less than the national average.

Virginia processors have indicated that the following programs have been greatly appreciated: (1) waste disposal, (2) human safety, (3) minimizing bruising of poultry during processing and production, (4) minimizing fecal contamination during processing, and (5) establishment of quality control labs in each of the 12 processing plants in the state. The Extension efforts in these programs have been successful in improving the economic returns of the processors, as well as providing the consumer with good products at relatively low comparative costs.

Dairy Processing

Prior to the creation of the FST Department, Extension activities related to milk handling were conducted by agents and specialists who worked closely with dairy science faculty. With the new FST program arrangements, however, and the new personnel involved, some of the close contact with dairy science was lost.

It soon became evident to the specialists that the dairy industry was a total industry and responsibility for quality was a continuous opportunity and could not be separated at the farm gate where ownership of the milk changed hands.

Extension specialists in FST embarked on a cooperative program with Extension specialists associated with the production sector to protect the quality of milk as it is drawn from the cow and through the various channels to the methods employed at the plants to process, package, and distribute the various products. The obvious procedure was to work with those responsible for sanitation and cleaning to assure that finished products met the regulations and were wholesome and safe.

The same emphasis on milk quality was applied to all suppliers, whether the milk was destined for the Grade A fluid market or for the various manufactured milk plants (i.e., cheese, butter, milk powder, and evaporated milk).

In general, FST dairy processing efforts have been successful, even when the consolidation of plant facilities was considered. Virginia did lose the evaporated milk plant to North Carolina; however, the one remaining cheese plant is a viable unit, and state facilities for handling butter and milk powder have been updated and enlarged.

Newer dairy developments in the state include a Farmstead Gouda cheese operation and another which produces Feta cheese from goats' milk. In addition, there are now two goat dairies licensed to sell Grade A pasteurized goats' milk. The FST Extension specialists have played important roles in these developments, as well as in the general maintenance of high-quality milk and milk products for state consumers.

Meat Processing

A significant portion of the Extension meat processing program has been devoted to quality control assistance for meat processors. Several firms have received valuable information and professional consultation related to the identification and control of nitrosamines (carcinogenic compounds) in cured meat products. Assistance with product analysis and with establishing quality control laboratories in various plants has resulted in increased conformity to regulatory requirements and savings for the firms on laboratory fees and the reworking of products that are not in compliance. The net savings have ranged from less than $1,000 for some small firms to much larger amounts that cannot be accurately measured. Through assistance provided to reduce condemnations of carcasses and various animal parts, some meat plants have saved over $100,000 per year.

Another important contribution of the Extension meats processing program has been assistance with the development of accelerated processing systems. These efforts have resulted in additional sales and reduced production costs. Improved processing technology has helped Virginia meat firms remain competitive with those in other states. Since this facet of the program is ongoing, the total economic impact cannot be accurately determined. However, the savings to larger firms in the state should be thousands of dollars each year.

Part of the meats processing Extension program involves dissemination of educational information to the industry and to consumers. Activities have involved the organization of several short courses every year. Various publications related to meat processing and consumer information have been developed. Other channels of communication have included radio and television programs and meat cutting and processing demonstrations.

General Food Processing

A federal regulation requires supervisors in the low-acid canned foods industry to obtain certificates of completion from an approved "Better Process Control School". This requirement has resulted in more than 14,000 persons completing such schools. Twelve courses have been organized and held on the Virginia Tech campus to meet the training need, some in cooperation with the University of Maryland and Rutgers. The 1,083 graduates of these schools are now employed in low-acid food canneries across Virginia and the United States. As informed supervisory personnel, they have been instrumental in improving the safety of canned foods.

Food processors have been informed through periodic workshops, short courses, and conferences on new food and drug regulatory thrusts. From time to time, processors have been suspended from operation by FDA inspectors pending elimination of certain violative conditions. In such cases, the Extension food scientist, fruits and vegetables, has worked with the offending processor, in conference with regulatory authorities, to bring about solutions and improve conditions and procedures so that processing operations could be resumed.

The Extension food scientist, fruits and vegetables, successfully completed a faculty enrichment program with Virginia's largest vegetable canner. Because of this effort, the processor installed about two-and-a-half million dollars' worth of new processing equipment, an investment that has substantially increased the yield, efficiency, and quality of products produced. The faculty member learned much about management problems in a large multi-product "real world" vegetable processing plant. This experience has helped the specialist

design educational programs that are more meaningful to the processors of Virginia and the United States.

A career-oriented film entitled "Science of Survival" was directed and produced following a successful fund-raising campaign directed toward the food industry. This film has brought national recognition to the Virginia Tech FST Department. More than 40 copies of the film have been sold to other universities in the United States and foreign countries.

Seafood Industry

The FST Department began its marine Extension program in 1969 when George J. Flick joined the department. The program was established to aid one of the largest seafood industries in the nation. Marine audiences include seafood processors, fishermen, unit Extension groups, food editors, and food retailers.

In 1971, the FST Department was instrumental in having Virginia Tech awarded a Sea Grant project for the establishment of an Extension marine advisory program. The original Sea Grant Award was based on permanent competency. In addition to expanding campus-based programs, a network of marine Extension agents was established in selected coastal counties and cities. It is anticipated that, by 1990, most residents of the Commonwealth will have immediate access to an Extension marine agent who will deal with the use of marine food, education, marine trades and business, and coastal development.

The Sea Grant program was elevated in 1979 from that of "project" to that of a coherent area. This action increased the level of support to a minimum of $350,000 per year and expanded the program to include education and research projects in addition to Extension. The National Sea Grant Office noted that Virginia Tech, through its Extension Division, was the first institution in the United States to develop an integrated program.

A marine Extension and research station at Hampton was established by the FST Department in 1975 to provide coastal citizens with better access to marine resource programs. The station's physical facilities include a pilot plant, laboratory with chemical and microbiological capabilities, and a meeting room. Personnel assigned to the facility include both faculty and classified staff.

One of the most widely publicized projects conducted by Flick and the Sea Grant staff centered around the oyster industry in the James River. The Environmental Protection Agency (EPA) found kepone in the James, and it had already been absorbed by some of the marine life. The discovery was not damaging in itself, but, because no tolerance limit had ever been set for

kepone in food, any amount present was illegal. As a result, the governor closed the James River to further sport and commercial fishing.

But, there was also a question of what should happen to oysters already harvested from the oyster seed beds in the James and transplanted to other areas throughout Virginia. Many processors had transplanted substantial quantities of oysters from the James and had large funds tied up in them. The oyster business is a three-year industry; if a processor has a million dollar business, he has to have three million dollars' worth of oysters at any given time. A systematic testing program was developed to identify which oysters being kept under water in transplanted seed beds were from the James River. Such oysters were then analyzed for kepone content. It was found that oysters planted over the summertime, from April to September, were free of kepone. Also, so long as the oysters were free of exposure for one summer, no matter where they were transplanted, kepone was undetectable. With this information, processors asked the federal government if their transplanted oysters could be harvested.

While such confrontation was in progress, the industry was prohibited from transplanting any more oysters from the James to seed beds. Processors realized there would not be a third-year crop unless the kepone crisis was solved. A request from the oyster industry to the EPA was made to allow the transplanting of more James River oysters to other areas with an embargo on them until further testing proved preliminary findings. Subsequent tests showed that the initial results were correct and the James River was reopened to oystering.

The rapidity with which the kepone project was performed was phenomenal. Twelve days after kepone was found in the James River, Virginia Tech Extension specialists had their first sample coming back from the laboratory. Before any other agency could get the chemicals ordered to run the tests, and before anyone else could get the systematic sampling done, Virginia Tech's Extension specialists had solved the problem. Credit to Virginia Tech was given in the Richmond Times Dispatch, as well as in hearings before a U.S. Senate Investigation Committee. The value of the project to the industry was estimated to be in excess of one million dollars.

The Sea Grant program and the kepone story represent only two successes behind the FST Department's efforts to serve the seafood industry. Flick and his staff have generated over $1 million in grants to support research since 1969. Flick has developed the Extension effort to the point where it is recognized as the best in the country.

HORTICULTURE

When Extension work began in Virginia, the fruit and vegetable industries were already well established. Virginia was one of the leading states in the production of apples. The industry has continued to flourish, and the state often ranks third in the United States in the number of bushels produced. Vegetable production has also been important in Virginia. Between 1921 and 1961, about 200,000 acres were in commercial vegetable production. The rise and importance of the ornamental industries occurred after 1935.

Extension specialists in horticulture have played important roles in helping professional growers of fruits, vegetables, and ornamentals increase efficiency of production and more effectively market their products. Most of the Extension agents hired since 1914 have not been horticulture majors, so the Extension horticulture specialists have provided them with professional assistance and training.

Fruit Industry

Prior to the establishment of the Virginia Cooperative Extension Service in 1914, the Virginia Agricultural Experiment Station was doing fruit research that proved to be important to the development of the Virginia fruit industry. William B. Alwood was a leader in this research. His first publication in 1889, Experiment Orchard and Small Fruits, helped to launch the application of science to fruit growing. Alwood followed this with over 60 other Experiment Station publications. He was voted the Silver Medal and Diploma of the French National Society of Agriculture in recognition of his work. In 1913, A. W. Drinkard, Jr., began a series of experiments designed to test the effects of pruning, root-pruning, ringing, and stripping on the formation of fruit buds on dwarf apple trees.

When fruit specialists began working, shortly after the Extension program was established, they had the benefit of this outstanding research work to guide them in establishing a fruit program. In addition, they had the support of an active Virginia State Horticultural Society, founded in 1897, whose members were predominantly fruit growers. The fruit specialists did not have to spend time organizing the growers, but could immediately begin to work with the leaders and individual members of the Virginia Horticultural Society. A very close relationship continues to exist between Extension and the Virginia Horticultural Society. The assistance that Extension could provide was recognized early in this relationship when B. F. Moomaw, president of the Virginia Horticultural Society, wrote to Hutcheson. His comments in part appeared in the 1923 Report of Extension Work in Agriculture and Home Economics July 1, 1921, to November 30, 1922:

May I extend to you and your staff a word of commendation and appreciation from the Virginia State Horticultural Society as to the efforts of the Virginia Extension Division in behalf of the fruit growers of the state? I have found the Extension Division always ready to help in most beneficial ways every proposition of the fruit growers along lines of more economic production and better marketing facilities. I have noted a marked improvement in orchard management in this state during the last few years, a great deal of which can be attributed to the Extension Division.

In acknowledgement of the services of the Extension Division to the farmers of the state, I am not unmindful of the fact that the benefits derived from the work of the Extension Division accrue to the urban population of the state as effectively as to the farming population for the simple reason that, as the farmer learns more economic methods of production, [and] better grading and packing methods, the urban population is directly benefited.

Since the first fruit Extension specialist, G. S. Ralston, was appointed October 8, 1914, there have been many dedicated fruit Extension specialists. Those with over 10 years of service are: Dewitt A. Tucker, A. H. Teske, Fred Dreiling, H. B. Aroian, Howard A. Rollins, Jr., Edsel L. Phillips, Ross E. Byers, and George L. Williams. In addition, three department heads with over 10 years of service are H. L. Price, Wesley P. Judkins, and C. Leslie McCombs.

A major accomplishment of the fruit specialists, in cooperation with the Entomology and Plant Pathology specialists, has been the yearly publication of the Spray Bulletin for Commercial Tree Fruit Growers, which guides them in the proper timing and application of pesticides used for the control of orchard pests and diseases. The information contained in this publication has enabled growers to produce better fruit by utilizing pesticides effectively and safely.

The fruit specialists have made major contributions to the Virginia State Horticultural Society by providing guidance and assistance with and at their annual educational meeting for growers.

Professional growers, over the years, have been made aware of industry developments. To cite a few: stop-drop sprays, chemical thinning of fruit, fruit storage, vole control, mechanical harvesting, spraying, pruning, fertilization, and fruit breeding. New development information has been presented at annual fruit schools and field demonstrations and through publications.

Vegetables

Since specialists began work on vegetable production in March 1917, the emphasis has been on commercial production and home gardening. Specialists have played important leadership roles in both categories. In addition, the Extension specialists have worked closely with Extension agents in providing training, guidance, and assistance to enable them to serve more adequately the commercial growers and to advise farm families about more efficient vegetable production.

The early Extension program with commercial growers was aided by the strong research program in existence at the Virginia Truck Experimental Station in Norfolk. Later, vegetable experimental research at Virginia Tech became more productive, and a research station was added on the Eastern Shore at Painter, Virginia.

During three major emergencies--World War I, the Great Depression, and World War II--the vegetable specialists exercised major leadership roles in increased food production. Of the war programs, the Victory Garden program started in 1942 was the most popular. The director of Extension formed a state Extension Garden Committee, and the specialists stressed the patriotic need for Victory Gardens and followed this up with the "how" of gardening.

In the period 1923 to 1945, specialists working in vegetable programs were L. B. Dietrick, L. C. Beamer, and A. G. Smith, Jr. The major commercial emphasis was on Irish potatoes, sweet potatoes, and tomatoes. This Extension work was carried on through field demonstrations and meetings attended by growers. In home gardening, the emphasis was on helping people realize the importance of the home or farm vegetable garden and on providing information about how to garden. Special emphasis was placed on training Home Demonstration Club leaders and working with boys and girls engaged in the 4-H Club work in food production. Another contribution the specialists made between 1923 and 1945 was to provide leadership in promoting vegetable displays at the county fairs and the Virginia State Fair and to set standards for the judging of vegetables. Also during this period, the specialists made major educational contributions during the Great Depression and World War II.

Since 1945, specialists with extended professional time in vegetable production programs have been L. C. Beamer, Fountaine Scott, L. B. Wilkens, Wesley P. Judkins, Flood Andrews, A. V. Watts, Charles O'Dell, and Herman E. Hohlt.

The increased growth in population in Virginia, particularly in the suburbs, created a vast new army of potential home

gardeners eager for information. It became necessary for the specialists and Extension agents to adopt mass-media techniques to serve the larger audiences because it was no longer possible to continue individual home visits. Emphasis was placed on preparing publications and developing slide sets about home gardening. In the late sixties, a monthly newsletter, Garden Suggestions, was distributed to the Extension offices for redistribution to individuals interested in timely garden tips. A weekly garden column on vegetables, made available to the daily and weekly newspapers, became very popular. The number of radio and TV programs on home gardening increased.

From 1945 to 1965, leader training sessions for home demonstration leaders were very popular and required a good deal of specialist preparation time. After 1965, these sessions declined, and there was a switch to county gardening workshops that were open to both men and women. Some of these workshops also included information on small-fruit production and general landscaping.

After the end of World War II, the specialists continued to work with the professional vegetable growers and helped to establish some of the local and state professional vegetable associations. Emphasis with the professional growers has been on mechanization for planting and harvesting, plastic green houses, fertilization, variety evaluation, pest control, and special emphasis on grading, packing, and marketing. Since the bulk of the Virginia commercial vegetable production is on the Eastern Shore, Vernon Watt was employed as a vegetable specialist in 1948 and located near this production area at the Virginia Truck Experiment Station, Norfolk.

In recent years, to help the professional growers and the homeowners in the production of vegetables, a team approach has been used. Horticulture specialists have joined forces with the specialists from agricultural engineering, agronomy, agricultural economics, entomology, plant pathology, and other appropriate departments to develop plans of action that will provide the type of assistance needed to produce better vegetables.

Ornamental Horticulture

Extension work in ornamental horticulture developed slowly from 1914 to 1935. The county agents and home demonstration agents, with a few exceptions, had no training in this field. During this period, limited help was provided by Mary Comfort McBryde who worked in rural beautification. She worked chiefly with home demonstration agents by assisting with the landscaping of rural homes, schools,and churches.

Prior to the establishment of Extension in Virginia in 1914, and for many years afterwards, no funds were provided for

ornamentals research at Virginia Tech. Flowers and landscaping were considered luxuries, and preservation of natural beauty was not considered very important.

During the period 1935 to 1948, the scope of the work in ornamentals was increased. McBryde continued to work with the home agents on rural beautification, but A. G. Smith, who was assigned one-quarter Extension time, in addition to working with agents, initiated Extension programs with the Virginia Nurseryman's Association, Virginia Federation of Garden Clubs, florists, and plant societies. He helped provide guidance for the newly organized Nurseryman's Association and served as editor of its monthly VNA Newsletter. In cooperation with the Virginia Federation of Garden Clubs, he helped organize the Flower Show School in 1938.

From 1948 to 1960, Virginia began to experience a growth in population and it was a period of extensive building of new homes, schools, churches, highways, and industrial buildings. The demand for specialist help from Extension agents increased dramatically, and it was no longer possible for McBryde and Smith to meet all these requests. In 1948, Albert S. Beecher was added as an Extension specialist.

During the next 12 years, emphasis was placed on group training, in preference to individual visits, and on the preparation of bulletins or circulars on ornamental subjects. Publications about these subjects were also prepared and made available: Lawns, Boxwoods, Roses, Design of the Home Grounds, Landscaping Slopes, Landscaping Church Grounds.

The first effort in group training was directed toward Extension agents. In 1949, 145 agents received training to upgrade their abilities to handle problems of home landscaping and plant identification. In subsequent years, additional study opportunities for agents have been provided.

Other group training sessions offered during this period were:

1. Leader training for Home Demonstration Clubs (average of 25 per year).

2. Landscape Design Study Course for professional workers in ornamental horticulture (8 sessions 1955 through 1962).

3. Landscape Nurseryman's Short Course, 1951. A program for nurserymen has been offered every year since then.

4. The Flower Show School in cooperation with the Virginia Federation of Garden Clubs (2 schools per year every year).

5. State workshop for florists in 1949.

6. The Garden Institute of Northern Virginia was organized in 1955 by Fairfax County agent Joe Beard, in cooperation with the specialists, and it provided the general public with information on lawns, landscaping, and vegetables. The success of this program paved the way for other Virginia counties to hold similar programs to serve county folks eager for information on home landscaping and vegetable growing.

7. A Landscape Design Study Course, sponsored by Horticulture and the Virginia Federation of Garden Clubs, was established in 1959. This course has been offered every year since.

8. In 1949, Landscape Notes was prepared and distributed to agents to provide them with timely information. By 1960, agents were requesting 10,000 copies annually.

9. Turfgrass field days at VPI and at the Warsaw Agricultural Experiment Station were held in 1957.

During the period 1960 to 1980, many of the programs started in the early 50s were continued. Smith retired in 1960, Judkins in 1976, and Albert S. Beecher in 1979. New personnel added during this period were Paul Smeal, 1960; James Faiszt, 1963; J. C. Garrett, 1965; H. E. Hohlt, 1969; C. J. Elstrodt, 1971; Ray Campbell and Alan McDaniel, 1975; and P. D. Relf, 1976.

A major change in program planning initiated during this period was a team approach for identifying problems and developing plans of action for solving them. The planning committee included representatives from horticulture, entomology, plant pathology, plant physiology, agricultural engineering, agronomy, and agricultural economics. Eventually, the broad field of ornamentals was subdivided into ornamentals and turfgrass industries (work with professional growers) and home & garden (work with amateur gardeners). The horticulture specialists also served on the plan of work committee for natural resources, and special emphasis was placed on community development.

In 1961, the Turfgrass Conference was established, and it has become an annual event, along with a field day, in the summer at Virginia Tech. The Nurserymen's Short Courses, started in 1951, have now become area short courses that are held in

northern Virginia, Richmond, Tidewater, Eastern Shore, and southwest Virginia.

During the last 20 years, the scheduling of county garden workshops or seminars by county Extension personnel have become very popular for those interested in home landscaping.

The agent training provided during the 50s started paying dividends after 1960 as more agents began to handle programs on ornamentals and turf without having to call upon the specialists for help. Prior to 1965, very few Extension agents had any horticultural background, but several of the county Extension units now have personnel with degrees in ornamental horticulture who are carrying out successful programs in horticulture. Agent training is still being provided for new agents.

PLANT PATHOLOGY AND PHYSIOLOGY

The Department of Plant Pathology and Physiology pursues tripartite missions in research, instruction, and Extension. The Extension Service communicates to the public new and established information covering disease and weed identification and control.

The department name, Plant Pathology and Physiology, was adopted in 1949 when it was separated from the Biology Department. Its predecessor units (according to Harold N. Young, director of the Virginia Agricultural Experiment Station, January 1, 1946-June 30, 1965) were the Entomology and Mycology Department (1889-1891), the Horticulture, Entomology, and Mycology Department (1891-1902), the Entomology and Mycology Department (1902-1904), the Mycology Department (1904-1907), the Plant Pathology Department (1907-1914), the Plant Pathology and Bacteriology Department (1914-1919), the Plant Pathology Department (1919-1926), the Botany and Plant Pathology Department (1926-1935), and the Biology Department (1935-1949).

Service work in plant pathology at VPI was begun in 1888 by William B. Alwood, then horticulturist and entomologist at the experiment station, although the Extension Service was not created until more than two decades later.

The first Extension plant pathologist in Virginia was R. C. Thomas, appointed in 1919. James Godkin was next, starting in 1922. S. B. Fenne became acting Extension plant pathologist in 1927. He was followed by H. R. Angel in 1928, who served until Godkin returned from leave in 1929. There were no more changes until 1939 when Godkin resigned. Fenne was then appointed Extension plant pathologist and made responsible for Extension work in both plant pathology and entomology. In 1942, Fenne was granted a leave of absence for war service, during which time E.

K. Vaughn served 18 months until Fenne returned January 1, 1945. In October 1949, John M. Amos was appointed one-half time associate plant pathologist. On June 1, 1956, Allan H. Kates was appointed weed specialist, and on July 1, 1956, W. Wyatt Osborne was appointed assistant Extension plant pathologist. In 1958, R. H. Gruenhagen joined the department as Extension project leader with responsibility for Extension work on diseases of ornamentals; in 1966 R. C. Lambe assumed these duties. Robert Pristou joined the plant pathology program in 1959 and later became Extension specialist with major responsibility for the Plant Disease Clinic, replacing Fenne who retired July 1, 1967. W. E. Chappell has served as Extension project leader for plant pathology and weed science Extension efforts since 1974. Several other Extension faculty members in plant pathology and weed science have served since that time.

Many research personnel provided Extension services to the state on an informal basis, especially those located at the research stations at Chatham, Holland, Winchester, and (until the mid-50s when R. J. Hurt retired) at Charlottesville. Most other personnel previously mentioned held joint Extension-research appointments at one time or another.

S. A. Wingard, plant pathologist who joined the faculty in 1917 and served VPI for 47 years--15 years as head of the newly formed Department of Plant Pathology and Physiology--held a part-time Extension appointment. Department heads since then (Houston B. Couch, 1964-1974; Chester L. Foy, 1974-1980; and Gary R. Hooper, 1980-present) have all held three-way appointments and have given administrative support to the Extension, teaching, and research missions of the university.

There has been a succession of competent Extension and research specialists in the fields of plant pathology and, more recently, weed science. Current staffing in the department includes 7.6 full-time equivalents (FTEs) in Extension plant pathology and weed science, 17.9 FTEs in research and 4.5 FTEs in teaching. Most hold joint appointments in Extension research and/or teaching.

Six of these 30 faculty members are located at off-campus university facilities. Two each are at the Tidewater Research and Continuing Education Center (Suffolk) and the Southern Piedmont Research and Continuing Education Center (Blackstone), and one is at the Winchester Fruit Research Laboratory (Winchester). The sixth Extension position on integrated pest management in soybeans and small grains is located at the Eastern Virginia Research Station (Warsaw).

The kinds of Extension projects in this department have varied greatly over the years. The earlier projects consisted of control of root stalk and ear rot diseases of corn, control of

cereal smuts, control of wildfire and blackfire diseases of tobacco, and control of tomato and cabbage diseases.

Three severe epidemic years for tobacco blackfire and wildfire were 1917, 1918, and 1920. Especially severe losses occurred in 1920. A considerable part of the crop was unfit for harvesting and much that was harvested was of such poor quality that it sold for less than the cost of marketing. It was estimated that the state tobacco crop was reduced nearly 22,000,000 pounds that year. By 1926, however, wildfire and blackfire of tobacco had begun to disappear from the flue-cured area because of control measures. No severe epidemics of wildfire have occurred since 1920.

This interesting item regarding stinking smut of wheat appeared in one of the early annual reports.

> **Up until the first World War, Virginia and the rest of the United States was not troubled very much with stinking smut of wheat. However, during the war a considerable amount of foreign wheat was brought into the United States for food and some of it was used for seed. As a result, new strains of smut were introduced, to which our American wheat was highly susceptible. After the first World War, stinking smut jumped from a mere trace to 6% and became the most destructive disease of wheat in this country. During 1924, 1925, and 1926, many wheat crops were a complete loss, the grain being fit only for chicken and hog feed (because of the fetid odor and flavor).**

In 1928, an epidemic of the wheat nematode disease appeared in Virginia and a quarantine was set up. As a result of recommendations by the Plant Pathology Department, almost complete eradication of this disease was accomplished and the quarantine against Virginia wheat was lifted.

Black stem rust of wheat was very severe in 1928 and the eradication of native barberry bushes, carrier of the disease, was started. That same year, cabbage yellows was very destructive, corrected since through the use of resistant varieties.

Tobacco bluemold was first reported in virginia in 1930, and by 1932 was the most serious plant disease in the state. Materials recommended for the control of bluemold in the earlier years were copper sulfate and Cal-Mo-Sul. Frequently, farmers reported better control by the use of nitrate of soda, dry soil, sunshine, chicken manure, and other home remedies. Much valuable research was conducted by plant pathologists in this department on control of tobacco bluemold. In 1939, cuprous oxide and emulsifiable oil, benzol, and paradichloro-benzene were

introduced and found to be quite effective. A few years later ferbam and zineb were introduced and are still recommended for tobacco bluemold control.

Tobacco blackshank was first found in Virginia in 1939. The disease originated from plants purchased in blackshank-infested areas in North Carolina during 1937, when there was a shortage of plants in Virginia because of bluemold. In 1940, peanut growers had severe problems with early defoliation of their plants, a condition thought to be an expression of maturity. However, research by L. I. Miller indicated that this defoliation was caused by two leaf-spotting organisms. It was demonstrated that the yield of peanuts could be increased as much as 60% by planting treated seed and using sulfur dust in the field. In 1942, because of the use of control measures developed at VPI, tobacco bluemold and peanut leaf spot were not considered to be the serious problems that they were earlier. Tobacco blackshank was also coming under control.

In 1945, the work in Extension entomology was shifted to J. O. Rowell who joined the department on October 15. Two years later, Extension entomology was separated from the Department of Plant Pathology and Physiology and became a part of the Entomology Department. In 1945, tomato late blight was by far the most serious disease of truck crops and continued to be a serious problem through 1948. Reports in 1953 indicated that the most destructive disease of truck crops and home gardens was caused by root knot nematodes.

A year-round plant disease clinic was established in 1955 at VPI. This was one of the first of its kind in the United States, and a full-time plant pathologist was in charge. The number of specimens received at the clinic increased steadily. All members of the department helped with the clinic whenever special disease problems arose. The Extension plant pathologist attempted to examine most of the specimens and made all replies concerning them. Special disease problems were referred to research specialists concerned with the crop affected.

As the plant disease clinic records increased in numbers, they became more helpful because they not only told Extension agents the areas most commonly involved with specific plant diseases, but also helped research workers find just what the disease problems were and where they could be found.

A weed herbarium was added later, and clinic services were expanded to include weed identification and diagnosis of injury symptoms caused by herbicides, growth regulators, other agricultural chemicals, and environmental-related physiological stresses. Plans begun in the late 70s and implemented recently have made possible the formation of a separate, new diagnostic and predictive nematode assay clinic.

Currently, all plant diseases and disorders are investigated whether incited by fungi, nematodes, viruses, or bacteria or by weed competition, pesticides, pollutants, or other chemical, biological, or environmental stresses.

Historically, members of the scientific staff of the Department of Plant Pathology and Physiology, in cooperation with those in the departments of Entomology and Horticulture, have exercised a decisive influence on the spray recommendations for Virginia orchardists. Similarly, the latest information on effective, safe, and economical controls for diseases and weeds in all other crops is provided through a series of pest management guides, which are revised annually.

Most Extension programs in plant pathology and weed science have been cooperative with and supportive of other disciplinary groups in giving coordinated scientific service to agricultural commodities or businesses (e.g., Extension plant pathologists and weed scientists have cooperated with agronomists, horticulturists, and entomologists in providing service programs to growers). Current areas of emphasis involving disease and weed control are those of "plant protection" and "integrated pest management", areas which have the strong endorsement of federal and state agencies. These concepts require a multi-disciplinary approach by Extension, as well as research and instruction.

POULTRY SCIENCE

Joseph W. Kinghorne, the first poultry specialist, was employed by the USDA in 1914 to promote 4-H poultry clubs in Virginia. The following information was taken from his 1914 Annual Report:

> **During the first year, 42 poultry clubs were organized in nine counties with an enrollment of 546 boys and girls. These club members set 4,572 eggs of which 3,200 hatched out and 2,742 were raised to maturity. Only 50 of this number sent in full reports, though 329 sent in partial accounts of work done.**

N. E. B. Talcott, who succeeded Kinghorne in 1915, continued the poultry club work by expanding it to 17 counties, an effort which resulted in a total enrollment of 646 members in 76 clubs. Talcott also began working with adults by organizing women's poultry clubs. The 1916 report showed 58 clubs where members served as demonstrators, thus helping the specialist to teach better poultry management practices.

A. F. Treakle was appointed poultry husbandman in April of 1918, Bessy M. Hadsden in the spring of 1920, and A. L. Dean in 1921. These devoted Extension workers continued working with 4-H Clubs and Home Demonstration Clubs to bring the best poultry production practices to the people. As county Extension agents were appointed, training schools were started and the demonstration aspect of the work was strengthened.

The decade of the 30s witnessed the birth of the commercial poultry industry in Virginia. A team of three people usually had responsibility for the Extension work. In addition to staff members previously mentioned, other workers prior to 1956 were Harry L. Moore, 1928-1956; Rachel Treakle, 1920; Marshall E. Coe, 1937-1956; and Denver Bragg, 1949-1973. During this period, the Department of Poultry Husbandry was strengthened. Both Dean and Moore served as its head (Dean, 1925-1928; and Moore, 1936-1956). The first B.S. degrees were given in 1940.

During his tenure with the department, Moore strongly promoted Record of Performance (ROP) testing from which breeders secured improved breeding stocks. This program enabled Virginia to assume early national leadership in the industry.

Dean perceived the need for a strong industry organization. Under his guidance, and with the help of key industry leaders, the Virginia Poultry Federation was organized in 1925 at the first field day held at VPI. This state organization has been and still is the envy of other state poultry organizations. Its leaders have been called on time and again to provide leadership to national organizations. Dean continued the family farm flock demonstrations, working with the home demonstration agents and clubs.

Coe started working with the commercial industry in 1937. He helped county agents set up poultry educational committees in many counties. These committees cooperated with the county agents to build educational programs for the commercially-minded producers. It was in the early 40s that the Virginia Poultry Federation recognized the need for each segment of the industry (i.e., hatchingmen, commercial egg producers, broiler producers, turkey producers, and processors) to form its own association and then be coordinated under the heading of the Virginia Poultry Federation. Each association was represented by an elected director, usually its president, to the board of directors of the Federation.

It became increasingly clear with the emergence of the commercial nature of the poultry industry that new technologies were required. Thus, the need to switch emphasis in the Extension educational programs was evident. The 50s were, therefore, the decade of change as the Poultry Science Department addressed itself to the changing industry.

Cecil E. Howes was named head of the department in February 1958. His appointment was divided equally among research, teaching, and Extension. He immediately set about developing a strong, viable department. With the cooperation of the Poultry Federation and the Extension staff, educational needs were identified and specific program areas were developed. These areas were commercial egg production, broiler production, turkey production, hatching, processing, and 4-H. As resources became available, a specialist was assigned to each program area. Because two members of the staff took leaves of absence for advanced studies (one in 1958-59, the other in 1964-66), much flexibility was required to meet the educational priorities in each of the program areas.

Commercial Egg Production

Denver Bragg assumed the responsibility for the education program for commercial egg producers in September of 1956 and continued in that capacity until he retired in July 1973. Bragg strongly promoted bulk handling of feed, mechanization of the poultry house and the egg processing room, and installation of larger units to take advantage of economical efficiencies. He was among the first to advocate the use of environmental housing and was instrumental in organizing poultry housing seminars that benefited all poultry producers in Virginia. All commercial egg production is now done in improved environmental housing, with the birds confined to cages. Much of the egg collecting and processing is done totally by mechanical means. The number of farms with 100 or more layers had decreased from 12,700 in 1969 to 100 in 1979. Yet the number of layers has remained around 4,000,000. Eggs produced per hen have increased from 181 in 1956 to 250 in 1980.

Since 1976, Paul L. Ruszler, Extension poultry specialist, has used two modes of operation to further educational programs in commercial eggs. The first employs the individual producer and servicemen on an "as needed" basis. The second mode of operation is applied/practical research both in the field and at the Poultry Research Center. An industry-appointed education committee consults with Ruszler in structuring educational programs and selecting research projects and field trials to help solve industry problems.

Hatching and Breeder Flocks

R. H. Burtner was appointed Extension specialist, hatching and broiler breeder flocks, in September 1959. He worked closely with the Virginia Hatchery Association to promote restricted feeding of broilers, the use of artificial lighting to delay sexual maturity in replacement flocks, and plural pneumonia-like organism (PPLO) clean breeder flocks.

R. T. Ringrose was assigned this work in 1966, along with broiler production. Burtner again returned to 4-H poultry. Ringrose encouraged the various segments of the industry to schedule production of broilers to meet the needs of the processors, an idea that is commonplace today. He assisted hatcherymen with replacement schedules for their hatching flocks so that they could produce the required broilers demanded by the processors.

Early in the 70s, broiler production became totally integrated, with each company in the business having its own processing plant, hatchery, and feed mill. Each company contracted with individual growers who produced the breeder flocks for hatching eggs and who grew the broilers for processing.

William D. Weaver, Jr., drastically changed the broiler Extension program from an emphasis on working directly with growers to working through servicemen in the integrated companies to reach the growers. The program has concentrated on developing recommendations for environmentally improved broiler and broiler breeder houses. These recommendations have involved the latest technologies associated with structures, ventilation, and insulation. Additionally, programs have involved various lighting and feeding schedules to improve broiler performance.

The broiler program became more research oriented during this period. A number of field research projects have been conducted whereby treatment and control groups were maintained. Also, the broiler Extension specialist has been involved in a series of experiments in the Virginia Tech poultry research facilities that have studied the effects of various lighting schedules, stocking densities, feeder space levels, and dietary changes on broiler performance. The research has outside funding (some from industry) and currently supports a graduate student.

The broiler Extension program has been significantly guided over the last eight years with the aid of an active education committee. This committee represents the production leadership of the state's integrated companies. It meets quarterly to discuss problems and opportunities and to help the specialist develop and conduct the experiments and field trials that have proved so beneficial over recent years. The state's broiler production has increased rapidly from 63,469,000 in 1969 to 111,564,000 in 1979.

Turkeys

In 1960, Burtner was assigned the responsibility for Extension education for turkey production along with hatchery and hatchery breeder flocks. D. D. Moyer was appointed as Extension

specialist for turkey production in 1962. About this time, a disease known as hemorrhagic enteritis became a most serious problem in Virginia. Mortality was running from 20% to 50% in flocks during the 4th to 20th week of age. Moyer teamed with the veterinarians at VPI to develop a vaccine to control the disease. This method is now used nationally.

Range production became unprofitable in the 60s. For producers to take advantage of new technologies, turkeys had to be housed. By 1964, 75% of the turkeys were produced in environmental houses. Moyer introduced new innovations such as artificial lighting, forced molting, and restricted feeding as turkey breeder management techniques. These practices enabled producers to obtain an average of 15 more poults per breeder hen.

Moyer retired in July 1973, and Gordon Meyer was appointed Extension turkey specialist in 1974. Meyer resigned in 1978 to take a position with a commercial turkey operation in Virginia.

The turkey Extension program under Meyer's leadership became more research oriented. He conducted a number of field trials to evaluate the effects of various light schedules on turkey performance. He also continued providing leadership to increase and improve the confinement rearing of turkeys; i.e., structures, ventilation, insulation, etc.

Meyer secured a large grant from the Agricultural Foundation to study ways to restrict feed on breeder turkeys (hens and toms). This study was conducted at Virginia Tech and was an educational opportunity for several graduate students.

The turkey Extension program during this period utilized an active education committee that was made up of production representatives from the various integrated companies. This committee aided the specialist in identifying and solving problems that faced the industry.

Poultry Processing

On July 1, 1966, a new Extension effort in poultry processing was initiated. Upon Wesley's return from Purdue University with a recently acquired Ph.D., he assumed leadership of the new program, serving until July 1, 1973, when he transferred to the Department of Food Science. (In that position he continues to assist poultry processors with their production problems.) Such programs as waste disposal, monitoring for chemical and pesticide residues, improvement in grades and yields of poultry, minimizing downgrades and condemnations, and improving processing efficiencies were parts of the new program. For the first time, Virginia poultry processors were provided much-needed assistance.

Although all these processing programs have been tremendously successful, the program for monitoring chemical and pesticide residues has received much public recognition. Under Wesley's leadership, the poultry industry opened a permanent monitoring lab in Harrisonburg on July 2, 1972. This lab has grown so that it is now able to monitor feed ingredients and finished feeds, as well as processed broilers and turkeys.

Four-H

From 1949 to 1980, 4-H work was assigned to these specialists:

Denver D. Bragg - 1949-1956
R. H. Burtner - 1956-1958
R. Lewis Wesley - 1958-1964
R. H. Burtner, Coordinator - 1964-1966, assisted by: D. D. Bragg, D. D. Moyer, R. L. Wesley, and A. T. Ringrose
R. H. Burtner - 1966-1972
Jerry A. Cherry - 1973-1977
Joyce H. Jones - 1977-1980

In the beginning, the educational thrust was built around poultry breed identification and production management. Working with agents and their poultry clubs, where such existed, Bragg developed demonstrations in management, housing, feeding, sanitation, and selection. The need to teach USDA standards for eggs and dressed poultry became apparent. So, egg grading and the judging of dressed poultry became parts of the 4-H poultry judging contest. The Junior "Chick-of-Tomorrow" contest proved to be an excellent tool to teach both production of quality broilers and grading techniques of dressed poultry to juniors and adults alike.

Virginia poultry judging and egg grading teams, as well as individual demonstrations, have historically ranked in the upper half of national and regional contests. First and second placings have not been uncommon.

As the industry moved more and more toward larger and larger production units, the family flock idea, such as the Sears Pullet Chain, became less effective as a teaching aid, so other methods had to be developed. Wesley developed the embryology project called "The Beginning of Life". It was strongly promoted by Burtner and Cherry and greatly improved and expanded by Jones. This project caught the imagination of youth beyond all expectations. School teachers were quick to recognize this project as a superb tool to aid their teaching of science projects. As a result, county Extension agents and 4-H leaders had easy access to school rooms. Four-H members gained deeper understandings of how life is formed. There were 17,304 4-H members enrolled in the 1979-80 4-H year.

RENEWABLE NATURAL RESOURCES

Forestry Extension began in 1919 at the University of Virginia with the appointment of Wilbur O'Bryne who was from Yale. With the demise of the forestry instructional program at UVA in 1927, O'Bryne came to Virginia Agricultural and Mechanical College. In those early years, O'Bryne traveled and worked across the state on how and why to manage our forests since "cut out and get out" was still the customary practice. The idea of running out of timber seemed impossible. So programs and demonstrations were on tree planting for erosion control, producing peeled pulpwood for Virginia's five paper mills, tan bark cutting, peeling poles, treating fence posts, custom growing, and harvesting and storing timber for home use.

The demand for educational work through the 30s and early 40s increased as the work of the Soil Conservation Service under the 1937 Norris-Doxey Act increased. Farm forestry became a cooperative effort with the Soil Conservation Service, the Virginia Forest Service, and Forestry Extension. Conservation work by the Civilian Conservation Corps and land purchases by the U.S. Forest Service also induced conservation interests in forest management concepts. Some of the U.S. Forest Service's "farm forties" of timber showed the promise of production on marginal and abandoned land. Idle land from the depression years added numerous acres of trees to be measured, inventoried, and utilized. Farmers, however, generally did not attend meetings that dealt with forestry matters. They wanted one-on-one relationships, and, since there were too few professionals for that, many farmers were slow to receive forest management information.

By 1942, the increased opportunity for growing trees and the pressure of World War II had created a need for educational and service work in northeastern Virginia. Forrest Patton, a forester with experience in Ohio and Michigan, was appointed area Extension forester for the Northeast District. At that time, both the Virginia Forest Service and Extension were engaged in service to farm owners. Extension's efforts, however, were concentrated in small demonstration areas to show landowners how they could do it the next time themselves. The Forest Service concentrated on forestry work that would not otherwise be completed.

In 1948, as interest grew, area positions were established in southeastern and central Virginia. C. Edward Gill, a North Carolina State and Harvard University graduate, began working as an area Extension forester in pine management for eastern Virginia. John "Bill" East, a VPI graduate, began similar work throughout the Piedmont section. Since the educational needs

also required coordinated programs and publications, all four Extension foresters were housed at Blacksburg and traveled throughout the state or to their respective area of work.

The coordinated programs also improved 4-H forestry and 4-H camp teaching as well as work with agricultural engineers, agronomists, and livestock specialists on conservation and grazing problems. County field days and demonstration farms included workshops and demonstrations on forestry activities and practices.

In 1951, A. B. Lyon, a University of Georgia Forestry graduate, took East's place and began working with hardwood management problems across the western part of the state. His experience in five other states was invaluable in initiating cooperative educational programs with the TVA and the Virginia Forest Service. Eventually, foresters of these three organizations established demonstration woodlots in most southwestern Virginia counties. One exceptional stand is now part of the Southwest 4-H Education Center near Abingdon. The foresters also initiated the 300-board-foot club. Somewhat akin to the bushels-per-acre clubs for growing grain, the 300-board-foot club promoted 300 board feet per acre per year of tall, straight, high-quality trees.

In 1954, O'Bryne retired with 35 years of service, and one year later Carl J. Holcomb became Extension forester. In 1956, Patton resigned to become a private industrial forester in northeastern Virginia. Will A. McElfresh, a University of Michigan and NC State graduate, became an assistant Extension forester in 1958, with major responsibilities in youth and general forestry programs.

During the 50s, forestry educational programs were broadened beyond farm forestry because many landowners were not farmers. Diverse groups such as garden clubs, businessmen, and small companies sought information about forestry, forest products, and conservation. For this larger audience, eastern counties organized forestry clubs wherein nine major practices were conducted by the landowners and scored by industrial, Extension, and agency foresters. County Extension units held instructional field days and scheduled judging days and award banquets. In many cases, FFA members and 4-H boys and girls entered into competitive programs on tree planting, deadening undesirable trees, thinning, harvesting, etc. In 1953, Lyon produced the score card and evaluation forms that are still used across Virginia in FFA forestry judging. To help agents gain critical knowledge in conducting forestry educational programs, all county and farm agents attended a training school series at the Blackstone Assembly Center, Virginia State, or one in the Southwest District. Industrial, Extension, and agency personnel

conducted the three-day schools. A few lay persons also attended the sessions.

The interest in programs other than farm forestry that continued into the 60s led Extension specialists to organize three state organizations. The growing emphasis on forest products led Holcomb and others to organize the Lumber Manufacturers Association of Virginia. In 1960, the cooperative efforts of Extension and the Lumber Manufacturers Association resulted in the first educational sawmill and logging show at Crozet. The show had outgrown its Crozet bounds by 1962 and it was moved to Petersburg. It went regional in 1964 and was renamed the East Coast Sawmill and Logging Show. Finally, it became a multi-million dollar operating equipment show and was called Expo. It now is featured at the Atlantic World Exposition Grounds in Richmond and alternates years with a somewhat similar show in Atlanta, Georgia. Short courses and field trips on forest production and on wood energy are conducted in the Virginias and Carolinas before and after the "Expo". Over 8,000 personnel from the eastern U.S. and a number of South American and European countries attend, as well as the general public.

Because of increased interest in forest products, the requests and needs of small businesses and forest-based industries also increased greatly. Extension responded by appointing its first specialist in wood products in 1966, James E. Kent from Louisiana State. He worked with Virginia Division of Forestry personnel throughout the Appalachians to improve sawmill and woodyard operations. Since his experience with large pine mills of the South did not fit Appalachian operations, however, he returned to Louisiana after four months.

Donald J. Stumbo from Louisiana, with experience from the Midwest and California, was employed as the wood products specialist in 1967. He was soon inundated with questions and problems and was assisted by Fred Lamb, a state technical services employee, who brought a Canadian, upper Midwest, and Pennsylvanian background to bear on forest products production and problems. The heightened interest in products gave wide support to finishing the new three-story Julian Cheatham Hall, the home of the School of Forestry and Wildlife. Wood and wood products were a featured building material for the interior of the building.

A second state organization began in 1961. Five Christmas tree growers met with Lyon and organized the Virginia Christmas Tree Growers Association. The members of this organization today supply most of Virginia and nearby metropolitan areas with trees. Christmas tree growing demonstrations and field days are still cooperatively conducted with local Extension programs across the state.

By the latter part of the 60s, a great deal of public interest in outdoor recreation was evident. Through the Technical Action Program, which was conducted by SCS, ASCS, FHA, and Extension, potential recreation inventories were conducted for over half of the counties in the late 60s and early 70s. Earlier in the 60s, questions and inquiries about campground development and operations led to seminars and short courses on managing recreation areas. Out of this came the organization of the Virginia Campground Operators Association. Holcomb and George Cornwell, wildlife recreation specialist from 1963 to 1967, were instrumental in assisting with these recreational programs. In 1965, Holcomb retired from his project leader position and a new Extension forester, Richard T. Marks, was employed. He assisted with much of the recreation program from 1965 until he resigned to become the federal Extension forester in 1971.

Holcomb continued with Extension recreation programs and teaching until 1971. In addition to assisting with recreation programs, outdoor recreation personnel conducted host training schools and service schools to allow Virginia localities to "make the tourist feel at home." As environmental interest grew, Extension personnel also worked with towns and cities to establish recreation departments and regional recreation authorities.

James J. Kennedy, a graduate of Penn State and VPI, began part-time work and then worked full-time until the end of 1968 on recreation facilities and finances. Natural science interpretive areas were also organized and built by local people through Extension outdoor recreation information programs. These were cooperative efforts with Extension units across the state and were located in local parks, schools and community centers.

In 1967, Lyon retired from forestry Extension to become a program coordinator with the new Donaldson Brown Center for Continuing Education. Robert C. Parker of Mississippi State joined the staff in 1968 and continued with forestry Extension planning on the economics of the growth and harvest of forest trees. Parker resigned to become the Mississippi Extension forester in 1974. Before leaving, he gave new dimensions and directions to the business of tree farming. In the past, it had been a satellite industry to farming or to off-the-farm employment. With the kinds of information he made available, tree farming could become a full-time job. During this time, Extension supported the Virginia Division of Forestry and Virginia Forests (now Virginia Forestry Association) movement whereby the self-taxing of industrial production was matched by state money for converting low-value hardwood forests to pine. This highly successful program is now a model for the U.S. In early 1974, John E. Gunter, a forest economist, was employed in forestry Extension, primarily to work with the economics of the

reclamation of cutover hardwood acreage. Gunter also assisted with the Christmas tree projects and involved consulting foresters and agency personnel in forestry tours. He resigned to join the U.S. Forest Service in 1975.

Forestry clubs, forestry camps, and "father and son" competitive programs pointed out a need for better understanding of forestry practices among youths across Virginia. For these reasons a series of annual county camporees and field days were held to teach forestry, wildlife, camping, and outdoor survival techniques. Specialists assisted with this phase of recreation and 4-H natural resources programs. From these experiences in the late 60s and through the 70s, a need developed for coordinated national 4-H forestry project and judging efforts. A potential national 4-H forestry sponsor reviewed the Virginia program and became a benefactor for the national program. The International Paper Company also sponsored a series of national workshops chaired by McElfresh; and a whole new series of 4-H forestry projects, leaders manuals, and judging programs were developed. In 1971, Robert L. McElwee became the Extension forester and, in cooperation with specialists from community resource development, continued working with the recreation programs that began in 1963. McElfresh came to Virginia from Maine, but before that he worked across the South with industry and research. At Virginia Tech, in addition to working with recreation programs, he initiated a number of county workshops for small wood producers on record keeping, safety, and OSHA considerations.

In addition to Extension work in forestry and forest products during the 60s and 70s, there was also work in wildlife and recreation. In 1967, Cornwell accepted a wildlife position in Florida, and Glenn R. Dudderar moved from a part-time Extension position to a full-time Extension wildlife specialist position. In 1973, Dudderar, a West Virginia University and VPI graduate, resigned to take graduate work and a part-time position in Michigan. At that time, Gerald Cross came to VPI with educational experience from the University of Wisconsin and North Dakota State. Cross was appointed department head for fisheries and wildlife in the School of Forestry and Wildlife Resources in 1976. Dudderar and Cross contributed much to the 4-H wildlife project. Peter T. Bromley of Cornell University, Montana State, and the University of Calgary, became wildlife specialist in 1977 and began an excellent program with sportsmen's clubs across the state. His Operation RESPECT (Responsible Educated Sportsmen Promoting Ethical Conduct Together) established better hunting ethics.

During this time when wildlife programs were being developed, there were many requests for programs about stream and pond management for recreational and commercial fisheries. In 1976, Louis A. Helfrich of Penn State and Michigan State, became

the first person appointed to this part-time position. He continues to work with sport and commercial fisheries across the state.

The term "part-time" position has been used because a number of the positions mentioned included Extension, teaching, and research responsibilities. In other words, a person holding such a full-time position is called a part-time Extension specialist. These partial appointments allow ideas that appear as problems to become research projects and, on the other hand, allow new subject content from the classroom or research to become educational programs for people. An excellent example of this is Eugene M. Wengert's release on the solar dryer for firewood. This dryer, designed for home conservation of energy, was an outgrowth of solar research for a supplemental or complete drying process in lumber kilns. Both home drying and kiln drying have received national acclaim. Wengert is a graduate of the University of Wisconsin and Colorado State, and he worked for the U.S. Forest Service before coming to Virginia. As a producer of lumber, furniture and other products, Virginia is one of the top ten, so energy-efficient production guarantees better employment. Marshall "Mark" White began part-time work in 1976 as a products specialist to help large and small producers fire their boilers to obtain more efficient heat, use of electricity, and drying. He also directs wood pallet research and works closely with wood industries across the state.

Another area of energy efficiency was the need to reduce wood handling. In 1974, William B. Stuart was the part-time Extension specialist named to help small producers and dealers reorganize their forestry operations. Methods and machinery must be carefully chosen because the average timber producer spends over a quarter of a million dollars on equipment before he gets into a woods operation. Stuart had wide experience with the mechanization of southern wood enterprises through his affiliation with the American Pulpwood Association's research.

As was mentioned earlier, the second person employed in Extension, Patton, began in a field or area position. Over the years, however, two other field positions were created to serve forestry program needs. Garland W. "Nick" Nichols of VPI began a 1955 Extension position partly funded by industry in Southampton County to assist with forestry educational programs. He later worked as an Extension agent with other responsibilities until his retirement in 1967. From 1961 to 1964, Fred M. Schilling, with a forestry degree from the University of the South, Sewanee, Tennessee, worked in Nottoway and Lunenburg counties on forestry programs and problems. At present, about 25 of the Extension agents across the state have natural-resources backgrounds, but no one is currently assigned natural-resources duties other than those who are Extension specialists.

In 1972, David L. Groves, who had an educational background from Concord College, Marshall University, and Penn State, was assigned the recreation and 4-H general conservation responsibilities. He continued working in recreation, but moved to Virginia State as liaison for state 4-H natural resources and camping programs in 1975. Groves left recreational work in Virginia in 1976 for a similar position in New York. Virgil B. Cauley, Jr., a VPI graduate, was a part-time assistant with the general natural resources program from 1973 to 1974. He volunteered for a number of years in the mid-70s to assist with special state programs while he was teaching in the Blacksburg schools.

More recently, Harry L. Haney, Jr., with a background from Auburn and Yale universities, took Gill's place in 1975. In 1978, Mark C. Vodak, a graduate of North Carolina State and Michigan State began working on Extension forestry. Both specialists have continued working through local Extension agents to arrange tax assessment and forest finances short courses. They have also arranged, in cooperation with many federal and state agency personnel, the popular resource management bus tours that serve both rural and metropolitan areas across Virginia.

COMMUNITY RESOURCE DEVELOPMENT

Community Resource Development (CRD) has been a part of the Virginia Extension effort since passage of the Smith-Lever Act in 1914. Section 8 of this historic bill emphasized the obligation of Extension for:

> **...assisting and counseling to local groups in appraising resources for capability of improvements in agriculture or introduction of industry designed to supplement farm income; cooperation with other agencies and groups in furnishing all possible information as to existing employment opportunities, particularly to farm families having unemployed workers.**

CRD has had many different names and subject-matter responsibilities, including Country Life Commission, Village Welfare, Community Organization Committee, land use and planning, farm and home development, rural development, rural areas development, economic development, community development, and capacity building.

However, the farm and home development program in the early 50s is regarded by many as the forerunner to CRD. It wasn't until 1955 that rural development education was stressed by Undersecretary of Agriculture True Morse. He initiated pilot

programs in several counties to help U.S. farmers who had limited and diminishing farm income opportunities. Virginia had programs in Carroll, Cumberland, and Grayson counties and the City of Galax.

Upton Livermore, professor, Department of Agricultural Economics, served as project coordinator. Mack Adams was employed in Carroll County; Herb Jones, now unit chairman of Isle of Wight County, was employed to provide the leadership in Cumberland County. Two directions were taken by the respective pilot efforts: In Cumberland County, the direction was to intensify family farm operations; in Carroll County, to provide off-the-farm employment for farm family members. Adams decided to leave Carroll County and the Virginia Cooperative Extension Service in 1958. O. W. "Buddy" Cundiff was employed in November of 1959 to replace him.

During this early period, Extension officials insisted that each county have an active Rural Area Development (RAD) Committee. These committees included USDA representatives who combined their agency's resources with Extension's to develop rural areas. The program helped create off-the-farm employment through industrial development and also helped Carroll and Grayson counties plan and implement positive programs.

Working with county and city officials and the Carroll-Grayson Chamber of Commerce, RAD also helped to provide leadership for the area's industrial and agricultural development. It helped the people, for example, influence the Hanes Corporation to locate its knitwear division in the area. The new plant opened in January 1961 and employed about 500 persons, mostly women. Other accomplishments included community recreation. Bud Price, Claude Simpson, and Cundiff helped plan the construction of two golf courses. One, known as Gay-Hills and located between Galax and Hillsville, operates today as a successful "county club" for rural families. The other golf course, Twin Oaks near Sparta, North Carolina, was built primarily for persons living in Grayson and in Alleghany County, North Carolina. The Twin Oaks course, like the one at Gay-Hills, is still in operation.

During the early 60s, Extension officials began to realize that rural development in Virginia involved more than just intensified farm operations. Leadership on the state level, therefore, reverted from Livermore, an agricultural economist who specialized in cooperatives, to Pat DeHart, associate director of VCES. DeHart held this position until M. P. "Mike" Lacy was named the first full-time program director for rural development.

When Lacy was promoted to dean of admissions at Virginia Tech, G. E. "Buddy" Russell was named as the unit's second director. An important development under Russell's direction,

who was assisted by Cundiff, was the organization of Community Action Programs (CAP), from Danville to the western part of the state, and the training of CAP employees. The employees were trained for a fee, but if a CAP organization could not afford to pay, the fee was waived.

John Shryock joined the rural development unit in 1965, followed by Bland Franklin in 1966. During this time, it became apparent that the term rural development was somewhat inadequate; so the unit name was changed to Community Resource Development. Since it was also recognized that implementation of a strong program would require interdisciplinary efforts, Gene McMurtry, agricultural economist, and Don Fessler and George Blume, rural sociologists, joined the CRD staff in supporting roles.

Based on a self-study and actions of the General Assembly between 1966 and 1968, the VCES was merged into the Extension Division. Russell served as program director for both CRD and family resources until he assumed directorship of the Virginia Tech Alumni Affairs office. At that time, McMurtry became director of CRD and served until 1974 when he left to become an associate dean at the University of Massachusetts.

The late 60s and early 70s were characterized by a decentralization effort, which was designed to improve CRD's program delivery. Shryock was designated as program leader, CRD, for the Southwest District; Franklin, program leader, East Central District; and Harvey Shelton, program leader, West Central District. Delbert O'Meara was designated program leader, Southeast District; Halverson, Northeast; and Bob Doyle, Northern. Charles R. Perkins, who had been an area agent, replaced Franklin in East Central when Franklin joined the state staff. When Halverson left the state, C. Clark Jones was named program leader in the Northeast District.

Following the reorganization in 1966-68 and the employment of district program leaders, area Extension agents became responsible for programs in CRD. Areas coincided with the jurisdictional lines of planning districts. Some of the individuals who were employed included Rusty Talbert, Ted Ashby, Steve Scheneman, Carol Chapman, Ron Clevenger, Jack Holland, Howard Handorff, Bill Mashburn, Jr., Sid Clower, Bill Irvin, Susan Craik, Neil Barber, Conrad Jones, Dorothy Turner, Gail Grahn, and Herb Pettway. Several of these individuals have moved to other positions, some have left Extension Service employment, and some have moved to similar positions in other states.

In the beginning, CRD assisted primarily the rural non-developed area of southwest Virginia. By the early 70s, the program had begun to move into urban and suburban areas. Also, programs in new special-interest areas began to be developed. One was youth activities as they related to the community.

Delwyn A. Dyer was added to the staff to place emphasis on 4-H/CRD. He became director of the Center for Volunteer Development, supported in part by a $3 million W. K. Kellogg Foundation grant, in 1979. The second emphasis was recreation and community and organizational planning, a program for which J. Douglas McAlister was recruited in 1974.

In 1975, Cundiff became director of CRD. His core state staff at that time consisted of McAlister, Dyer, and Franklin. The staff was expanded in 1976 to include a local government specialist, Donald P. Lacy, and citizen and people-involvement specialist, Robert M. "Mike" Chandler.

CRD has developed many sound projects. It is a small, hard-working organization whose strategy is to pass its information to communities quickly and then move on to the next problem area. For example, in fiscal 1977, Dyer helped 38 units conduct leadership identification surveys; held four staff development meetings for over 100 agents; held other organizational and leadership development workshops for over 800 members of the Virginia Federation of Women's Clubs, 900 members of Extension Homemakers Clubs, 350 teen 4-H leaders, and 250 members of voluntary association boards, councils, and commissions; helped 43 Extension personnel put together leadership development workshops at local levels; assisted membership committees of Extension Homemakers in five units with their plans for member recruitment; and wrote and revised several publications dealing with organizational work.

The program to help the members and staff of volunteer boards, councils, and commissions, be more effective has been one of the most satisfying and successful programs conducted by CRD. In 1977, CRD called in a team of Extension specialists to plan the program's workshops. These specialists were selected from across the nation because of their reputations for improving the effectiveness of board members. Two of the specialists also helped with some of the workshops.

In fiscal 1978, CRD held five ten-hour workshops. Oscar Williams, graduate intern, reported on the progress of each workshop. He also taught part of one, organized a three-month follow-up questionnaire, and co-authored with Dyer an Extension bulletin dealing with board effectiveness. Over 200 persons took part. Eighty percent were board members, and 20 percent were board staff members. They represented 50 organizations from across the state. CRD staff worked with teams of three, made up of two board members and one staff person. Each of the 200 people making up the teams reported having spent over 30 hours each year attending board meetings and in most cases another 20 hours doing committee work.

Local voluntary action centers and Extension staff recruited 200 persons for a series of five workshops. The State Office on Volunteerism helped with publicity and provided some material assistance. A small ACTION grant paid for bringing specialists to the consultations and workshops. The five sites chosen for the workshops gave citizens everywhere in Virginia a chance either to take part in a workshop or learn from someone who had.

Williams' questionnaire was completed by 83 percent of those who took part in the workshops. Answers indicated that all participants felt the workshops had been useful. Seventy-two percent had applied some part of what they had learned to at least one board or committee meeting. Fifty-five percent said they would like to have additional training and materials, and 40 percent said they would be willing, with more help, to train members of other boards.

A recent activities report showed that CRD developed several programs during fiscal 1978 in the area of local government. One program was held jointly with the Virginia Municipal League and the Institute of Government of the University of Virginia. It was designed to help newly elected council members gain additional skills required for their new positions. More than 90 officials took part. According to the results of their questionnaires, the officials strongly supported the program.

Another program consisted of three regional workshops for officials where they learned about trends and problems in local government. More than 200 local officials attended them and gave positive evaluations. Another activity provided for the development, printing, and distribution of citizens' guides to local government. More than 4,000 copies were developed and distributed in Montgomery and Henry counties and the city of Charlottesville. These guides were popular with local citizens and officials. Also, CRD provided computerized grant searches to more than 30 counties, cities, and towns through the use of the Federal Assistance Program Retrieval System (FAPRS).

In addition, CRD conducted youths-in-government programs in 12 school systems during fiscal 1978. More than 4,000 students participated. The programs were so successful they were repeated in fiscal 1979.

During 1978, Virginia's Secretary of Education Wade Gilley requested a detailed report of the scope and activities of Extension. The subsequent report documented that Extension agents and faculty spent 81 man-years, or 12% of the total Cooperative Extension effort, on CRD-related programs that year. The report also documented that Extension agents and faculty working with CRD programs made a total of 556,243 audience contacts during the year.

Always, CRD has tried to help communities identify and solve their special kinds of problems regardless of community location. Some major areas of assistance have been:

community education
community improvement
crime prevention
4-H CRD (formerly called "youth" in community development)
land use and planning
manpower
public policy and local government
recreation and tourism
rural development
volunteerism (leadership development)

COMMUNITY IMPROVEMENT CLUBS

By 1950, the community improvement program, once known as the standard community organization, was underway in Virginia. The movement peaked during 1952-1957, and by 1960 the program's newness and excitement had given way to other community interests and activities.

"Community" was defined by Extension workers as a relatively small living area in which the common tie holding the people together was the proximity of their homes. In open country, such a community might spread over a radius of five miles or more but provide only a few institutional services like an elementary school, a church or two, and a general store. In towns, a single block or even a large apartment house might be a neighborhood community. Extension aimed at the open-county type, not entirely a new program concept.

B. L. Hummel, Extension sociology, began working in 1928 with open-country communities. At that time, community work was called standard community organization, and the first standard community organization was formed in the Riner area of Montgomery County. During the following year, 14 other communities were formed. The standard community organization program encompasses nine areas of interest: agriculture, homemaking, education, civic and social activities, health, public welfare, business, and religious life. Each organization, of course, did not try to relate to all nine areas of interest. Workers determined which ones would best suit their communities. Whereas some communities might choose to form committees for each of the nine interest areas, other groups felt that they could do best by forming only four, five, or six, depending on the activities taking place within their communities.

Attendance at meetings was good. As a result, communities sponsored community sings, talent plays, conducted leadership training conferences, and sponsored picnics, field days, and holiday programs. Some even had community choruses and quartets. Each community reported completion of an average of eight projects, ranging all the way from onion growing to sponsorship of 4-H clubs and conducting debates.

Extension did not try to organize additional communities from 1934 through 1938. Instead, federal agencies worked through Extension to help alleviate the critical agricultural situation during this part of the Great Depression. Not much time was left for Extension's other programs. From 1939 to 1945, World War II precluded further involvement. In the latter 40s, however, interest picked up again, and by 1950 standard community organization, now called community improvement, got under way in Virginia. Work began in 12 southwestern counties in and around the Bristol trade area, with the program jointly sponsored by the Bristol Chamber of Commerce and Virginia Tech's Extension Service. A smaller-scale program was also started in one county in the Fredericksburg area.

During 1950, community clubs began to compete in county and area improvement contests. When contests were introduced, a new feature was added to local programs: urban businessmen began sponsoring them, a development which gave the program added prestige and greater publicity. Cash prizes were kept to moderate levels and were widely distributed in order that all communities would receive some type of recognition. Behind these contests lay the community improvement program's four objectives:

1. Bring about the solution of community problems through organized community activities.

2. Develop a sound system of farming.

3. Stimulate the production and preservation of home-grown foods in order to provide adequate foods and adequate diets for the farm family.

4. Develop and improve the convenience, comfort, and attractiveness of both the farm and the home.

By the end of 1952, there were 69 community improvement clubs organized throughout the state.

The period of 1952-57 was the peak of the community improvement program; 120 clubs operated in 39 counties. But, like all programs, the newness and thrill and drive soon began to give way to other community interests and activities. Clubs no longer needed the stimulation of competition and recognition to carry on their activities. However, community clubs did not

necessarily break up. Some of them continued to carry on organizational activities and very effective programs.

In the community improvement program, Extension played three roles: (1) it was the chief motivator and guide in the initial steps of community organization; (2) it provided a major share of technical know-how necessary for communities to achieve their various farm, home, and community-wide objectives; and (3) it supervised the judging of the communities at the end of each con test year and provided many of the judges.

Many outstanding persons in Extension were responsible for the success of the standard community organization/community improvement program. On the program planning level, Hummel envisioned the value of such a program. Gilley laid some of the basic organizational groundwork to get it started. Fessler, with his concepts of people motivation and felt needs, solidified program goals; and Amelia Fuller and Blume functioned as Extension facilitators.

FOUR-H

Its Beginning

The 4-H program began in Virginia during the winter of 1908. It was then that Seaman A. Knapp and T. O. Sandy decided that boys' corn clubs could and should be started in the state during the spring months of 1909. J. D. Eggleston, in his history of Extension work up to 1940, stated that "once it became clear to Knapp that the General Education Board would fund boys' corn clubs, he had his agents appoint corn club organizers." F. Southall Farrar, who was employed in October 1907 as district agent for southside Virginia, was designated by Sandy to provide the leadership for corn clubs. Sandy enrolled 75 boys from Dinwiddie County and 25 boys from Chesterfield County and formed corn clubs. Each boy conducted a demonstration by growing one acre of corn, and the 100 boys averaged 65 bushels per acre. Their fathers were very pleased because the county average for corn production was only 18 bushels per acre. The excellent results in 1909 led to corn clubs being organized the following year in the 11 counties that had demonstration agents.

The General Education Board provided funds for the first corn clubs in Virginia. Board members believed in the program and felt it would strengthen public education throughout the South. School administrators were instrumental in starting corn and tomato clubs in many states during the early years. County

boards of supervisors provided funds for demonstration work with the boys and girls.

Work with girls began in 1910 in Halifax and Nottoway counties, with 46 girls participating. Each girl planted and cared for 25 tomato plants and canned the fruit. Ella G. Agnew, who was appointed on July 1, 1910, to work with both farm women and girls, provided the leadership. The tomato clubs of those early years soon became known as "girls' canning clubs".

Lizzie A. Jenkins was appointed in May 1913 to begin demonstration work with Negro families. She was to organize and conduct canning among Negro girls in thickly settled sections of the southeastern counties of Virginia.

The first club work with Negro boys in Virginia started in 1915 at a meeting of Negro agents at Hampton Institute. Jessie M. Jones, field agent, presided. Field staff started their work immediately with Negro boys, and participation grew, but not as rapidly as with Negro girls.

The first community club in Virginia was organized as the Sunnyside Club in Dinwiddie County in 1913. Community clubs, many with both boys and girls participating, became popular. The club letter of July/August 1918 stated, "the agricultural clubs should include all club members in the community--boys and girls."

In 1918, the policy of organizing both boys and girls into the same clubs was promoted statewide. This procedure was used to save time for agents, teachers, and members, and also to achieve greater results. For two years, these clubs were known as agriculture and home economics clubs. Since 1920, they have gradually become known as 4-H clubs.

Administration and Staff

The first state office for demonstration work was located at Burkeville from 1907 to 1916. During this period, the demonstration agents, both men and women, reported results of their club work directly to the state agents, Sandy and Agnew, who were in charge of Extension work. Headquarters for Extension work was moved to VPI in 1916.

A state club department was added to the Extension organization in 1917. Charles G. Burr was employed in 1917 as state boys' club agent; in 1918, Hallie L. Hughes was appointed as state girls' club agent. John R. Hutcheson, in his report "4-H Club Work in Virginia", said, "Mr. Burr loves boys and knows how to work with them." Both Burr and Hughes believed that boys and girls should be organized and work together in the same club,

regardless of the individual demonstrations or work projects members might be conducting.

Gradually, as clubs began to meet more often, more instruction was given during club meetings. Previously, most of the instruction had been presented to club members individually through visits to farms and homes and through written communications. Even though the term "club" had been used, very little instruction had been given to members in club groups since they had not met frequently.

With establishment of the state club department, greater emphasis began to be placed on development of a well-rounded life. The development of individual capacities for learning, intellectual and moral character, and qualities of effective leadership and citizenship were encouraged. Work on demonstrations and projects to increase knowledge and skills was recognized more as method and not as an end in itself.

Jessie M. Jones, Extension Director, in his report of 1919, states, "concrete examples have demonstrated again and again that club work for boys and girls . . . develops leadership, broadens and betters social life, stimulates local pride, makes better communities, enlarges the vision, elevates morals, establishes self-confidence, purpose, and scholarship. . ."

Objectives, Purpose, Mission

Elcan and Hughes, in their "History of 4-H Club Work in 1909-1939", reported that "up to this time (about 1918) emphasis was placed on the project, but as the organization grew, boys' and girls' 4-H club work is now a specialized educational enterprise for rural youth. As such, it shares in the objectives common to all educational institutions and movements in its concern with the development of individual abilities and capacities for learning, intellectual and moral character, qualities of effective citizenship, and the like."

During those early years and since, the 4-H emblem, the name 4-H, the 4-H pledge, and the 4-H motto helped Extension staff, 4-H leaders, members, parents, donors, and others to envision the scope of 4-H, verbalize objectives, develop programs, and justify various types of support. Franklin M. Reck's "The 4-H Story" details the birth of each and indicates their impact throughout the country.

Stated briefly, the 4-H emblem, a four-leaf clover with an H on each petal, was adopted nationally in 1911. The name 4-H clearly identifies Head, Heart, Hands, and Health as areas for development. The term 4-H Club was first used in 1918 by Gertrude Warren, National Club Leader, in a national publication. (The "Virginia Club Letter" of May 1922 used the term 4-H Club

six times. The August 1922 issue used the term 4-H 25 times.) Reck states, "By 1924, club work had acquired the name by which it would thereafter be known throughout the world."

The motto, "to make the best better", was adopted in 1927. The pledge was officially adopted in 1927 during the first national 4-H camp. Earlier, the executive committee of the land-grant college association had requested that a pledge be written. The state leader of Kansas, Otis Hall, wrote the pledge:

"I pledge
My Head to clearer thinking,
My Heart to greater loyalty,
My Hands to larger service,
My Health to better living, for my club,
my community, and my country."

In 1973, a national 4-H subcommittee, after polling the states, proposed adding the words "and my world". This addition was approved by the National Extension Committee on Organization and Policy (ECOP).

A retired member of the state 4-H staff has stated many times, "The name 4-H clearly identifies for everyone the areas to be improved by children and youth in 4-H programs. It is our job as leaders and teachers to arrange experiences through which members can and will improve in each area: head, mental excellence; heart, ethical qualities; hands, social effectiveness; and health, both physical and mental stability. These are prerequisites in achieving the broad objective to develop boys and girls into useful, desirable, productive citizens in a democratic society." The projects, programs, and activities in agriculture, home economics, and related areas are significant in the lives of young people and the reaching of this objective.

Although it is not stated as an objective, 4-H since its inception has been and is of tremendous value to the families involved--and also to neighbors. The 4-H members, through their successes in applying the latest research of the land-grant universities, show their parents what can be done. Parents are both pleased and proud of their children's accomplishments. Records show that they and their neighbors often follow the example and instructions provided by the 4-H member. Parents, of course, have supported their children in 4-H; thus, 4-H is a family endeavor.

A wide variety of programs is planned and carried to completion in each unit to meet the developmental needs of 4-H youth. The six broad areas are: development of a sense of worth; development of social responsibility as citizens in a

democracy; development of insight into personal values; development of leadership competencies; improvement of employability and development of marketable attitudes and skills; and development of an appreciation for culture and heritage.

For the past several years, the following 4-H mission statement has been used: "To assist youth in acquiring knowledge, developing life skills, and forming attitudes which will enable them to become self-directing, productive, contributing members of society."

Another statement concerns Virginia's program approach to 4-H in Century III, a response to a task force appointed by ECOP to look into the first 10 years of Century III. The task force was charged with recommending new efforts in 4-H, while maintaining traditional programs. The recommendations offer new concepts designed to serve more 4-H'ers in a rapidly changing society.

The task force selected the following eight program component areas for emphasis during the first ten years of Century III:

1) economics, jobs, and careers

2) animal, plant, and soil sciences

3) environment and natural resources

4) home and family resources

5) health and safety

6) leadership, citizenship education, and community development

7) creative and performing arts, leisure education, and communications

8) mechanical sciences and energy

The influence of people in planning 4-H programs for the state was substantially strengthened with the establishment of the Virginia 4-H Council in February 1977. This Council consisted of the state executive committees of the five state 4-H organizations. The elected leadership groups are:

State 4-H Congress Cabinet
Virginia IFYE (International 4-H Youth Exchange) Association
Virginia Chapter of 4-H All Stars
Virginia Association of Adult Volunteer 4-H Leaders

Virginia Association of Extension 4-H Agents

The Virginia Council meets twice a year for the purposes of strengthening communications among the elected leadership of Virginia 4-H and advising the state 4-H staff and Virginia Cooperative Extension Service on matters of broad concern to the advancement of 4-H in Virginia.

Organized 4-H Clubs

In 1909, boys enrolled in corn clubs; in 1910, girls enrolled in tomato or canning clubs. The term club was used even though instruction was given on an individual basis. As the number of young people participating in the programs increased, it became necessary for agents to organize members into clubs for instruction because the demand for individual instruction was becoming impossible to meet. The increase in numbers reduced the distances between members, which, in turn, increased the interest of members in seeing and associating with each other. For both the boys' clubs and girls' clubs, agents provided instruction in more than one project.

At first, boys learned the latest recommended practices in a wide variety of farm production projects, while girls learned about homemaking. Within a few years, boys and girls who lived nearby in one community or adjacent communities were organized into the same club. Agnew said, "Experience has taught that greater results are obtained in club work when all boys and girls in an individual school or community are combined in one club." The first community club was organized in Dinwiddie County in 1913. In 1918, additional effort was devoted to bringing both boys and girls into agriculture and home economics clubs. With the establishment in Extension of a state club department in 1917, Burr and Hughes promoted community clubs and a broader program for boys and girls.

Community 4-H clubs gradually replaced the agriculture and home economics clubs. Usually, club membership was composed of both boys and girls in the age range of 10 through 20 years. The members of each club elected a president, vice president, and secretary-treasurer. In 1920, additional officers were elected and several committees appointed, depending on the size of the club. Agents provided project instruction, general guidance, and encouragement when they attended meetings. Agents also had adult program responsibilities.

Adult volunteers assisted the members in conducting meetings and took part in various 4-H activities in the community and other areas of the state. The calendar year was the club year, and agents encouraged clubs to plan for meetings once a month. The programs included transaction of business, songs, talks, reports, stunts, and other features such as social periods and

subject-matter discussions. Committees prepared the programs, which were conducted in community buildings, homes, and other locations. Club members were encouraged to work together in deciding what they and their club should accomplish. Community 4-H clubs continue to be one of the soundest and most productive 4-H structures.

Four-H clubs were organized in the schools in Virginia during the early years and they remain in many schools today. A school 4-H club was defined as an organized group of 4-H members meeting in school facilities during school hours and only during the school year. Many school teachers served as organizational and/or project or activity leaders for school clubs in the early years and through the early 70's. As regular and other school responsibilities mounted, many school teachers gave up leadership. Some teachers, however, especially those with 4-H-age children, continued to serve in a variety of 4-H leadership roles in their neighborhoods or Extension districts or in the state.

School 4-H clubs also have officers and committees and, like community clubs, are conducted as democracies in action. Frequently, however, the lack of time and other constraints have limited the opportunities for members to share a wide range of activities. Agents attend and assist with a large proportion of school clubs, but, in recent years, the trend has been for volunteer 4-H leaders to become more involved in serving 4-H members in school clubs.

County 4-H clubs became rather numerous during the mid-50s and have varied in popularity through the years. These clubs were, and some still are, organized primarily to provide project instruction in one program area. Qualified instructors have at times been difficult to obtain. Boys and girls joining a county 4-H club usually also belonged to a community or school club.

Some county 4-H clubs met each month and others met more frequently, but only for a few months. Even though the term countywide was used to identify some of these 4-H groups, there were county situations in which more than one 4-H club was involved in the same project or program area. These situations occurred when the county had many members participating, the county was large, or other circumstances such as poor roads or long distances made it more workable to have two or three clubs within the county. The 4-H electric program, 4-H horse program, and those of a similar nature have made the most use of county 4-H projects. Meetings are usually conducted where appropriate equipment, as well as space, is available. Agents and highly technical and professional people provide the leadership.

Club Plan of Work

In a 1927 issue of the 4-H Club paper, which every 4-H member received monthly, the following statement appeared: "Each 4-H Club is encouraged to have a club plan of work as one goal." Other items to consider as goals were also listed: "Hold a county 4-H rally day", "Hold a county 4-H camp", etc. Similar types of guidance and encouragement were contained in the 4-H Club paper on an annual basis, usually in fall issues. Spring and summer issues reported actions taken and successes achieved.

During the 50s, the State 4-H Department rejuvenated the idea of having each 4-H club in the state develop a written plan of work and strive to reach each goal. The major tool designed and distributed to each 4-H club, the county 4-H council, and honor club was a workbook entitled "4-H Yearbook". This publication showed examples, gave suggestions, and provided a suggested format for the executive committee of each club to consider as it recorded the plan it would present to the club membership to adjust and/or approve. Clubs were encouraged to approve a "4-H Yearbook" plan in the early fall months. This practice was continued into the 60s until most clubs were pleased with their planning and results.

4-H Enrollment by Membership Categories

The first 4-H members in Virginia were 100 corn club members in two rural counties demonstrating the 1909 scientific methods of raising corn. In 1910, 46 girls in two other rural counties enrolled in tomato clubs, and each demonstrated the best practices in planting, taking care of, and canning the fruit of 25 hills of tomatoes.

Very few statistical reports regarding 4-H membership from 1910 to 1928 can be located. Narrative reports, however, contain some statistical information. In 1930, Hutcheson stated, "During 1929, 19,000 boys and girls in 80 Virginia counties carried on 22,000 demonstrations." He also stated that membership declined slightly during World War I because several agents entered the Army and those remaining devoted additional time to war-type programs such as food production, conservation, and the like.

The charts which follow report membership through the years. The categories of statistical information requested on reports have changed from time to time. The four categories for 4-H membership provided on the current ES-237 form supplied by USDA are used on the charts. Flexibility in membership categories has made it possible for a broader audience of children and youths to have some of the benefits of 4-H "learn by doing" programs and activities. Reports, letters, and other information indicate that some of the boys and girls who were introduced to 4-H in

these expanded programs have joined existing clubs or have formed new clubs. This was one goal of agents and volunteer leaders.

The basic membership structure showing a major strength of 4-H programs through the years is the first reported category, "youth participating in organized 4-H clubs." Information on the chart seems to indicate that during the early years great emphasis was placed on program impact and not so much on categories of reporting. Numbers on the charts correspond to the following explanations:

1. All 11 counties having Extension agents in 1910 had "corn clubs" that year with an estimated 300 participants.

2. Reports located for 1928 and 1930 provide figures for male 4-H members but not female.

3. Reports for 1937, 1947, and 1967 through 1977 provide information by sex.

4. Reports located for 1942 and 1957 provide figures for total Negro and white 4-H membership only.

5. Membership in 1952 and 1962, as was also true in reports between these two dates, was provided by both race and sex. These two reports are examples.

6. The chart shows a second category, "special-interest", in 1967, one of the first years this category was used even though several boys and girls had been "lone-star members" and/or took part in a special-interest 4-H study group for many of the earlier years.

7. The 4-H instructional television series category of 4-H membership was included in the Virginia 4-H program in 1968. Virginia was one of the first states in the nation to provide educational programs by television to young people. Four-H programs by television were and are provided through cooperation with the public schools. The membership to 1972 was: 1968--33,765; 1969--122,225; 1970--98,600; 1971--97,342.

8. The Expanded Food and Nutrition Education Program (EFNEP) membership is reported on the chart for 1972 and 1977. The membership by years since 1972 was: 1973--35,550; 1974--30,466; 1975--36,378; 1976--26,735; 1978--21,408; 1979--24,558. EFNEP has been one of the most significant additions to the 4-H program in recent years.

9. Prior to 1952, there were more white, boy 4-H members than white, girl 4-H members. Since that date, however, the number of girls has been greater.

Information with regard to age-levels of participation in various 4-H programs is not provided.

During the mid-60s, there was expanded emphasis on senior 4-H programs. To aid Extension staff in this effort, a "4-H Program Analysis Handbook" was provided to each Extension staff member. It was developed as a guide and also to encourage having each facet of the 4-H program serve a larger 4-H audience. Extension agents involved adult volunteer leaders and 4-H members in evaluating their club and county 4-H programs and in making plans for adjustments as they felt appropriate. Involvement probably contributed significantly to the increased enrollment.

Volunteer 4-H Leaders

For the first corn and tomato clubs, agents performed the functions that many volunteers now perform. Parents and other adults helped but were not called leaders. Many community resources were utilized by agents in support of the project clubs; homes, farms, schools, and other public buildings were used for meetings. Parents and other adults transported members and their exhibits to fairs and numerous other activities. Other interested persons provided prizes.

The words volunteer 4-H leader were seldom found in reports prior to 1919, but have since been used frequently. The April 1919 agricultural letter included the heading "To School Teachers and Club Leaders - Ask Your County Agents for a Copy of the New Secretaries' Minutes Book." The April 1921 club letter complimented 4-H leaders by stating, "A 4-H canning girl of Dinwiddie, Lucy Hubbard, now Lucy Wray, became a club leader." Wray continues to serve as a 4-H leader. John Pryor Atkinson made a tremendous impact on 4-H as principal of the high school in Dinwiddie County and as a 4-H All Star. His influence as a volunteer leader was statewide.

Twenty-one volunteer leaders attended the 4-H short course held in 1922 for white members. Eighteen volunteer leaders assisted with the first short course for Negro 4-H members held at Hampton Institute in 1923.

The club letter of April 1924 had this headline: "Has Your County Held a Leaders' Conference or Club Council Meeting?" The same letter stated that Rockbridge and Montgomery counties were among those having such a conference in March. A 1925 club paper reported that 100 local leaders and 130 farm and home agents attended a training meeting. One topic was "Psychology of Adolescent Age with Application to Club Work." The club paper each year from 1919 to 1980 reported excellent examples of leadership by volunteers. Leadership training was also reported frequently. The numbers of leaders have increased as have their

responsibilities. Leaders have come from almost every walk of life and profession, but those serving most frequently and for the longest periods appear to have been parents and school teachers.

Junior 4-H leaders were reported in the mid-20s. They were complimented for the guidance and project instruction they provided younger members. From those days to the present, older 4-H members have been provided a variety of opportunities not only to serve younger members, but also to study and practice principles of leadership. Junior and teen 4-H leaders have, through the years, performed many tasks admirably. Examples from the beginning to 1980 include serving as project leaders or assistants; camp counselors and instructors; community and unit activity leaders and teachers; assistant 4-H club leaders and technicians; and serving on committees to plan events and shape county, district, state, and national 4-H programs.

Through serving, junior and teen 4-H leaders have increased their knowledge and improved their skills as they prepared and performed. Equally important, they have learned more about working with people and how others react to them. They have gained self-confidence and greater appreciation for others and of their own self-worth. Professional Extension staff members have helped these young people recognize that they also are role models and that great responsibility rests upon them.

Training 4-H Leaders

Training junior and teen 4-H leaders, as well as training adult leaders, has been a major program of Extension for more than 65 years. The stated purpose of the July 25-30, 1921, state 4-H short course was "to train boys and girls for rural leadership and usefulness." Programs of each short course and Congress since those early years have shown scheduled time for 4-H member and adult leadership training.

The first county 4-H council was organized in Nansemond County in 1919. The June 1920 club letter stated that a Henrico County 4-H council was being organized. These councils, which usually met two times a year, were organized for three major purposes: 1) to provide timely training for all 4-H club officers in the county; 2) to train all adult club leaders; and 3) to provide information, guidelines, and other "tools" for the officers and leaders of each club to use in developing and carrying out club plans.

Leadership learning opportunities were expanded during the 50s. An additional associate state 4-H agent was employed so that additional effort could be devoted to leadership development. This position has been retained and good results are evident.

In the early 50s, additional leadership materials were developed and used with leaders, including leadership projects and materials for junior and teen leaders. Self-instruction leader materials were also developed and used. County 4-H leader organizations were encouraged and staff members aided in getting them organized. Jack M. Tyree and W. E. Skelton initiated the first state weekend 4-H leader conference, conducted in 1957. Additional training meetings were conducted at county, multi-county, district, and state levels. Leaders were encouraged and taught how to identify, recruit, train, support, and supervise other volunteer 4-H leaders.

County Extension agents, with some assistance at times from district and/or state 4-H staff or subject-matter specialists, conducted county and multi-county training. District staff, with some assistance by state 4-H staff and/or subject-matter specialists, conducted district training. State staff, with assistance at times from Virginia Extension and other university administrators, national Extension, and nationally-known personalities and subject-matter specialists, conducted state training. Unit or county Extension agents and volunteer 4-H leaders usually helped with district and state training sessions. Subject- matter specialists from both VPI and Virginia State College have, through the years, conducted and/or assisted with junior, teen, and adult 4-H leader training.

Volunteer 4-H leaders from the early years to the present time have been encouraged and aided in various ways to attend and participate in leader development programs. Partial scholarships and travel assistance to in-state and out-of-state training meetings have been provided for years. Donors have been obtained to provide funds that partially pay for subscriptions to the "National 4-H News" for 4-H leaders and several libraries.

The regional annual volunteer 4-H leaders forum at the Rock Eagle 4-H Center in Georgia has been significant in training Virginia 4-H leaders. The January 1974 issue of the 4-H paper reported that 28 adult leaders and two Extension agents from Virginia participated. This program is partially financed by the J. C. Penney Company. Virginia's largest delegation, 55 leaders, took part in 1979. Through the years, several members of the Virginia Extension staff have presented programs at these forums.

One of the greatest strengths of the 4-H leader program in Virginia has been volunteer 4-H leader organizations. The first state group was organized during the 4-H short course at VPI in 1930. Minutes of this meeting revealed that Lula Lord of Amelia County and others had been considering such action for several years. C. A. Montgomery, state boys' club agent, was requested to be chairman of the meeting. The following officers were elected and requested to present a suggested constitution and bylaws at the 1931 meeting:

John Pryor Atkinson, Dinwiddie County - President
Lula Lord, Amelia County - Vice President
Sydney H. Coates, Albemarle County - Secretary/Treasurer

Fairfax County 4-H leaders organized the first county 4-H leaders' club (later called "association") in June 1931, and 43 leaders participated.

During 1968, the 4-H leaders of each district elected a district vice president. East Central Extension District has the distinction of having the first district association of 4-H leaders. It was formed in 1970.

In appreciation for the assistance of Extension agents, the state 4-H leaders association initiated in 1978 special recognition for Extension agents. Ben S. Lee, Greenville County, was the first agent to receive this "Outstanding Agent of the State Award".

During 1979, the Virginia Association of 4-H Volunteer Leaders changed the name of its executive board to "board of directors" and completed its efforts to incorporate as a nonprofit organization for educational purposes. The association continues, in cooperation with the Extension 4-H staff, to conduct spring and fall training conferences for 4-H leaders.

4-H Leader Recognition

Starting in the 20s, Extension agents and donors praised adults who gave their time to assist boys and girls in the 4-H program. Appreciation has continued and other types of recognition added. Examples include spoken words, banquets, certificates, pins, scholarships, transportation costs, and silver bowls to the leaders of the year. The staff at every location takes action to recognize leaders and also to encourage additional participation in leader training programs. As an example, in 1972, a scholarship to the state 4-H Congress was provided for one volunteer 4-H leader per Extension unit. The scholarship was provided to recognize and also to present training for the 100+ leaders attending. Scholarships of this type continue to be awarded. Actually, scholarships were awarded more than 40 years ago. The 4-H paper reports that full scholarships for volunteer 4-H leaders to state 4-H short courses were provided when the total cost for the week was $5.00.

Short Courses and Congress

Short courses have been major events to inspire, instruct, and recognize 4-H members and leaders. The first for club girls was held at Harrisonburg Normal School in 1915. Prize-winning club boys took part in a short course for farmers held at VPI in

the winter of 1917. Another was conducted during the Farmers Institute at VPI, August 7-9, 1918, and 110 boys and girls took part. In August 1919, 167 boys and girls from 39 counties attended the 4-H short course at VPI.

The first state short course for Negro 4-H'ers was held at Hampton Institute in 1923. One hundred nineteen boys, 62 girls, 10 men, and 8 women leaders and a number of "demonstration" officials participated. Hughes and Sally Guy Davis of the VPI Extension Service assisted, as did Gertrude Warren, the national 4-H leader of the federal Extension Service.

Each year, there were several countywide, multi-county, and district courses conducted at colleges, normal schools, or other public institutions. Two state 4-H short courses were also held each year. The club letter in June 1919 quoted Hughes: "Briefly, a short course is a regular house party composed of club girls from one county or several counties who come together to learn more about their particular club project and about club work in general and to have a good time." Attendance at short courses for 1916 was 1,113; 1917--4,426.

During the 20s and 30s, many short courses were conducted. A communication to parents in 1920 concerning short course preparations contained this assurance: "Parents need not feel uneasy about their daughters, as arrangements will be made for a number of home demonstration agents to be in charge during their visit." Starting in the late 30s, the number of county short courses began to decline.

By the late 40s, only two state 4-H short courses remained: one for Negro 4-H'ers and leaders at Virginia State College and one for white 4-H'ers and leaders at VPI. VPI 4-H staff members assisted with each of the eight short courses conducted at Hampton Institute until 1930 and the majority of those at Virginia State College from 1931 until 1965 when short courses at that institution were discontinued.

Those attending state 4-H short courses in the early days were county prize winners, leaders, agents, and 4-H All Stars. Quotas were established in 1950 to encourage greater participation. Each county was given a basic quota for 4-H membership in the county, plus additions above the basic quota for achievement-award winners, demonstration and judging teams, 4-H All Stars, and adult leaders. Representative county Extension staff members were responsible for the management of delegates. Volunteer leaders assisted.

As the needs of young people changed, programs were adjusted to meet the needs and interests of the teenagers participating and also to introduce and/or stress topics and activities which the program planning committee felt would or could be continued

in county 4-H programs. The following examples indicate changes that were made through the years.

1918: State short course, VPI.
6:00 a.m. arise, dress; 30 to 40 minutes of exercise; bath, dress again, flag raising.
7:15 a.m. breakfast.
8:00 a.m. make beds and do other duties.
(Six hours of instruction each day, beginning at 8:30 a.m.)

11:00 a.m. assemblies.
12:00 noon lunch, quiet period.
Afternoon: classes continue.
Recreation: athletics, games, singing, storytelling.

Examples of classes: cooking, sewing, canning, poultry, hygiene, first aid, sales, plants, stock judging, corn judging, farm machinery.

1948: State short course, Virginia State College -- 335 attended.
6:15 a.m. rising bell.
6:45 a.m. devotions led by 4-H members.
7:00 a.m. breakfast.
8:15 a.m. assembly, group singing; classes;
12:00 noon lunch
Afternoon: class periods; break; recreation; dinner; vespers; evening program.

Instruction topics: nutrition and health, good grooming, poultry, gardening, leadership, club member responsibilities in creating better homes, club member responsibilities in creating better communities.

1961: State 4-H short course, VPI.
6:45 a.m. arise and shine.
7:15 a.m. breakfast.

Instruction topics during the day included: Clever club programs, learn to lead, 4-H teamwork, 4-H mirror, 4-H show- how, stairsteps to success, top-notch 4-H activities, world neighbors, some leadership, joyfully we sing, just for fun, dollar dignity, field crops, garden guidance, livestock programs, modern poultry, my castle (room), plant reproduction, traveling timbered trails, and your career--a big decision. Each member participated in four of the different classes. This was a plan to keep each class an appropriate size for effective learning. Each class was one hour and fifteen minutes in length.

Vesper programs were a part of each program until the 60s.

1961-present: D. Merrill Davis, a professional in music education, directed the vocal aspects of the programs. He directed all group singing, taught song leadership, and organized and directed choral groups.

Prior to 1961, 4-H alumni who excelled in music, or teachers of music in nearby schools, were in charge.

1966: State 4-H short course for both Negro and white members, VPI.

Instruction topics: citizenship-education-action; how your community rates; tips for teens; equine science; fitness and health; values in focus; confidence for leadership; social courtesies; tiny giants; art of presiding; poultry science; opportunities in dairying; confidence in speaking; Heart H; traveling timbered trails; song leadership; world neighbors; who am I?; it's smart to bank; your career--a big decision; animal science; getting to know color; 4-H electronics; clues for consumers.

The name short course was changed to State 4-H Club Congress in 1967 to correlate with the national activity called National 4-H Club Congress. In 1971, the name was changed to State 4-H Congress. The word club was discontinued in an effort to convey to special-interest, EFNEP, and television 4-H members that they, too, could participate. These 4-H membership categories were becoming realities and are now very well established.

1973-present: Evangeline Swain, Chairman of the State 4-H Congress planning committee, has served longer in this position than any other person. During this period, there have been many special-theme Congresses.

1979: County staff members began serving as dean of girls, assistant dean of girls, dean of boys, assistant dean of boys.

Adjustments were made in 4-H short course and Congress programs from the first in 1915 to the present. All were made to meet the needs and interests of those participating and to broaden their knowledge of 4-H program and management possibilities existing in their neighborhoods, counties, districts, and state.

Some of the additions and deletions during the past 32 years include: expanding quota categories in 1950; the first state 4-H band in 1951, an "off-and-on" activity; the first state 4-H chorus in 1953, which has also been "off-and-on"; vespers, which began in the 20s and were discontinued in the 60s; and 4-H tea, a super dress-up occasion (gloves, hats for girls; suits, ties for boys), discontinued in 1967 because the additional number of

delegates (1,100+) brought space, scheduling, and management problems.

Camping and 4-H Educational Centers

The terms club camp, club encampment, and short course were used interchangeably prior to 1920. Hughes told about conducting a camp for club girls in Loudoun County in 1917. "The girls were quartered in a large house provided free for our use for the week," she said. "We enjoyed preparing as well as eating the food which the youngsters brought from their homes: fresh fruits, vegetables, and some cured meat and canned food. We were pleased, too, when Bradford Knapp, who lived next door and who was the son of Seaman A. Knapp, would visit and watch the girls make jelly and practice canning."

The agricultural club letter of 1919 reported that boys and girls of Westmoreland County took part in a county short course using cottages belonging to J. C. Wetherill.

Facilities during the early years for camps, encampments, and short courses varied considerably and were located throughout the state. Houses, cottages, colleges, normal schools, and other types of facilities were used, apparently at little or no cost. Examples of such facilities were: Sabot Hill Farm, Goochland County; Curles Neck Farm, Henrico; and Boy Scout Camp, Nelson.

In 1928, the first 4-H camp in Virginia, owned and operated by 4-H, was used. This was the Jamestown 4-H Camp and was to serve 4-H'ers in that Extension district. Later, other district 4-H camps were constructed. Even though these were primarily for 4-H'ers in the district, the camps were also used by other Virginia 4-H'ers when space was available.

During early years, and through the 50s, many camp facilities were rented for one or more weeks per year. Four-H camp programs were conducted in Virginia at rented churches, Boy Scout and private camps, at state park facilities, and other camps owned by service clubs. Four-H camps in West Virginia and Tennessee were also rented. Albemarle was the only county in Virginia which had a county camp facility for 4-H. Periodic flooding by a creek remains one of the major problems encountered there.

Day camps have made significant contributions to the Virginia 4-H program. These were especially prolific throughout the state during the late 60s and early 70s. Members of Extension Homemakers Clubs did much to make these 4-H day camps highly successful.

Facilities have changed dramatically from rather primitive camping situations with canvas tents and one or more buildings to many fine buildings and one or more "outpost" areas with tents for those interested in primitive-type experiences for one or two nights. The changes were made to provide facilities for maximum efficiency and effectiveness for the types of programs that best meet the real-life learning needs of children and youths. Also, there was a desire to eliminate and/or minimize the time necessary for children and youths to be involved in the provision of housing, bedding, and food service, and to maximize the time for program fulfillment.

The number of 4-H members participating during the early years was 20 to 70 for each two- to five-day camp period. As camping facilities and, later, 4-H education centers were developed, the optimal number of 4-H members for program effectiveness was between 150 and 200. Program people seemed to prefer 160 to 240 people per period. Cost-effectiveness considerations have contributed to considering larger numbers.

Tyree, who had 4-H camping as one of his responsibilities for several years, said, "It is more difficult to direct a productive educational program with more than 200 participants. Some keys to having successful programs in a 4-H camp, or at 4-H centers with large numbers attending, continue to rest primarily upon such factors as quality or quantity of staff, the number of sub-groups of participants, how the sub-groups and the total group are managed, facilities and equipment, program content and its presentation, and the quality of food service as well as the quality of food."

The age range for camping during the early years was 10 to 21. Later, two primary age groupings were encouraged. Junior 4-H member programs were for those 9 through 12 or 13. Programs for senior 4-H'ers at camp usually involved those 13 and over. It appears that there have been relatively few programs at 4-H camps and/or centers, through the years, which were planned with and specifically for teen 4-H members, except for special camps such as the conservation camps. The current age range is 9 to 19, but the majority are pre-teens.

Regular 4-H project instruction, which was a practice in the early years of camping, has been replaced with activities that meet additional developmental interests and needs of participants. Programs at present are almost always coeducational. As such, they are recognized as a vital part of the educational process of children and youths.

Programs for the early camps were planned by adults. From the late 20s to present, more and more programs have been developed with representative 4-H members, volunteer leaders, Extension, and center personnel planning together for a specific

group of children and/or youths. The goal in recent years has been to design and implement programs that are enjoyable, educational, healthful, inspirational, and which complement unit 4-H programs. Excellent and appropriately served meals, as well as healthful refreshments at appropriate times, are considered a vital part of the program.

Everything that a 4-H member experiences from the moment of arrival until departure is a part of the program at a 4-H center. Four-H camp and center programs contribute the most to the success of county or unit 4-H programs when a minimum of 20% of the 4-H membership of a county, assisted by several adult volunteers of the Extension unit, takes part annually. The carry-over effect in terms of enthusiasm, re-enrollment, increased program participation, and leadership is tremendous.

The number of adult volunteers assisting at camps and centers has varied through the years. As the design to involve more volunteers materialized, the number of Extension staff conducting activities or providing instruction was reduced. Today, the many volunteers, who are outstanding individuals and exceedingly professional in one or more program areas, give much of their time to serve at 4-H educational centers as well as in neighborhood, town, city, county, and/or unit 4-H programs.

4-H Educational Centers

The 4-H educational center concept was conceived in the late 50s when Skelton was the state 4-H agent. The center concept was promoted for several reasons: (1) there was a dearth of 4-H camp facilities and equipment in Virginia; (2) rented facilities within and out of the state were not adequate to accommodate the numbers who wanted to participate in the regular summer type camp; (3) district and county Extension staffs wanted facilities within their districts for their client groups to conduct programs; and, (4) volunteer 4-H leaders, county 4-H councils, 4-H honor clubs, 4-H All Stars, and other groups in many counties wanted facilities where they could meet at appropriate times throughout the year to plan programs and/or receive training.

Interstate and intrastate 4-H program potentials were discussed. Because of location and history potential, it was felt that the Jamestown 4-H Camp or center could offer many opportunities to 4-H'ers from other areas of Virginia and also other states. Facilities and equipment to meet the expanding needs of present adult Extension groups, additional Extension groups, and also Extension support groups were discussed. It was felt that knowledgeable leaders in both the public and private sectors would support the development of 4-H centers because of their understanding of 4-H program principles. Cost effectiveness was another major concern; it was recognized that the 4-H centers should be designed for use throughout the year by

4-H and by other related groups when not utilized by 4-H. The president of VPI and other officials strongly supported these efforts.

The decision was made to move forward with 4-H centers rather than camps, and the concept has had tremendous support and success even though some "growing pains" have been encountered.

Beginning with Skelton and continuing through the years, VPI administrators, program personnel and, at times, engineers and other staff, worked with the board of directors in each of the six districts to establish a center in each district. Volunteer adult leaders and business and professional men and women began to serve on the boards to give the public an opportunity to assist in the planning and funding of the centers.

Virginia State University administrators and staff have supported the 4-H center concept from the beginning. Recently, the president of Virginia State University, as well as its Extension administrators and staff, has been increasingly supportive of 4-H centers.

The leadership and financial support provided by organizations and institutions, state and local governments, citizens of the districts, and executives of corporations have certainly been significant keys to the success achieved. The quotation, "we pull the most when we pull together," has been demonstrated.

Growth patterns of the six 4-H educational centers in Virginia are interesting. Jamestown, Holiday Lake, and Farrar started as 4-H camps.

Jamestown 4-H Educational Center
(Near Jamestown Festival Park)

This was the first 4-H camp facility in Virginia owned and operated by 4-H members. Five and one-half acres were acquired for the camp through the cooperation of J. C. Jeahn. This agricultural agent of the Chesapeake and Ohio Railroad was a prime leader in acquiring the land and obtaining financial support. He also served as camp program director.

At the request of the federal government, the original site was made available in 1946 for development of the Colonial National Jamestown Historical Park. The government permitted continual use of the area for a 4-H camp through 1948.

The present facility is located one mile west of the original site, contains 16 acres, and is flanked on one side by the James River. It is constructed primarily of concrete blocks and can accommodate up to 200 people. It is used mainly during

the summer. An olympic-size pool was added in the early 70s. Serious discussion and planning for a 4-H educational center started in 1975.

Holiday Lake 4-H Educational Center
(Near Appomattox)

Hampden-Sydney College facilities were used by 4-H'ers in the East Central Extension District for its 4-H camp-type programs from 1926 through 1940. Beginning June 23, 1941, 4-H members of East Central used their own 4-H camp. The district had acquired a lease on land and buildings in good condition. These had been constructed by the work relief program during the Depression years.

In 1976, the board decided to convert the camp into a winterized, year-round 4-H educational center. In 1980, the state legislature authorized the State Commission of Conservation and Economic Development to negotiate a 99-year lease for the 156 acres of land. A fund-raising campaign is in progress.

Southeast 4-H Educational Center
(Near Wakefield)

The new facility near Wakefield replaces 4-H Camp Farrar which was at 85th Street, Virginia Beach. It honored F. Southall Farrar who organized the first boys' corn club in Virginia. The camp area, located a short distance from the ocean, was leased from the State Division of Parks. Camp Farrar opened in 1948 and served eight different 4-H camp groups of about 200 campers each week that summer.

The board of directors, during the January 1974 meeting, decided to close 4-H Camp Farrar and to develop the Southeast 4-H Educational Center on the same land area.

Following examination of an environmental study that substantiated such concerns as a small, fragile land area with a major highway on one side, sand dunes on another, and a densely populated area on the other two sides; sand dune erosion; inadequate water pressure; and the City of Virginia Beach not being able to extend sewer lines, the board decided that some other site should be considered. Many potential locations were visited and evaluated.

Action by a major corporation in July 1977 was reported in the February 1978 4-H paper: "The Virginia 4-H program has received 210 acres of land for a modern, year-round educational center, a gift of Union Camp Corporation of Wayne, New Jersey."

Southwest 4-H Educational Center
(Near Abingdon)

This is the first 4-H center in Virginia to be named an educational center prior to its construction. It contains 75.75 acres and began operations in 1960. Prior to 1960, 4-H members and leaders in this district rented facilities at Hungry Mother State Park, other facilities in the district, and also 4-H camps in Tennessee and West Virginia. Some of the Southwest 4-H Educational Center facilities are constructed and equipped for year-round use. By 1965, 225 people could be housed and fed at the center, which is utilized to some degree throughout the year. It has an excellent junior olympic swimming pool. Somewhat different from other 4-H educational centers, it has a lighted horse rink and stalls for 96 horses. Only some of these, of course, are used by 4-H members. The center is managed by a board of directors.

West Central 4-H Education Center
(At Smith Mountain Lake)

This was the second facility in Virginia to be designated a 4-H Educational Center from its beginning. In its first year of operation, 1966, it was filled to capacity almost every program period. Prior to 1966, 4-H members and leaders in this district utilized rented church camps, 4-H camps in West Virginia and 4-H camps in other districts of Virginia.

The Appalachian Power Company gave 112 acres of land to 4-H'ers of the district for the construction of this 4-H educational center. It, too, has a swimming pool, horsemanship facilities, and many other facilities for a variety of programs. Facilities and equipment are for use 12 months a year.

Northern Virginia 4-H Educational Center
(Near Front Royal)

Four-H members, their parents, leaders, and other interested persons in Northern Virginia began to dream of a 4-H center near Front Royal in the early 70s. Virginia Tech 4-H staff and agricultural engineers worked with the research station staff, Extension staff, and lay people of the district to determine a desirable land area at the research station for a 4-H center. In the mid-70s, the 229-acre site, which was formerly a part of the U. S. Department of Agriculture and Virginia Tech Beef Cattle Research Station, was made available by the federal government for the development of a 4-H center through the efforts of Congressman Kenneth Robinson and Skelton.

Construction of the $6 million facility began November 17, 1977, with an official groundbreaking ceremony after a $532,000 Virginia Outdoor Recreation Commission grant was secured through the efforts of Skelton. The goal was to have the center accommodate up to 550 people on a year-round basis.

During the early years of 4-H educational centers, full time paid staff, especially during spring and summer, presented and managed a high proportion of the programs. They were responsible to the directors or managers of the centers. At present, each 4-H educational center has a full-time director and/or manager.

Four-H educational centers employ other staff as necessary to take care of the physical plant, equipment, and health and food services. At times, some program aides are also employed. Such employees are responsible to the boards of directors through the directors and/or managers of the centers. The number of Virginia 4-H members participating in programs at 4-H educational centers during summer months and throughout the year is steadily increasing.

4-H Paper -- "Head, Heart, Hands, and Health in Virginia"

The major purpose of this publication since its beginning in 1918 has been to guide and encourage all recipients to take those actions necessary to improve their own performance and the performance of others in 4-H programs and activities.

The publication, even though probably not intended to do so, has performed another major function: It is a source of vital information regarding the development and growth of 4-H in Virginia. Jesse Jones, Director, in his 1919 report, stated: "material used in the 'club letter' is the kind that interests boys and girls in the work and imparts such information as will be useful to club members in carrying out the various projects in which they are engaged."

The content at first included such information as suggested programs and program outlines for regular club meetings, minutes of club meetings, work project instructions, reports of fairs, short courses, award winners, and letters from the Governor of Virginia and other persons in high positions with interests in youths. Many "how to" instructions were provided. Names of club members and their successes were numerous.

The purpose remained the same even though the content changed through the years. For example, as 4-H volunteer adult and teen leaders' roles were identified, more information to direct and encourage them toward greater participation and achievement was also included.

Ten thousand copies were distributed in 1919 according to Director Jones. It appears that the target audience has remained the same. In 1919, club members, farm and home demonstration agents, division school superintendents, some school teachers, and a number of people who had shown interest in club work received a copy each month. In 1980, many school libraries

received a copy, as did school teachers who assisted 4-H members in school 4-H programs or other 4-H areas, adult 4-H leaders, donors, and others interested in 4-H efforts. Extension staff with 4-H program and administration responsibilities, as well as 4-H members, received copies.

Direct mailing was the method of distribution most preferred by members and by staff even though the distribution cost was slightly higher. Bulk mailing to a county or unit Extension staff person left much to be desired. Even when the issue arrived early enough in the Extension office, the Extension agent had to take the correct number to each club meeting or locate necessary money for them to be mailed. When a bulk supply was mailed to club leaders, it was learned that there were similar distribution problems and many members never received copies.

During the mid-60s, there was an evaluation of the 4-H paper. The idea to combine it with the Virginia Extension News to reduce staff time involved and also to save money was explored. This activity helped clarify that each publication served different audiences, that the club paper was extremely valuable to members and leaders, and that its contributions to 4-H programs justified staff time and funding needed. It was also concluded that the content of each issue should be closely evaluated and that items used should be timely for action by members and leaders, as well as interesting and informative. One or more articles concerning 4-H in each issue of the Virginia Extension News was determined as desirable because of audience interest and support of 4-H.

The 4-H paper had its beginning as a bi-monthly with the May-June 1918 issue. It was first called the "Agricultural Club Letter". In December 1918, it became a monthly publication and the name changed by adding the 4-H emblem between the words agricultural and club. There have been three other name adjustments. In September 1929, the name was changed to "Agricultural 4-H (emblem) Club Letter." In January 1943, it became "Head, Heart, Hands, Health in Virginia." The first three Hs filled the first line across the top of the page and much of the second line by the remaining words.

In July of 1945, "Head, Heart, Hands and Health" was spread across the top of the paper using upper and lower-case letters. The words In Virginia appeared in a one-half-inch-wide shaded bar which underlined the first line. An outline of the 4-H emblem, super-imposed on an outline of the State of Virginia, separated the words and Health on the first line. The paper color was also changed from white to green in 1945.

"Virginia Boys' and Girls' Guide and Song Book for Club Meetings"

This attractive 1920 publication, compiled by the 4-H Club Department, was 4x6-1/2 inches, with 56 pages of practical information, as identified by its title. It also contained notes of encouragement from the Governor of Virginia and the State Superintendent of Public Instruction.

Some items included were: organizational objectives, what every organized club should have, year's program (suggested special features for each monthly program), suggested constitution and bylaws for clubs, how to elect officers, parliamentary suggestions, typical club meeting (an outline and also what might be said when and by whom), duties of officers, order of business, and words for songs.

Separate publications have been published to present information contained in this booklet, which had a three-color cover. The last issue of the 4-H Song Book (early 70s) encourages song leadership by devoting one section to instruction.

Recognition and Awards

Recognition and awards have been parts of the 4-H program throughout its history. This is verified by a statement from Extension Work in Virginia: A Brief History, 1907-1940 concerning a boys' corn club, 1910: "The boy captured the prizes for the largest yield, for the best ten ears of corn, and for the best single ear. He received $30 in prizes and still had his corn."

Trips and/or scholarships were given as incentives for 4-H'ers to expand their understanding of greater possibilities for themselves, as well as to recognize their achievements. Every issue of the 4-H club paper reported success stories of advancements in learning, listed awards or rewards available, named 4-H'ers who had earned awards, or named donors. For example, the first issue of the agricultural club letter, May-June 1918, stated: "There will be a prize in most counties for the best agricultural club." The October 1922 club letter listed all donors of 4-H awards. Two issues of the 4-H paper during the 20s and 30s were devoted completely to listing and explaining recognition and award programs. Through the years, the 4-H paper was used to report awards, recognize achievements, and encourage continued effort and learning. Many pictures have been used.

Private support continues to be a significant factor contributing to the consistent growth of 4-H in both scope and scale. Donors appreciate the objectives of 4-H, the successes experienced, and its cost effectiveness; they have been numerous and generous. Award programs, along with the name of the program each donor supported and a listing of the consecutive years a program or other 4-H cause has been supported by the same donor,

show the understanding and dedication donors have for the value of 4-H in the lives of young people. Donors include: individual banks, bankers, bank associations, livestock and breeder associations, packers, chambers of commerce, railroads, elected officials at every level of government, civic groups, 4-H alumni, and farm and other business organizations. Executives of many of these groups also give individually. Organizations of volunteers, adult Extension groups (Extension Homemaker groups in particular), professional associations, senior and adult 4-H groups and/or organizations, women's clubs, and volunteer and professional leaders also provide recognition in the 4-H program. This, of course, is not a complete listing.

Through the years, volunteer 4-H leaders and unit Extension staff have had the bulk of the burden and pleasure of presenting recognition and awards. Choosing awards and appropriate words that will bring satisfaction to 4-H'ers, and thus encourage their continued performance, takes much thought and preparation. Leaders and staff fulfill that responsibility by knowing each youngster and providing each with encouragement, direction, and recognition. They have helped boys and girls realize that learning is winning and that if a prize is not received, they must continue to keep their spirits high and try again.

To get large numbers of 4-H members who are eligible to take part in demonstrations and judging--rather than working primarily with a few young people--has been a concern to both volunteer 4-H leaders and professional Extension staff. The successful units are those that involve all eligible 4-H members in the unit plan for presentations and judging.

Information concerning awards available and how to use them wisely has been provided to unit staffs for many years. Staff members inform volunteer 4-H leaders, who inform the members. The major publication has been the Virginia 4-H Recognition and Awards Handbook, a state 4-H department publication updated as needed. The 4-H paper is another major communicator.

The scope of various aspects of the Virginia 4-H program has been reflected rather well through the number of awards announced at club, unit, district, state, regional, sectional, national, and international levels. Judging teams, especially horse, dairy, livestock, poultry, and land appreciation, have captured many first and other top positions. Four-H state and national achievement awards began to increase in 1950. This resulted in part from actions taken following a report and recommendations by the state 4-H club leader, a district Extension agent, and a subject-matter specialist who attended the 1949 National 4-H Congress. This committee reported that the state quota of 4-H members to the National 4-H Congress was not being filled and that achievement records in Chicago did not reflect what 4-H'ers were doing. The following actions were taken: additional state

sponsors for National Congress were obtained to finance subject-matter quota categories that were not being used; additional written suggestions were provided to county (unit) staffs to use in teaching volunteer 4-H leaders how to help 4-H members report the work they were doing, and training meetings for professional and volunteer staffs were conducted throughout the state.

Additional subject-matter achievement records were reviewed. Members began to report more accurately their work and what had been learned. Materials were more effectively and attractively presented. The results: additional Virginia 4-Hers were recognized for their work in 4-H. In 1960 Virginia 4-Hers earned 12 national and four alternate national achievement awards, one national 4-H alumni award, livestock judging earned a first with 30 teams competing, and poultry judging earned a first with 16 teams competing.

Virginia Association of Extension 4-H Agents

The Virginia Association of Extension 4-H Agents was conceived by Extension agents in Virginia who had chosen 4-H as their career and who felt that they could become more effective through participation in an association. In 1967, Extension administration approved Extension agents' attendance to the National 4-H Association Conference. Larry Blair, John Brooks, Charlie Elliott, William Griffin, and Jack Sisk attended and joined the National Association. Administration continued to support this avenue of staff development and aided staff in attending national meetings. Five attended in 1968 and 30 in 1969.

On May 20, 1970, the Virginia Association of Extension 4-H Agents became a reality. Nancy Ascue, "a dynamic, dedicated, effective Extension agent of Russell County," was elected president. Other agents elected were: Vice President, Betty Unger; Secretary, Roger Brown, Jr.; and Treasurer Jack Sisk.

The Virginia Association became active in the National Association. A delegation of 55 took part in the 1970 convention. In November of 1972, Ascue was elected vice president of the National Association for 1973. As national membership chairman, Ascue shocked some by announcing a membership goal of 1,000; all were elated when membership reached 1,520 in that year.

The Virginia Association, assisted by other Virginia Extension associations, served as host for the 27th annual conference of the National Association at the Hotel Roanoke, October 28-November 1, 1973. President Edward Poole of Michigan, encouraged by the program in which over 800 participated, described the Virginia-hosted conference as "one of the most successful in the organization's history." VPI president T.

Marshall Hahn, Jr., singled out the programs of 4-H as one of the most viable avenues the nation has for teaching "self-reliance and responsibility." Ascue was elected national president for 1975.

Emma Thrasher, City of Chesapeake, was elected secretary of the National Association of Extension 4-H Agents, for a two-year term, during their conference in Colorado in November 1979. Phyllistine Mosley was 1980 national chairman, Professional Improvement Committee; and C. Dean Allen, National Program Committee chairman. Other members of the Virginia Association have filled national committee and Southern Region director positions.

Developing and implementing 4-H programs that are consistent with the developmental needs and interests of 4-H'ers have been major thrusts of the members of this association whenever they have instructed or provided refresher programs for volunteer 4-H leaders. It is interesting to note that in 1927, R. B. Hudgins, farm agent of Appomattox County, in a talk during the annual conference of Extension agents, said: "It would be needless to state that the most important thing for sheep specialists to know is sheep. It ought to be just as needless to say that the most important thing for a boys' and girls' club agent to know is boys and girls."

4-H Alumni

How many former 4-H members are in Virginia? At least 750,000. The following represent the many who were especially active in 4-H.

Joe G. Campbell, Russell County: 4-H All Star, IFYE to the Netherlands, National 4-H Club Congress leader. His children were 4-H'ers; he and Mrs. Campbell have been 4-H leaders. He owns and operates a dairy and livestock farming business.

Mae Gilbert, Campbell County: Past president of the Virginia Extension Homemakers Council; Southern Regional Director and member of the board, National Extension Homemakers Council.

Robert B. Delano, Richmond County: An eight-year 4-H'er, presented poultry demonstrations at the 1939 World Poultry Congress. VPI graduate, state and national 4-H alumni recognition recipient for his continuous actions supporting 4-H. President of the National Farm Bureau.

Mills E. Godwin, Jr., Chuckatuck, Suffolk County (City): Governor of Virginia for two terms. As keynote speaker supporting the Southeast 4-H Educational Center, he said: "This is an opportunity to do something for our young people." At the

Northern Virginia 4-H Center, Godwin said: "4-H'ers have an opportunity to develop the 'whole being.'"

Mary Clairborne Jarratt, Floyd County: National 4-H Club Congress leader, National 4-H Achievement Award winner, earned state and national 4-H alumni award recognition. She has held government positions since 1966, and her present position is Assistant Secretary of Agriculture for Food and Consumer Services in Washington.

Earl J. Shiflett, Augusta County: 4-H All Star. Graduate of Virginia Tech and former professor. One of two 4-H alumni in the nation chosen to make the annual 4-H report to President Eisenhower and the nation. Beginning in 1952, served as Secretary of Education for State of Virginia, a Governor's cabinet position; and later as Secretary of Commerce and Agriculture. Retired, but has a consulting business. Active in 4-H and other community service.

W. E. "Bill" Skelton, Dinwiddie County: 4-H All Star, National 4-H Congress leader, Army officer--World War II, state director of 4-H; director of Virginia Cooperative Extension Service; dean of Extension Division at VPI. Received the Freedom Foundation's George Washington Award.

Milton T. Smith, Lunenburg County: Received 4-H recognition and awards in forestry, leadership, achievement, and was presented a William Danforth Award. Received his M.D. degree from the Medical College of Virginia.

Reginald Smith, Prince Edward County: 4-H member. A much-sought-after speaker, consultant, and educator. His specialty is motivation; one of his many topics is "School is a Short-Term Pain for Long-Term Gain." Currently Director, Division of Leadership Development, Virginia Education Association.

Areas not reported upon are: projects, honor clubs, and 4-H All Stars.

4-H Personnel

Personnel of the state 4-H club department at VPI from 1917 to 1980 have been:

Charles G. Burr State Boys Club Agent	1917-1924
E. B. Keeley Assistant State Boys Club Agent	1917-1918
Hallie L. Hughes Acting State Girls Club Agent	1918-1920

	State Girls Club Agent	1920-1950
B. O. Bradshaw		
	Assistant State Boys Club Agent	1918-1919
C. A. Montgomery		
	Assistant State Boys Club Agent	1920-1924
Helen L. Ricks		
	Acting State Girls Club Agent (while Hughes was on study leave)	1925-1926
C. A. Montgomery		
	State Boys Club Agent	1924-1932
Gordon A. Elcan		
	Assistant State Boys Club Agent	1923-1933
	State Boys Club Agent	1933-1950
W. A. Turner		
	Assistant State Boys Club Agent	1942-1943
	Assistant State Boys Club Agent	1943-1950
Catherine Peery		
	Assistant State Girls 4-H Club Agent	1946-1948
William E. Skelton		
	Associate State 4-H Club Agent	1949-1950
	State 4-H Club Agent	1950-1962
Hallie L. Hughes		
	Associate State 4-H Club Agent	1950-1954
W. A. Turner		
	Associate State 4-H Club Agent	1950-1967
Lucille Graves Calhoun		
	Associate State 4-H Club Agent	1950-1954
Jack M. Tyree		
	Associate State 4-H Club Agent	1950-1962
	State 4-H Club Agent	1962-1973
	Extension Leader, 4-H	1973-1975
Evelyn Barker Starling		
	Associate State 4-H Club Agent	1954-1962
Dorothy Gentry Wiss		
	Associate State 4-H Club Agent	1955-1959
	Extension Leader, 4-H	1973-1974
A. R. Slayton		

Assistant State 4-H Club Agent	1957-1963
Associate State 4-H Club Agent	1963-1967
Shirley Patton Richards	
Associate State 4-H Club Leader	1960-1970
Margaret G. Williams	
Associate State 4-H Club Agent	1962-1964
Robinette Miller-Niemann	
Assistant State 4-H Club Agent	1964-1966
Robert W. Blanton	
Assistant State 4-H Club Agent	1962-1967
Cecil M. McBride	
Assistant State 4-H Club Agent	1964-1967
Extension Leader, 4-H	1971-Pres.
Martha York Broyles	
Associate State 4-H Leader	1966-1969
Extension Leader, 4-H Youth	1969-1973
C. Dean Allen	
Associate State 4-H Club Leader	1966-69
Extension Leader, 4-H	1969-Pres.
Delwyn A. Dyer	
Extension Leader, 4-H	1968-1972
Evangeline Swain	
Extension Leader, 4-H	1971-Pres.
Kenneth E. Dawson	
Director, 4-H	1973-Pres.
Edward Rapking	
Extension Leader, 4-H	1973-1974
Courtney H. Schwertz	
Extension Leader, 4-H	1974-Pres.
Harriet Rosenthal	
Extension Leader, 4-H	1974-1975
James Edwards	
Extension Leader, 4-H	1975-Pres.
Jack Beasley	
Extension Leader, 4-H	1978-Pres.

4-H Staff Housed at Virginia State University:

Rudolph Powell
Extension Specialist, 4-H 1972-1976
Extension Leader, 4-H 1976-Pres.

Yvette Robinson
Extension Leader, 4-H 1976-Pres.

Richard F.Booker
Extension Leader, 4-H 1977-Pres.

District 4-H Staff

Pam Beverage
Program Leader, 4-H Youth 1972-1978
Northern District

Joyce Gladstone
Program Leader, 4-H 1979-Pres.
Northern District

Edward Rapking
Program Leader, 4-H Youth 1972-1973
Northeast District

Jack Beasley
Program Leader, 4-H Youth 1974-1978
Northeast District

Larry Kuhl
Program Leader, 4-H 1976-Pres.
Northeast District

Wayne Garst
Program Leader, 4-H 1971-Pres.
Southeast District

Cecil M. McBride
Program Leader, 4-H 1967-1971
East Central District

Wayne Keffer
Program Leader, 4-H 1971-1974
East Central District

Charlie A. Elliott
Program Leader, 4-H 1974-1979
East Central District

Robert W. Blanton
Program Leader, 4-H Youth 1967-1974

West Central District
Program Leader, 4-H 1974-Pres.
West Central District

Neel Rich
Program Leader, 4-H 1970-Pres.
Southwest District

4-H Educational Centers

Charles Clement
Extension Agent 1974-1977
West Central 4-H Center

Lewis Campbell
Extension Agent 1977-Pres.
West Central 4-H Center

Henry Snodgrass
Extension Agent 1975-Pres.
Southwest 4-H Center

Don Jimison
Extension Agent 1975-Pres.
Holiday Lake 4-H Center

Marvin Heimbach
Extension Agent 1978-Pres.
Jamestown 4-H Center

CHILDREN AND FAMILIES

The first full-time specialist in this area was Kathleen Wampler, who came to Virginia Tech in 1963. At that time, the subject-matter area was called Family Stability. In 1971, the name was changed to Children and Families. Subject matter includes human development and relationships throughout the life cycle.

Changes in the program during the last 20 years include:

1. A shift from training agents and leaders on a one-to-one basis in the units to in-service education sessions and program support meetings for groups.

2. Increased cooperation with other agencies such as social services, health departments, Virginia Division for Children, schools, and civic groups.

3. A shift from "one-shot" programs to a series of meetings or correspondence courses on one topic, such as the series of six lessons on "Discipline for Young Children".

4. A shift from programs based on problems caused by substance abuse and child abuse to programs aimed at the prevention of such problems.

5. A shift from specialists going to units to conduct programs to specialists providing educational materials so that agents can conduct programs in the subject- matter area themselves.

6. Changes in topics from parents and teens ("How Teenagers Can Get Along With Parents" and "How Parents Can Cope With Teenagers") to parenting the preschooler, then to parents and teenagers.

Wampler, Extension specialist, family life education, has provided leadership to programs in the area of children and families since she joined the Virginia Tech faculty. Her special interests are child development, parent education, teenage parenting, day care, and prevention of child abuse. She has a special interest in 4-H and has developed a two-unit child development project called, "You and Tots". Her other publications relate to infant development and adult-infant communication.

Joseph W. Maxwell served as Extension specialist, family life education, for several years in the early 1970s. His position was 50 percent Extension and 50 percent resident teaching. Maxwell's special interests were family relations, human development, and rational emotive therapy.

Martha R. Conley, Extension specialist, family relations and development, was the first specialist in this program area at Virginia State. She filled that position from September 1, 1972, to August 30, 1973. Her main emphasis was on parenting and family relations and communications. She conducted training sessions, edited a newsletter, Family Affair for agents, and wrote a publication, Kid's Stuff.

Betsy R. Schenck became Extension specialist, child development, at Virginia State in 1974. The major emphasis of Schenck's program was on encouraging Extension agents to increase programs about children and families. Many agents did not feel comfortable conducting such programs; however, Schenck believed that an increase would occur if agents were provided with educational materials and resources. She developed publications on adult-child communication, the child's self-concept, the importance of play, choosing child care centers, and discipline for young children. Also, she produced a bimonthly newsletter,

Focus on Children, written for parents of preschoolers and adults who work with preschoolers. Agents used the newsletter to make new contacts with a hard-to-reach audience: parents of young children and day-care personnel. Approximately 18,000 people in Virginia were on the mailing list.

As society has changed over the past two decades, so have programs for children and families. As more mothers entered the labor force and more children were placed in child-care centers, programs were aimed at improving child care. As the divorce rate increased, programs emphasized reducing family stress. Though the family has changed, family members continue to need education that helps them understand human development, learn how to develop relationships, and develop commitments to strengthen the family and each individual family member.

CLOTHING AND TEXTILES

After the passage of the Smith-Lever Act in 1914, home demonstration workers were appointed in a limited number of counties. Ella Agnew helped them organize year-round demonstration clubs for women and sewing clubs for girls.

In 1916, Edith Roberts was hired as home economics specialist. One of the projects she promoted was getting sewing clubs and home demonstration clubs to construct clothing for needy children so they could attend school. As a result, hundreds of garments were made and distributed to the poor.

Roberts resigned in 1918 and was replaced by Grace Townley, who provided leadership in subject-matter areas to the home demonstration agents, mainly through publications and training meetings. One method of program support was preparation of three-year programs for Home Demonstration Clubs. In August 1919, the home demonstration program focused on the family clothing budget. That same year, Townley wrote a bulletin in which she encouraged adults to place clothes first in the care of young children. Lula V. Walker followed Townley, who resigned to marry Warren Miller of Blacksburg. Her responsibilities were basically the same as those of her predecessor.

The first clothing specialist was Eldona Oliver, appointed in 1927. She married shortly thereafter and was replaced by Cymbel Taylor in 1930.

The Depression taught many people to economize in clothing. This was especially true of farm families whose incomes were so low. Practically all farm women made garments for themselves and their children. In Loudoun County, one 4-H Club of 12 girls gave

a real lesson in thrift by making 12 dresses out of feed sacks for a total cost of 85 cents. This was a demonstration not only in economy, but also in the use of colors, designs, and materials. When the garments were completed, the entire club appeared in the feed-sack dresses. As a result of the publicity, many women were motivated to use feed sacks for clothing. In many counties, feed sacks were also used for draperies, bedspreads, and dish towels. Women and girls continued to make use of feed sacks throughout the depression years, and as long as feed was sold in them.

By 1934, clothing clinics had become popular with people on relief and also with the Home Demonstration and 4-H Club groups. Coats and dresses were brought to the clinics where they were "diagnosed", and recommendations were made regarding repairs, remodeling, and restoration. Most of the recommendations were carried out on the spot. Albemarle County reported that one clinic conducted on a stormy day resulted in the remodeling of 850 garments.

Taylor resigned as clothing specialist in 1935, because of illness in her family, and Iva Byrd Johnson replaced her. Johnson served in this position until her marriage to Dr. Charlie Manges in 1958. In 1936, she reported that women were particularly interested in making the most of the clothing dollar. One thousand seven hundred eighty-five (1,785) women in 100 counties and 7,006 4-H club girls in 29 counties majored in clothing. Adults and club girls reported an estimated saving of $65,998.

In the latter part of the 30s, the leadership of Johnson was directed toward clothing construction, clinics for restyling garments, the family clothing plan, and wise selection of shoes, hose, coats, dresses, and fabrics. A new technique introduced in 1939 was the coat school. In one such school of three days' duration, women made five new coats and remodeled 11 others at an estimated saving of over $213.

In 1940, the emphases of the late 30s prevailed, but interest had surfaced in dry cleaning at home, washing woolens and silk garments, and improving children's clothing. Appropriate clothes for the expectant mother were introduced and strongly endorsed by those who needed the information.

During the war years, serious shortages caused certain clothing items to disappear completely from the markets. Mothers and daughters adopted such slogans as "Use it up", "Do without it", "Make it do", and "Make and mend for victory". Many families did little or no buying of new apparel, but went to their attics, closets, and storage spaces for unused, outmoded, or outgrown garments that could be given a new lives. The wise use of the garments required a great deal of time, patience, skill, and imagination, but women and girls demonstrated they had these qualities.

It might be said that sewing machines helped win the war. They were absolutely essential to take care of the clothing needs of families, as most production efforts had gone into ready-made clothing for troops or other war-related needs. To help keep sewing machines in good repair, clinics were held in cooperation with specialists from agricultural engineering. The women brought their machines to the clinics and repaired them under supervision. Following the clinics, many women who participated assisted their neighbors with machine repair. In 1943, 515 sewing machine clinics were held, and 3,500 sewing machines were cleaned, repaired, and adjusted. One club member said, "The work on my machine doubled the amount of sewing I would have attempted otherwise."

After the war, there were still real problems in finding "yard goods" and children's undergarments. "Make an item over and make it do", was still the emphasis, along with proper care and storage of clothes to make them last longer. Outgrown or worn-out men's suits, overcoats, and slacks were made into skirts, jackets, jumper trousers, and suits. Young men who had been in the navy brought home woolen pea-jackets and bell-bottom trousers that were cut and made over for garments for wives and children. Some people were fortunate enough to get a surplus parachute that provided many yards of nylon fabric; these were torn apart and used to make undergarments.

By the early 50's, fabrics were becoming more plentiful and women and girls were eager to cut and construct garments from cotton and nylon. Then the polyester fabrics appeared on the market in increasing kinds of combinations and weaves. The numbers of them and the great variety of finishes applied to the natural fibers completely confused consumers. It was necessary for specialists to spend time developing information related to construction techniques, wear qualities, and care.

Edna Earle Akers (Blume) joined the staff as half-time clothing specialist in 1956 and served in that capacity for one year. Her major emphasis was on "individuals as consumers of clothes and how the dollars could best be spent in purchasing ready-to-wear apparel, including what to look for in construction and care of the garment after it was purchased.

In July 1958, Bettie McClaskey was appointed to a full-time clothing specialist position to meet the growing demands for assistance with clothing and textiles by women and 4-H club members. She resigned in 1965 to pursue graduate work and enter college-level teaching. In the meantime, Margaret Groseclose had joined the staff as Extension specialist, clothing and textiles. She served until she was named assistant director of family resources in 1971. Linda McGraw joined the staff in September 1968 and resigned in July 1970. During the tenure of McClaskey,

McGraw, and Groseclose, there was still a great deal of emphasis on clothing construction and some on remodeling and making hats.

As the 60s moved along, consumers became more sophisticated and the interpretation of sociological, psychological, and physiological needs as related to clothing became more important. People bought more clothes as the health of the economy improved. They wanted information pertaining to styles, colors, design, and clothing to suit their needs. Use and care of clothing and clothing supplies and equipment (not just sewing), clothing plans, and buying ready-made garments were topics of many training meetings.

Mary Helen Marshall joined the staff in 1970 and Beatrice Kalka in 1971. Prior to their appointments as clothing and textiles specialists at Virginia Tech, Marshall was a member of the Extension staff at the University of Kentucky and Kalka was on the faculty at the University of North Carolina at Greensboro.

The new developments in textiles throughout the 60s led to requests for more programs dealing with fibers, so Marshall and Kalka began their work in the early 70s by developing information about fibers, conducting training meetings, and preparing related teaching materials. Knits were the "in" fabrics and special cutting and sewing techniques were required. There was much emphasis on making men's and women's suits and slacks as well as lingerie. Within three years, interest in sewing had begun to dwindle, and by the mid-70s, home construction of garments had slowed significantly. Ready-mades were more available, particularly those from foreign manufacturers that could be bought in discount department stores at prices that made time and energy spent in home construction less worthwhile.

By the latter part of the 70s, John T. Molloy's book, Dressing for Success, had begun to influence the clothing program. Many of the women and some men in the work force requested information on color, line, and design in relation to their individual body styles, skin and hair types, personalities, and work-related activities. Interest had also arisen in clothing for those handicapped by physical limitations, so Extension teaching materials were prepared to provide help to this special audience. Dressing to keep warm assumed significant program importance because of the need to conserve energy supplies, and an educational program package was designed specifically to provide information in this area of need.

Today (1980), if one compares home sewing interest with the 60s, there is a dramatic decline. Since more women are in the work force, there is less time to sew, and also ready-to-wear can still be found at affordable prices. Sewing at home remains alive and well, however. The emphasis has just shifted from construction of new garments to extending the wear or use of

apparel on-hand through proper care, recycling, remodeling, and repair.

Consumers are wearing clothes longer and taking better care of them. They are also attempting to become better shoppers for ready-to-wear, and to gain a better understanding of the existing relationship between clothing and energy use. It is apparent that escalating inflation and the need to conserve resources will continue to determine the clothing and textiles program to a great extent throughout the decade.

CONSUMER EDUCATION AND HEALTH EDUCATION

The early 60s is often called the era of "consumerism" because there was a growing awareness of the needs and rights of the consumer. Extension programs reflected this concern and the need for added program emphasis in consumer education.

In 1965, an Extension specialist position in consumer education was established and Gaynelle Hogan was hired. Some of the major program thrusts during the 60s and early 70s included family financial management, consumer credit, consumer protection, consumer buying, and decision making. Extension specialists and agents also developed and expanded new programs to reach and teach consumers. Some of these included greater use of mass media and developing creative ways of reaching and teaching consumers, such as tip-a-phone messages, exhibits, food buying through computer, and learning packets for special audiences.

The program needs in consumer education continued to expand in the 70s. In 1975, Glen Mitchell assumed the position of Extension specialist, consumer education. In 1976, Suzanne Helms assumed the position of Extension specialist, consumer management, at Virginia State College.

One of Extension's overall educational objectives has been to improve the quality of living. Health is an important aspect of this objective. To give added emphasis to the area of health, Hogan was asked in 1975 to develop a new position in consumer health education. Major program emphasis has been in expanding teaching methods in preventive health care for both adults and youths and in working with health agencies and other organizations to bring effective health programs to the citizens of Virginia.

FAMILY MANAGEMENT

During the period 1973-1980, major efforts of the family management specialist at Virginia State University were planned and implemented as a part of the Children and Family Focus Unit. A major thrust was the use of human resources to meet individual and family needs. Primary audiences included young families, families with two or more earners, persons with physical limitations, and older people.

The first Extension program for persons with disabilities initiated by Ann Lastovica in 1975 to teach work them simplification skills that would enable them to function more independently. Support for the effort led to a two-year interdisciplinary joint project between Virginia State College and Virginia Tech, funded by the Title I Higher Education Act. A state workshop was held and there were follow-up regional workshops that provided information to persons working with the disabled. Lastovica was responsible for the development of six kits of self-help devices, four publications on work simplification for persons with various limitations, and other materials useful in programs for this audience. As a result of these efforts, the following successes were reported:

1) In a CETA-funded program, Extension on Wheels for the Homebound, a gentleman with visual limitations was provided an outlet for his leisure time when the CETA employee, on personal time, developed and made a Braille chess set from scrap lumber for a savings of $30.00.

2) One participant in a unit program reported "one week after the session was conducted I had made and was using an oven rack remover to prevent burns."

3) Another reported, "The one-handed can opener was a good savings for me. I made it for 62 cents instead of spending $55 for the electric one-handed can opener."

4. A young man (26 years old) was able to feed himself for the first time after learning of the rocking knife/fork combination. This man is continuing to work toward being able to live alone and manage independently.

To assist working families (two or more earners) in managing at home, fact sheets on sharing family responsibilities were developed. Numerous programs were given by the specialist and by agents to help families manage effectively on the job and at home. In husband-wife families, both parties were encouraged to participate in learning sessions.

Time management has been a primary concern of clientele. Much effort has been expended in developing materials, acquiring

resource books, and presenting programs. Participants have reported that they have learned the value of time and setting priorities for its use. To encourage families to plan a balance between work, rest, and leisure, materials have been developed on creating a sense of leisure values. In addition, programs and other materials have focused on planning for a satisfying use of time in later years.

By the end of the 70s, family resources program component areas had begun to change. The family management specialist now includes most of her efforts under the personal and family resource management component area. Specific emphasis, however, continues to be given to helping families manage human resources.

FOODS AND NUTRITION

The first Extension programs in foods and nutrition were the "girls tomato clubs", started in 1910 in Nottoway and Halifax counties under the supervision of Ella Agnew. The first state training meeting, an outgrowth of needs revealed by canning done by the girls, was held in 1912 at Burkeville, where home demonstrators were taught how to use outdoor canning equipment and to seal cans with a soldering iron. They were also taught how to judge the canned products and exhibit them to best advantage. From that time, judging and exhibiting became an important part of all food programs. Demonstration, the method of teaching used by home demonstrators, trained the leaders and girls.

Effect of World War I

At the outbreak of World War I, greater emphasis was placed on growing and preserving larger quantities of food. As more people heard about canning in tin containers, the number of requests increased among clubs of both women and girls for more demonstrations to show the best and easiest way to seal and process in tin containers.

Food demonstrations were in great demand. Homemakers wanted to learn the best ways to use home-produced foods to feed their families more nutritious meals. "Food will win the war" became a slogan, and rural families were encouraged to grow and use their own as well as produce extra for sale. Emphasis was placed on planting and cultivating more vegetable gardens and raising poultry. Demonstrations were given to women and girls on the best ways to cook and preserve vegetables and how to keep eggs in water-glass (sodium silicate) solution.

Similar educational programs were started with Negro girls in 1914 under the supervision of Lizzie Jenkins, special industrial supervisor. She worked with 38 industrial supervisors who introduced the teaching of cooking and sewing in Negro schools and homes in 40 counties.

Women's Clubs that were later known as Home Demonstration Clubs were started in 1916. Many of them emphasized the study of food values in order to provide families with better foods at moderate output of money and energy.

As the war continued, both glass and tin containers were scarce and hard to secure, so the drying of fruits and vegetables was recommended and demonstrated. Demonstrations included the best-known methods for sun drying and evaporation in warming ovens or over stoves. Brining or salting of string beans was also recommended, as well as the preservation of cabbage by making sauerkraut. Extension Division Bulletin #16, July 1917, written by Charles Graham, director of agriculture, Hampton Institute, was widely used for information.

In 1918, a need surfaced for a cottage cheese specialist, so Jessie Logan was appointed to that position. The next year her title was changed to specialist in utilization of dairy products, a change which allowed her role to expand beyond that of an educator in charge of just cottage cheese information.

During the 20s, emphasis in the foods and nutrition program was on different and improved food preparation methods to give variety and greater food value to family meals. Lula V. Walker succeeded Grace Townley as home economics specialist (a position that included foods and nutrition programs). She was succeeded by Mary B. McGowan in 1927, who was the first staff member with the title of food specialist. Janet Cameron succeeded McGowan in 1931. At that time, there were just three home economics concentrations: foods, clothing, and home management.

Planning the Yearly Food Supply

Because of the severe drought, especially in the Midwest, thousands of cattle were slaughtered for lack of feed. Many of the animals were shipped East, so the meat specialist, along with the food specialist, held training meetings for men and women Extension agents on cutting, curing, canning, and using more beef. The agents, in turn, did the same in their counties. These "Meat Schools" helped farm families take better care of their meat and provide a better supply for winter use. One example cited in a report took place in Essex County where the agent worked with several women one morning and canned a quarter of a beef, which amounted to 36 quarts of steak, roast, hamburger, and meat loaf.

Demonstrations were also given in culling and canning chickens. Chickens were bringing such low prices it was more economical to can them for home use than to sell them. In Brunswick County, the Board of Supervisors was so impressed with the chicken program that they bought a steam pressure cooker to be passed around the county. Thus, old hens not "paying their board" were put to profitable use.

Before the days of government school lunch programs, many Home Demonstration Clubs established community projects to serve hot lunches in the rural schools. This effort helped improve the nutritional status of the children, many of whom did not bring much or any lunch and often had little or no breakfast. Nutrition surveys were taken in several counties by agents, with help from club leaders, and all showed that a large percentage of the children did not get an adequate diet. Many clubs organized to can soup mixture during the summer months when garden produce was abundant. Four-H clubs helped with these projects and also with serving the lunches in winter. In 1939, Virginia shared in the nationwide program for improving school lunches, a plan sponsored cooperatively by the Extension Service, the State Board of Education, and the Work Projects Administration. Home Demonstration Club members served on county school lunch committees. In that year, Home Demonstration Club members prepared over 15,000 cans of food for use in the school lunch program. This volunteer community hot lunch program showed the need and paved the way for a national school lunch program, which became a reality in the 50s, as consolidation of schools closed many of the small, rural ones.

Home Demonstration Club Markets

In the late 30s and early 40s, cooperative Home Demonstration Club markets thrived in many parts of the state. These served a dual purpose of helping rural homemakers add to their family's income and establish high standards for their food products. Training schools were held in which women who wanted to sell produce at the markets learned how to judge and score them. All kinds of baked foods became popular at the markets and many town people counted on buying the high-quality products each week. During the summer months, garden produce was sold and training schools in grading and displaying were held. Garden specialists also worked with the marketers in growing quality produce for market. Income from the markets helped many farm families through low-income years. In 1935, a state market committee was formed to set up a code of minimum standards for Home Demonstration Club markets.

The cooperative markets were a benefit to both consumers and producers. In 1939, 185 women sold products in 11 markets and realized over $103,000, an average of $559 each. In the two markets in Augusta and Staunton-Waynesboro, they sold over

$30,000 worth of products, and one woman and her daughter reported total sales of $1,500 in the eight and one-half months the market was open. In 1940, total market sales in the state amounted to $128,757.86.

An interesting spinoff of the markets was that many of the women bartered their produce for medical services, music lessons, and even beauty parlor services. Some women used their sales money to send children to college or to keep them in school. The market experience became highly educational. Participants learned salesmanship, the value of better business methods and records, how to produce more and better food, and to recognize quality in food products. It also gave some self-confidence and emphasized to all the importance of good grooming, sanitation,and the value of fair play to competitors. Each market had a paid manager who had charge of advertising, bookkeeping, selling prices, and seeing that the market was kept orderly and clean.

As more became known of the importance of nutrition for the health of the family, county nutrition committees were formed, patterned after the state nutrition committee. The purpose was to coordinate the programs of health departments, welfare departments, schools, the National Youth Association, the Farm Security Administration, and the Extension Service; to have a greater impact on improving the nutritional status of all citizens; and, to coordinate the educational programs of the agencies. The nutrition committees played very important roles in spreading information about the importance of human nutrition to the public.

Mary Thompson joined the state staff in 1942. For the first time, there were two foods and nutrition specialists to help the county workers with their programs. Travel funds were limited and gasoline rationed, so the two workers served different parts of the state. Labor and energy savings were important parts of all the programs.

Effect of World War II

With World War II came another crisis: how to produce enough food. Farm families were again encouraged to preserve all food needed for their families. "Victory Gardens" were promoted in urban as well as rural areas. Labor became scarce as more workers went into the armed services or became involved in war programs at home. Year-round food planning was stressed to meet family needs. Because of the scarcity of metals--and therefore tin cans--dehydration of fruits and vegetables was encouraged. In cooperation with the Agricultural Engineering Department, an electric home dehydrator was designed and a company found to produce it at moderate cost. This made demonstrations on dehydrating foods much easier, and better quality products could

be produced in a relatively short time. The dehydrators were used in agent and leader training schools throughout the state.

During the war years, many foods were scarce. Some, including sugar, fats, and meats, were rationed; so Extension programs concentrated on stretching these foods. Emphasis was placed on sugar-saving desserts, ways to make available meats go further, and using fewer fats in family meals. Bulletins and leaflets were revised to incorporate these changes, and club programs included better use of the rationed foods through making the changes.

Cheese making at home became very popular. Many farms had surplus milk at some seasons, so a method of making so-called "American cheese" was worked out in cooperation with Nancy Saunders of the Dairy Department. This nutritious protein food helped when meat was scarce. One year, reports showed that 464 women made over 10,000 pounds of cheese as a result of demonstrations by Extension agents. The cheese was of fine quality and used surplus milk to advantage.

Organized Programs

By the 50s, county home demonstration programs were well organized, with one or more agents in nearly every county. Each phase of the program had volunteer leaders who were trained by the agent or specialist and who, in turn, gave demonstrations to their clubs. A county advisory committee helped plan the year's program in each county, and usually one main emphasis was chosen for the year. The foods and nutrition specialist then concentrated on helping counties that emphasized this phase of homemaking. The county advisory committees were made up of leading people in the county, representing each section. They helped in seeing that the programs were based on real needs of all the homemakers in the county.

In 1950, Cameron was given a leave of absence for six months to accept a Department of State assignment to work with home economics teachers in Germany. Thompson carried on the program in her absence.

Nutrition Workshops

Two nutrition workshops were organized at VPI to help Extension workers, teachers, and others keep up to date in the fast-growing science of human nutrition. The first was held in the summer of 1954 and was so successful that workers in the state requested another in 1957. Each of these was a concentrated three-week program, planned as a regular VPI program for those who wanted college credit (4 hours each). Laura Harper was the coordinator, and Cameron and Thompson were in charge of the different groups. Nationally known scientists in the field

of nutrition were secured to discuss the new research in the field.

Weight Control Programs

In the 60s, weight control programs became very popular, and the two specialists set up plans to work with groups in the counties requesting help. Monthly programs were planned (sometimes every two weeks) and members or others interested in losing weight by improved nutrition could enroll. Each participant agreed to keep a record of all food eaten between monthly meetings. Each was weighed every time and records kept of the weight loss. Demonstrations were given on low-calorie foods, exercises (by physical education teachers), and clothes to help achieve a slimmer appearance. The weight control groups emphasized good nutrition and helped homemakers understand how to prepare meals for the overweight members of their families.

Thompson retired in 1963, and Jo Anne Barton assumed her position as foods and nutrition specialist. Cameron retired in 1964, and many different professionals have served in the years since then. Some have been part-time Extension specialists with appointments in research or teaching. A partial list follows:

Marjorie Porter came in 1966 and served until 1971.
H. Jean Robbins came in 1970 and served until 1973.
Georgia Williams Crews came in 1971 and served until 1975.
Elizabeth S. Spenser came in 1974 and served until 1975.
Jane Edwards Aycock came in 1974 and served until 1975.
Rebecca M. Mullis came in 1976 and served until 1979.

Those now on the staff in addition to Barton are Michael Olsen (1976), L. Janette Taper (1976), Robert Reid (1978), and Ann Hertzler (1980). Barton devotes a part of her time to the Expanded Food and Nutrition Education Program, a federally funded program to teach nutrition to low-income families. There are 131 technicians trained and supervised by the responsible county agents now working in 28 cities and counties. They work on an individual basis with homemakers, helping them to plan more nutritious meals, buy foods to best advantage, and prepare foods to retain greatest food value. The program started in 1969 and has been most successful in spreading nutrition information and education to a large part of the lower-income homemakers.

The foods and nutrition specialists are now more involved in preparing materials for the use of all the various county workers and programs. They hold training meetings for Extension agents who, in turn, do most of the training of volunteer local leaders. The leaders continue to give demonstrations for local clubs. The specialists also work with many agencies in the state.

As food prices have risen in the past few years, emphasis is again being placed on all forms of food preservation--especially freezing and canning--to save on the food budget and to assure another source of nutritious food for the family. Interest remains high in weight control programs. Two interesting new developments are the use of computers to figure the nutritional values of foods eaten in a trial period, and the growth in programs for people engaged in food service and lodging management.

GIRLS' TOMATO CLUBS

When the first tomato clubs were organized by Ella Agnew in the summer of 1910, Hallie Hughes was the home demonstrator in Nottoway, and Sadie Terry in Halifax. The tomato clubs had a two-fold purpose: to teach the girls better methods of canning for family use and to make it possible for them to earn money through the sale of properly canned tomatoes.

Each tomato club member selected a small plot of land (one-tenth acre) in her garden and assumed responsibility for planting and cultivating the tomato plants. When the tomatoes ripened, some were used for home consumption and some were sold, but most were canned according to methods taught by the Extension workers. Making the canned tomatoes look "store boughten" was considered important. All canning for market was done in tin containers. Labels were printed--"Product of Girls Canning Clubs"--and with the motto "To Make the Best Better". The weight of the can and the member's name who canned the product were given.

Canning for home consumption was done in glass jars. The cold-pack method of canning was new and generated much interest among the girls and their mothers. It was a much surer way to prevent spoilage and to retain vitamin C than the previous method of boiling the tomatoes and pouring them into the jars. Although nutrition research was new, the importance of vitamins, especially vitamin C, was known.

The second year, many more girls enrolled in the clubs, attracted by the small amounts of money received in sales by the first tomato club girls. The program expanded to include the canning of other tomato products such as catsup, chili sauce, and green tomato pickles. In the third year, with a greatly increased membership, requests came for an expanded program. The name was changed to "canning club" to provide for growing and canning a variety of vegetables and fruits. Home demonstration agents introduced training in business management, which included securing markets and fair prices, making contracts for future delivery, and the importance of keeping a contract even under adverse circumstances.

By the time Congress passed the Smith-Lever Act (1914), the canning clubs had expanded to include sewing, cooking, home improvements, and raising poultry and baby beef. Although some clubs were still called canning clubs, they were under the direction of 4-H club leaders. Eventually, all clubs for boys and girls became 4-H clubs and met year-round, some of them as a part of the school program.

On July 1, 1916, Bulletin #7, Handbook for Use of County Agents in Home Demonstration Work in Virginia, was released. It was written by Agnew and was the first bulletin prepared for the foods and nutrition program. This interesting publication listed the requirements that canning club members had to meet to receive one unit of credit in high school science. Besides being a club member for one full year, each had to preserve at least 100 cans of food, which included 50 of vegetables in tin containers and 50 in glass jars. A variety of three vegetables and a collection of at least four other foods, such as pickles, jelly, and jam had to be represented in the 100 cans. Detailed records of all work were required, including the number of demonstrations given, the number and kinds of exhibits made, and contests entered.

Bulletin #10 (1916) was a price list of 4-H Brand canned goods and included the following:

#2 cans of string beans -- $1.50 per dozen
12-oz. jar of sun-cooked strawberry preserves -- 40 cents
#3 cans of tomatoes -- $2.25 per case
#2 cans of soup mixture -- $1.20 per dozen

Printed on the cans for sale were the words, "All goods are put up by members of the Virginia Girls Canning Clubs."

Virginia Baskerville Chinn, a club member in 1917, put together a booklet entitled, "My Garden Story". Her booklet is a four-page example of the transition years in club work from the individual demonstration to the well-organized 4-H club of the early 20s. In it she talked about growing and canning tomatoes. She plowed and harrowed the land herself, she explained, "but had to have a man to help turn around at the end of the rows when I cultivated the vegetables because the horse would step on some plants, which brought tears." Her cans of tomatoes were labeled "4-H Brand".

In 1924, Bulletin #79, Preservation of Foods: A Guide for Canning Club Members, was released. Written by Walker, specialist in foods, and Hughes, state girls club agent, it detailed canning steps for fruits, vegetables, and meats, pickling, preserving, drying fruits and vegetables, and equipment needed for food preservation. The standards for 4-H Brand canned vegetables and fruits were given, along with the following information required for the labels:

Name and address of person putting up the product
Date of canning
Net weight of contents
Name of contents

By this time, foods for sale were also available in glass jars. The small, oblong 4-H Brand label was placed one-quarter of an inch from the bottom of the jar on the side opposite the jar-brand lettering. The label for tin containers was wide enough to completely cover the side of the can.

HOME IMPROVEMENT, HOME MANAGEMENT, AND HOUSE FURNISHINGS

In 1926, Mary B. Settle, who had been home demonstration agent in Prince Edward County since 1923, was appointed home improvement specialist. She served until 1938 when she joined the Farmers Home Administration. An example of what was accomplished through Settle's leadership is found in a 1933 report:

> House Furnishings. In this work 889 living rooms, 415 dining rooms, 625 bedrooms, 591 porches, and 222 bathrooms were made more comfortable and attractive. Two thousand (2,000) women treated windows, refinished walls, woodwork, and floors. More than 3,400 pieces of furniture were reconditioned, 6,000 articles of furnishings were made, and 2,000 bought for making the home more comfortable.
>
> Approximately 1,600 4-H club girls enrolled last year in home improvement projects. These girls rivaled their mothers in learning to do much with little. Virginia women and girls made a saving of approximately $100,000 through home improvement achievements.

By 1934, women were becoming more interested in the managerial phases of homemaking. Just as the farmers were showing more interest in the farm management problems, the women were showing a desire for improving the management of their homes. Much effort on the part of the women was devoted to better use of time, energy, and money. They were especially interested in their kitchens. To help them with kitchen management, Settle prepared Kitchen Cleaning Circular No. E-312.

Through homemade equipment, labor savers, and cleaners and polishes, kitchens and back porches were made more usable and attractive. Reported figures show that 1,596 kitchens were improved and 2,762 articles of homemade equipment added in 1934. The old art of soap making was revived and 40,000 pounds of soap were put on kitchen shelves. There was a great deal of good-natured, informal competition among women to see who could make

the clearest, whitest soap. In the house furnishings program, the chief interest of the women that same year was making the best use of things on hand. Three thousand eighty-three women reconditioned furniture.

Ruth Jamison, a native of Franklin County and former home agent in Augusta and Brunswick counties, joined Settle as a specialist in home improvement in 1935 and served until 1961 when she retired. The year she joined the staff, a better housing campaign was started and it continued throughout 1936. All counties stressed some phase of the program. Improved kitchens, sanitation, and lighting were the major emphases as indicated by these figures reported for 1936: 400 refrigerators added, 955 homes electrified, 1,993 sanitary toilets built, 2,883 kitchens rearranged for greater convenience, lighting improved in 615 homes, and running water installed in 325 kitchens.

The depression years were not easy ones for Extension workers. Besides relief programs, they directed a number of other projects. One was the Cotton Mattress Program.

During the late 30s and early 40s, man-made fibers began to replace natural fibers, so cotton farmers had to be subsidized by the federal government. With little demand for it, cotton began to stockpile. What could the federal government do with it? The United States Department of Agriculture came up with the idea of starting a cotton mattress program among cotton-producing southern states.

Beginning in the late 30s, the USDA decided to put large amounts of stored surplus cotton into a mattress program. Low-income families, willing to make a mattress, could use 50 pounds of cotton free. The program, when accepted by a state Extension director with assured cooperation from the boards of supervisors, was to be implemented by the home demonstration workers in that state. Virginia was the second state to get into the program; North Carolina was the first. Director J. R. Hutcheson started the program on a pilot basis in early 1939 in three counties: Isle of Wight in the east, Mecklenburg in southside, and Montgomery in the southwest. Extension's home furnishing specialist, the farm and home administrator, and several Extension agents were sent to Roxboro, North Carolina, to gather the best available information on mattress making and to learn how to organize and administer the program.

The job was not easy. Jamison, home furnishings specialist at that time, said, "Home demonstration agents felt put upon; the cotton mattress program was an extra project to their already full work load." They had to convince poor, rural farm people that the program was no hoax, find centers where cotton could be stored and mattresses made, provide tables large enough and at the right height for comfortable work, and gather other equipment

like the right kinds of needles, cord, and tufting buttons. There was no money except to rent the centers; none of the equipment could be paid for at the time.

Home Demonstration Club members helped enroll families. Members canvassed their areas and reported to the agents the names of families that were poor enough to qualify. At first, only a few families enrolled. Agents soon learned that a family felt it belonged in the program if it contributed one dollar toward the mattress. And, in most cases, the dollar covered expenses for tables, needles, etc. The plan was to allow only one mattress per family until all enrolled families had a chance to make theirs. It took an entire day for a family, under the tutorship of the home agent and perhaps a leader from a Home Demonstration Club, to make one mattress.

Like most new programs, a great deal of time and energy went into planning the cotton mattress program, and no one could be sure it would amount to anything. But, it was successful immediately, and once agents and specialists realized its value to rural people, they pitched in willingly. Other counties heard about the program and asked that their poorer families be included. So, in the second year, 1940, 33 county Extension services entered the program, enrolled families, and set up centers.

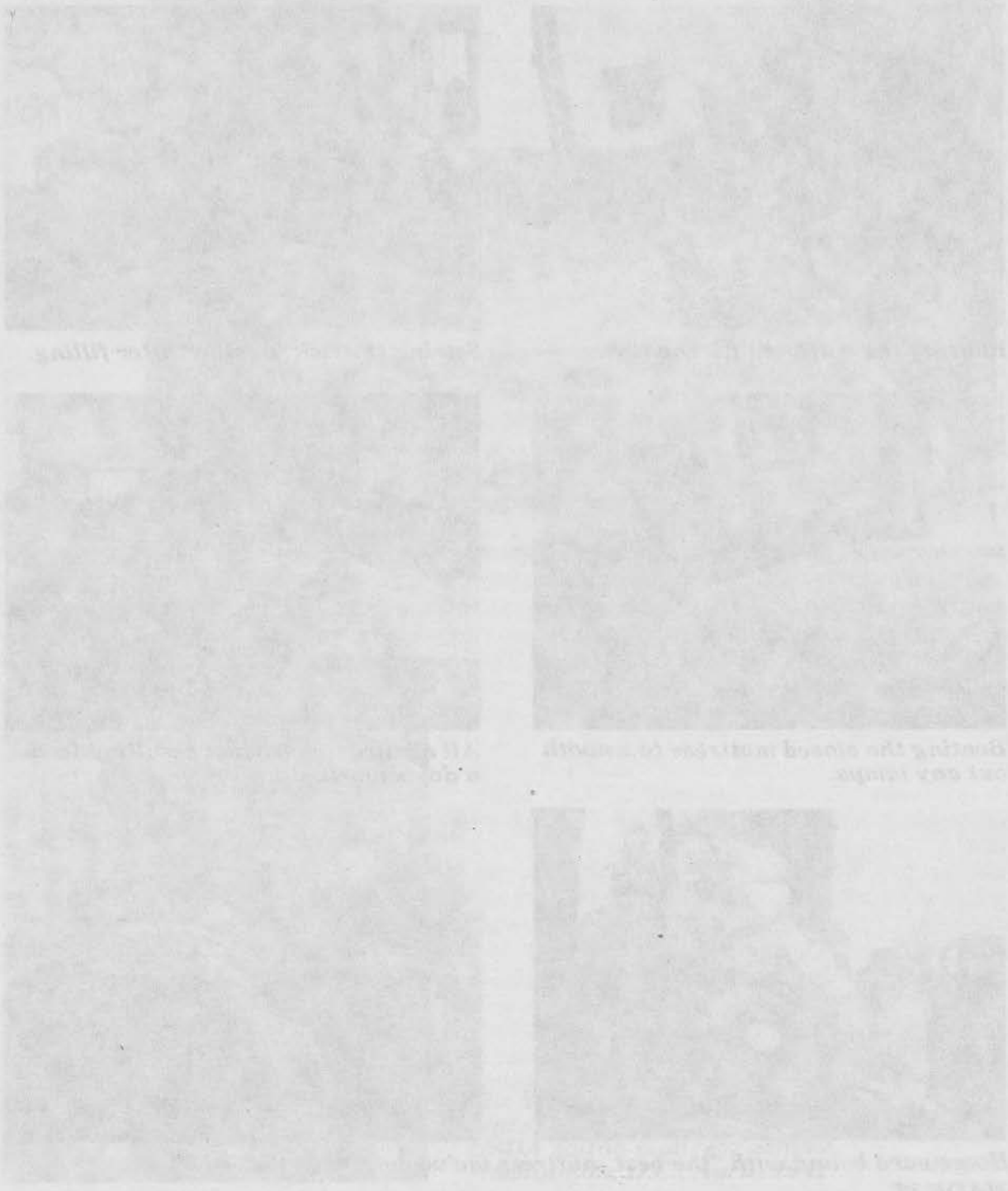
In Carroll County, which operated the largest program, families made 5,000 mattresses. Among the other 32 counties participating, 64,000 mattresses were made, a figure which averaged 2,000 mattresses per county. Overall, families in the 33 counties made 69,000 mattresses.

Many families had to borrow trucks to haul their mattresses home once they were made. A story is told in Isle of Wight County about a man who brought his small, frail wife to a mattress work center in Smithfield. He sat outside on a curb all day while his wife and others made the mattress inside. When they finished, the man wanted his picture taken with it. He said, "Do you know, this here's the first mattress I ever owned?"

Truly, there was pride in the mattresses that were made. Prior to 1940, many low-income farm families in Virginia slept on loosely tacked tickings filled with straw, pine needles, hay, broom sedge, or chicken feathers. If a family had beds, tickings were put on them; if not, they were put on built-in bunks or on the floor. A good mattress from a store cost only $12.50 after the Great Depression, but even that amount was hard to find. People were glad to have the comfortable cotton mattresses made with their hands.

Unfortunately, the cotton mattress program lasted only a few years. Interest in the program was still spreading fast

throughout Virginia as more and more farm people learned about it; however, when the United States entered World War II, the federal government needed all surplus cotton for war purposes.



The Mattress Project, 1940-41

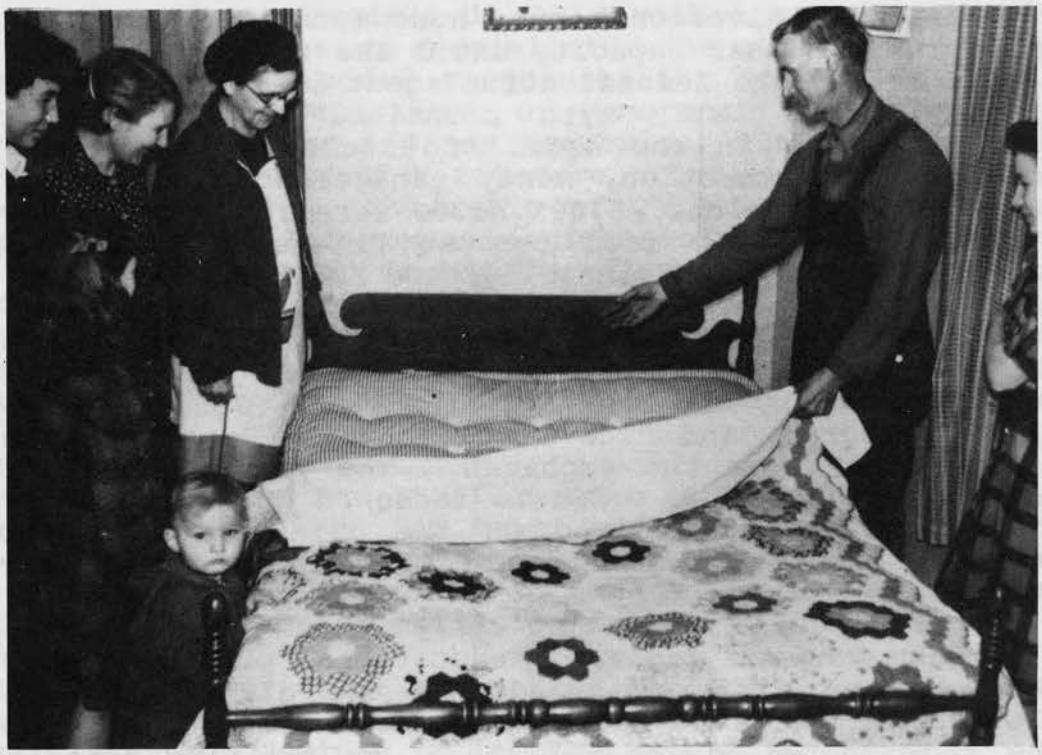
Fluffing the cotton to fill the tick.

Sewing the tick together after filling.

Beating the closed mattress to smooth out any lumps.

All admire the product resulting from a day's work.

Homeward bound with "the best mattress we've ever had" and WE MADE IT.



The Clyde Wolfe family, Brentsville, displays its finished mattress.

The Wolfe's mattress represented Virginia at the USDA cotton mattress exhibit, Washington, D.C., April, 1941.

Helen D. Alverson became home management specialist in 1939 and served in that capacity until she retired in 1958. Alverson was formerly home demonstration agent in Augusta, Halifax, Bland, Prince Edward, and Smyth counties. Some of her earliest leadership was in the areas of kitchen improvements, furniture repair and restoration, money management, and home storage for food. In 1939 alone, 5,495 homes were reported to have improved storage spaces for food because Extension recommendations for building new or improving old space had been followed.

By 1940 there was a definite trend toward concentrating on one room in a home, with the idea of making it a complete demonstration by the end of a club year. Jamison gave leadership to the program, and "The Livable Living Room" and "The Cheerful Dining Room" were the emphases. The year 1940 was also a time for some of the club women to focus on guest rooms for tourists. Since many of them lived on the main highways, accommodating tourists in a guest arrangement was a good way to increase their incomes.

When war was declared, educational programs changed to meet the new and different needs of the girls and women. Small electrical equipment became irreplaceable. "Making do with what one had" increased in importance, so training schools were held to teach agents, other home economists, and local leaders how to repair small electrical equipment. There were also housing fix-it demonstrations that included repairing door and window screens; replacing broken window panes; repairing locks, hinges, and loose or rattling windows; and repairing broken cushion springs.

Home management emphases also changed with the war. Since most men were actively involved in some way in the war effort, more women were found working in the fields and gardens. Housekeeping practices that conserved time and energy became essential. So the educational programs switched to improving work methods, fitting into the government's plan for rationing and paying no more than ceiling prices, wise use of family income to prevent inflation, producing a record crop of food and fiber in spite of shortages, and buying war bonds and designating them for furnishings and household needs when the war was over.

During the years immediately following the war, interest was high in replacing small electrical equipment, washing machines, vacuum cleaners, and gas ranges as soon as they were available and the family financial circumstances would allow. Production still fell short of demand, however, and although many people had more money, the dollars were cheap. Specialists and agents stressed that wise planning for family savings and spending were more important than ever, and many educational programs were held to help women and girls accomplish this.

Settle returned to Virginia in 1948 with a master's degree from Purdue and became housing specialist. She continued in this position (and assumed an added responsibility in 1961 when she was named head of the Department of Management, Housing, and Family Development, College of Home Economics) until she retired in 1966. At the beginning of her tenure, there were 1,129 Home Demonstration Clubs with a membership of 27,945 and 91 counties with Extension agents. The women in eight counties took housing as a goal and reported many improvements, especially in kitchen and laundry areas. Women in all counties were called upon to build community houses, improve restrooms in public buildings, and conduct fly and rat control campaigns. Settle and the agents were involved in all of these projects as their expertise was needed.

Amelia Fuller joined the staff as home management specialist in 1949 (retired 1968). She had been an agent in Dinwiddie and Southampton counties. Her major emphasis as a specialist was on financial planning and management, an area of great educational need, particularly because of inflation following World War II.

In 1949, an appropriation became available for an additional subject-matter specialist. Maude Wallace felt the need for a health specialist, but decided to let the Home Demonstration Club members choose the area of specialty. The matter was discussed throughout the state and the women decided they wanted help with art and recreation. After the war, with all its food programs and sacrifices, they felt a need to improve their minds. So, Catherine Peery was appointed rural arts specialist and began working with club leaders. She developed a program in appreciation and application, and subject matter included design, music, literature, drama, and nature study, and worked in the rural arts program until it was phased-out in 1964.

By 1954, the dollar had stabilized somewhat and there was a great deal of emphasis on building new homes or making major improvements in old ones. It became difficult--and was sometimes impossible--for the specialists to meet requests for individual appointments with people who wanted help. Agents consulted with these individuals and involved specialists as needed.

On July 1, 1955, Ocie Jones O'Brien became a home management specialist and her primary responsibility was to work with families involved in the rural development program. Prior to accepting this position, she was in charge of the women's work in the Farm and Home Administration in Nansemond County (now the City of Suffolk) and was also home demonstration agent there at one time. O'Brien left the specialist position in 1957 to pursue advanced study at the University of Tennessee, and returned September 1, 1958. (She retired July 30, 1967).

Edna Earle Akers Blume served one-half time as house furnishings specialist in 1956. She was formerly home demonstration agent in Carroll County. She resigned her specialist position to do graduate work at The Ohio State University, where she later served as an Extension specialist on the Ohio staff.

In 1958, Katherine Habel joined the state staff as house furnishings specialist. She was previously home demonstration agent in Prince Edward County, but the earlier years of her career were spent as a teacher of vocational home economics in several areas of the state. When she began work as house furnishings specialist, she found well-structured programs in which to implement her design interest in clothing and home furnishings. As the result of a survey of furnishing needs with 325 homemaker families in Virginia, she recognized the need for a tool to help consumers plan for, shop for, and use furnishings, and immediately began work in this direction.

Mildred A Payne was appointed house furnishings specialist in 1965. She had served as home demonstration agent in Charles City and New Kent counties. Payne's approach to the field of house furnishings as a specialist was "make the most of what you have." This included refinishing furniture, making slipcovers, reupholstering, making draperies, and arranging furniture in a room for increased convenience. Payne retired in 1976.

Wanda Golden succeeded Settle as family housing specialist on September 1, 1966. Golden had been an agent in Washington, Dickenson, and Wise counties. She left Virginia in 1972 to join the staff at the University of Missouri.

In the latter 60s, people were buying more furnishings for new homes and for replacement in existing homes, but clinics for furniture repair were still popular. Upholstery clinics, reseating, caning chairs and stools, and making lamp shades were of high interest. Lighting remained an important topic. People were also very interested in home management areas such as finance and time.

By this time, Laura D. Kivlin had joined the staff as home management specialist (1967-68). Janice Woodard accepted a position as home management specialist in 1969, and Hilda Dailey as home management specialist, family economics, that same year. Woodard was formerly a home management specialist at Cornell University. In 1979 she was granted educational leave from Virginia Tech to pursue a doctoral program at The Ohio State University. Dailey was a former home management specialist in West Virginia and Georgia. She retired in 1979.

Irene F. Cosby began part-time work as housing specialist at Virginia State College in September 1971. She was instrumental

in working with county, district, and state officials to improve small, rural communities, particularly housing and sanitation. Cosby left the position on December 31, 1972.

An 1890-funded pilot housing program was begun to provide training for families occupying substandard and dilapidated housing in rural Pittsylvania County in 1972. The one-to-one teaching approach was used by paraprofessionals to instruct hard-to-reach families. Because of its success, the program was expanded until 12 rural counties and two urban areas were involved at the same time. During the first two years, approximately 18,000 Virginians benefited from the teaching and assistance of this housing project. Participants developed repair skills, increased pride in their immediate environments, and, in many cases, learned how to receive financial assistance to maintain their immediate homes through Farmers Home Administration home improvement loans or to obtain a new home through an FHA loan. Their successes in the program motivated them to make other improvements that would result in a better way of life for their families.

By the mid-70s, the oil embargo and consequent emphasis on energy conservation had generated intense interest in retrofitting and home repairs. Programs were conducted annually in every Extension unit in the state. "Do-it-yourself" and "hands-on" experiences equipped participants to do simple plumbing and electrical repairs, repair screens and steps, replace window panes, and winterize for energy savings and comfort. Everette Prosise was on the staff at that time at Virginia State as Extension specialist, housing. His leadership built a strong program, and when he left after three years (1972-75) to join the Extension staff at North Carolina State University, Clinton Turner became housing specialist. Turner took educational leave in 1979 to pursue a doctoral degree at Virginia Tech.

Interest remains high in the retrofitting and repair programs today as people continue to try to cope with escalating fuel costs. John Kirby, who joined the staff as Extension specialist, housing, in 1980, gives leadership to the program and is located at Virginia State University.

Other people who have served as subject-matter specialists in home management or a closely related field are Gaynelle Hogan, consumer education, 1964-75 (in 1975 she became a specialist in consumer health education and is still serving in that capacity), and Helen Wells, housing, 1973-80.

Today, the specialist staff at Virginia Tech consists of Glen Mitchell, consumer education (1975); Katherine Habel, home furnishings (1958); Gerald Bird, financial management (1979); and Janice Woodard, home management (1969). Suzanne Helms, consumer

management (1976); Ann Lastovica, family management (1973); and John Kirby (1980) are at Virginia State University.

Programs continue to change as the needs of the people change, but some of the needs have remained relatively constant. There is still a great deal of interest in home repair, but little in repair of small electrical appliances. Interest remains fairly high in furniture refinishing and restoration, but there is little demand for upholstery clinics. Microwave and convection ovens are in use and information regarding buying and using them is sought. There has always been interest in kitchen planning, and it continues. Housing interests, however, are changing from restoration of large, older homes, for example, to more energy-efficient dwellings such as those making use of solar panels, less living space, and even earth-sheltered houses. Overall, the focus is on conservation of energy and adjusting needs and wants to available money.

PROGRAM DIRECTION, FAMILY RESOURCES

When Maude Wallace retired in 1958, Lucy Blake was named assistant director of the agricultural Extension service in charge of home demonstration work. Blake brought a strong, professional commitment and experienced background to the position, having served Extension since July 1, 1934, in three different roles: county home demonstration agent, district home demonstration agent, and district agent. Until her retirement as assistant director, September 1, 1965, she dedicated her professional life to strengthening the home demonstration program in Virginia.

By 1966 the responsibilities of agents giving leadership to Home Demonstration Club work had broadened so much that when Ann E. Thompson came to Virginia, she was given the title of state leader, home economics. Thompson began her career as an Extension agent in Alabama. A high level of productivity and outstanding accomplishments resulted in her being a recipient of an Extension/USDA Fellowship for graduate work. She served on the 4-H staff at Florida State and later as assistant state leader for home economics programs, also at Florida State.

During the period between Blake's retirement and the appointment of Thompson, Ethel L. Grubbs served in the state leader position. Grubbs began her Extension career in Patrick County as home demonstration agent. When Mary Moorman, who had served as the home demonstration agent-at-large under the direction of Wallace, retired, Grubbs was appointed to that position and served under the direction of Blake and Thompson.

Among the responsibilities of the agent-at-large were the following: working with new personnel in home economics and 4-H when they were placed in a county; teaching program-planning methods and techniques; identifying and involving local and area clientele in program development; identification of resources; preparation for and conducting special-interest meetings; evaluation and reporting; working with leaders of Home Demonstration Clubs; assisting with in-service training of personnel; assisting home economics specialists with conducting programs in critical-need situations; and, working in the district agents' positions if they were on sick leave.

In 1967, after serving one year as Extension agent, home economics, Grubbs was named an Extension specialist with responsibilities in program planning to reach older people. She served in this position until her retirement March 31, 1979, at which time she moved to North Carolina. With her leadership, the state educational program for senior citizens made significant advances, and strong relationships were built with agencies and organizations. Grubbs developed a monthly newsletter relating to aging that was widely used across Virginia and provided information to many clientele, including large numbers not reached by Extension in any other way.

Heidi Ford joined the staff in 1968 as Extension specialist, home economics. Ford had been located at Virginia State since 1955, and while there had assumed responsibilities specific to such positions as district local home agent, home demonstration district agent, and district agent, home economics. As Extension specialist, home economics, Ford accepted leadership for the community development focus area of the home economics program and worked in close cooperation with Community Resource Development to implement the plan of work as it related to homes and families. In 1970, Ford's title was changed to Extension specialist, programs, a title that broadened her responsibilities to include leadership development programs and assistance with conference planning. In August 1974, she transferred from the department to become an Extension leader with administrative responsibilities in equal employment opportunities.

As the need for special home and family-related programs continued to evolve and the concept of home economics broadened, a need existed to change the name of the department to approximate more closely the expanded programs. On September 1, 1969, Thompson's title was changed to director of family resources to correlate with the new department name.

When federal funds were appropriated for the Expanded Food and Nutrition Education Program (EFNEP) in 1969, Betty Mifflin, formerly with the state 4-H staff in Florida, came to Virginia to give leadership to the EFNEP program. Under her direction, the Virginia program gained a reputation of national prominence. In

addition to developing an innovative framework for EFNEP, Mifflin brought together all Extension technicians in the state into an organized group for the purpose of personal and professional improvement. Known as the Extension Technician Association, it was the first in the nation and became a model for formation of similar Extension paraprofessional organizations in other states. Mifflin continues to serve as state coordinator for EFNEP.

In 1971, Thompson became assistant dean, Extension Division, and retained her title and responsibilities as director, family resources. Shortly thereafter, Margaret Groseclose was appointed assistant director, family resources. Groseclose began her professional life as an Extension agent in Tazewell County. After having served creditably there for a number of years, she continued her commitment to Extension by accepting a specialist position in 1960 in clothing and textiles. She assumed the responsibilities of this position until her appointment as assistant director, family resources. Thompson was promoted to associate dean, Extension Division, on July 1, 1973, but continued to serve as director, family resources, until Groseclose assumed this title on March 1, 1974, a position that she held until her marriage to William E. Skelton in 1976.

Laretta King, formerly an outstanding agent with experience in the Southeast District, was appointed Extension specialist, family resources, in January 1973. She served in that position until she entered graduate school at The Ohio State University in January 1976. Upon her return in June 1978, King resumed her leadership role in Extension programs for young families. Her work has had a singular influence on creating awareness among agents of the importance of reaching and teaching this clientele.

Jane Janey accepted a position with the department and was assigned the title Extension specialist, family resources, in August 1974. Janey brought a strong educational background to Extension, having been a public school teacher for 23 years, and more recently an Education Professions Development Award (EPDA) Fellow at North Carolina State University. Her major responsibilities as an Extension specialist were to assist Groseclose with implementation of the family resources plan of work and to give leadership to the community development focus area. In 1977, she was named state advisor to the Virginia Extension Homemakers Council, a responsibility she continues to fulfill.

When Groseclose resigned, Ruth Harris became family resources director. Harris had recently served for four years as program area leader, home economics, vocational and technical education, Virginia Tech. In October 1979, she accepted a three-year international assignment to Kenya, Africa, and Barbara Fite, formerly Extension specialist, staff development, was named interim director. As 1980 began, King, Mifflin, Janey, and Fite

composed the core group providing program direction for family resources.

Key: N = Negro
W = White
M = Male
F = Female
T = Total

Five-year Intervals

Membership Categories

	Organized 4-H Clubs	4-H Special-interest or Short-term	4-H Individual Study. No group affiliation.	4-H Instructional T.V. Series	Total 4-H Members (Some duplication)	Total No Duplication
1909	M 100					100
1910	M "All 11 counties having agents had corn clubs." F 46					300 46
1928	M N 1,842 W 6,378 F T Report	Not Found	Located data for male members only.			M 8,200 T ?
1930	M N 3,170 W 6,672 F Report T ?	Not Found				M 9,842 T ?
1937	M 18,822 W 17,244 T 36,066					T 36,066
1942	N 11,798 W 24,015 T 35,813	The reports located for 1942 and 1957 provided information regarding Negro and White membership --not male and female				T 35,813

KEY: N = Negro
W = White
M = Male
F = Female
T - Total

Five-year Intervals

Membership Categories

	Organized 4-H Clubs	4-H Special interest or Short-term	4-H Individual Study. No group affiliation.	4-H Instructional T.V. Series	Total 4-H Members (Some duplication.	Total No Duplication
1947	M 22,389 F 21,490 T 43,879	1947 is the last year that the number of boys enrolled was greater than the number of girls. The membership age range was 10-20 in 1947 and prior years.				T 43,879
1952	M N 7,244 W 19,677 F N 8,593 W 23,708 T 59,222	Membership figures for 1952 and 1962 are shown as an example of how Negro and White membership was shown separately and then combined. Membership age range 9-19.				M 26,921 F 32,301 T 59,222
1957	N 16,731 W 52,575 T 69,306					T 69,306
1962	M N 7,113 W 23,935 F N 8,949 W 28,114 T 68,111					M 31,048 F 37,063 T 68,111
1967	M 31,890 F 37,902 T 69,792	Special interest study groups and individual 4-H members had taken part in 4-H for years. The numbers so involved began to be reported in the 60s. 9,324				

KEY: N = Negro
W = White
M = Male
F = Female
T = Total

4-H ENROLLMENT BY MEMBERSHIP CATEGORIES

Five-year Intervals

Membership Categories

	Organized 4-H Clubs	4-H Special-interest or Short-term	4-H Individual Study. No group affiliation.	4-H Instructional T.V. Series	Total 4-H Members (Some duplication)	Total No Duplication
1972	M 38,654 F 45,200 T 83,854	11,744	(EFNEP) 31,902	58,542		T 185,952
1977	M 58,262 F 63,117 T 121,379	24,864	(EFNEP) 21,103	65,623		T 232,978
Membership figures provided in this table were obtained from statistical reports in the state 4-H office.						

SECTION III

Extension Leaders

SECTION III

Extension Leaders

KEY: N = Negro
W = White
M = Male
F = Female
T = Total

4-H ENROLLMENT BY MEMBERSHIP CATEGORIES

Five-year Intervals

Membership Categories

	Organized 4-H Clubs	4-H Special-interest or Short term	4-H Individual Study, No group affiliation	4-H Instructional T.V. Series	Total 4-H members (Some duplication)	Total No Duplication
1971	M 38,584 F 45,283 T 83,854	11,744	(EFNEP) 31,802	38,542		T [illegible]
1977	M 58,262 F 63,117 T 121,379	24,264	(EFNEP) 23,[illegible]62	65,623		T 232,878

Membership figures provided in this table were obtained from statistical reports of the state 4-H office.

230

ELLA GRAHAM AGNEW
"Pioneer Home Agent"

"I have begun a work among the girls," Seaman Knapp stated in a report submitted to the General Education Board of New York in October 1910.

> The direct object is to teach some one, simple, straightforward lesson to the girls on the farm, which will open the way to their confidence and that of their mothers, and will at the same time open their eyes to the possibilities of adding to the family income through simple work in and about the home. The indirect object is that of attacking this home problem on the farm.

Malnutrition and poverty were the home problems in Virginia around the turn of the century. Ella Graham Agnew was hired to help alleviate the problems through education.

Agnew was born in 1871 on her family homestead, "Roseland", in Prince Edward County. During her first year, Roseland was destroyed by fire, and toward the end of her second year, her mother died. The next year she moved to Burkeville. When she was five, her father remarried; he died when she was eight. Partly in jest, she later attributed her kind of life to her childhood: "I began the adjustment to varied living in my first year," she said, "and seemed to keep it up. My education has been on the pay-as-you-go, get-what-you-can-when-needed plan."

Agnew acknowledged that the only respectable employment open to women at that time was teaching school, but she felt unfit for the classroom. She turned to secretarial work instead, an avant-garde profession for women, and one that enabled her to spend five years, just before the turn of the century, in South Africa where she was a stenographer and bookkeeper for the Huguenot Seminary at Paarl. Following her secretarial stint, she became principal of Amajuba Seminary for Boer Girls in the Transvaal. She also worked for a few weeks at the American Consulate in Pretoria where she acted as interpreter for the consul and presided at several state dinners.

During those years in South Africa, Agnew became an ardent, though never militant, suffragette. Sometime around 1897, while watching a small group of intelligent, devoted women bring about the repeal of certain vicious laws, she had a glimpse of what value women might be if they were acknowledged citizens. From this experience, she vowed to advance opportunities for women's service whenever and wherever she could.

After five years of service in South Africa, Agnew returned to the United States. In the fall of 1909, she was working for the YWCA in Toledo, Ohio, as general secretary when she took the first step in her journey home to Virginia to become the pioneer of all home demonstration work. The adventure began one sunny afternoon when a young woman, pretty and irritated, stepped into Agnew's office and demanded that she tell her if the educational leaders in Ohio had been fair to the girls of the rural districts. The two conversed frankly at some length, and when the young woman left, Agnew wrote immediately to Virginia's superintendent of public instruction, J. D. Eggleston. She passed the question on to him regarding rural women in Virginia. Eggleston answered Agnew's letter by offering her a job. She was interested, and as a result of such quick action, February 1, 1910, found her in Virginia ready for work--she knew not what sort.

She did not get the position Eggleston had in mind for her, however, until May 31 of that year. On that day she met with Seaman Knapp, Eggleston, and Governor William Hodges Mann. After discussion of the present and future directions of demonstration work in Virginia, they decided that rural girls needed a program similar to the corn clubs already in operation for rural boys.

The work was to be started in the garden for growing, to be moved into the yard for canning, then through the kitchen to the pantry for storing. It would almost unconsciously interest the mother, and the home demonstration work would follow logically and quickly. Financing was arranged partly through the General Education Board of New York and partly through the United Board of Agriculture, a board created by Governor Mann in 1910 that permitted county boards of supervisors to contribute funds to demonstration work.

Following the decision to begin tomato clubs for girls, Knapp asked for recommendations for a person to head the work. Acting on the advice of T. O. Sandy, Eggleston recommended Agnew. She accepted the challenge after Knapp agreed the position would have equal status with the farm agent position, and she had assured him that she:

> ...knew nothing about gardening which seemed to be of immediate importance. If ignorance of this subject were accepted as a qualification, then I was good. Dr. Knapp in a quiet but impressive manner replied: "but you know girls, Miss Agnew, and they are so much harder to learn than tomatoes." I acknowledged all my training had been along that line.

On July 1, 1910, Agnew was appointed the first home demonstration agent, not only in Virginia but also in the United States. Her title was State Agent, Girls' Tomato Clubs. Her

commitment to the suffragette cause probably influenced her to take this position.

She was also the first woman appointed as field worker for the U. S. Department of Agriculture, with the admonition from Knapp that upon her rested the responsibility of either closing the door to women or opening an unlimited field of service. What a task!

During the month between the May 31 meeting and July 1 when Agnew began tomato club work, two matters transpired that were of importance: first, a decision was made to start the work in Nottoway County because Agnew and Sandy both lived there, and Halifax County because the agent there was anxious for such a program to begin; and secondly, H. B. Frissell invited Agnew to spend time at Hampton Institute learning how to raise tomatoes. Her instructor there, a Mr. Graham, gave her the desire to pass along the plan and its meaning. She was ready to begin her 10 years as home demonstration agent for Virginia.

The first summer was hectic, and she was beset with obstacles on every hand. The most difficult to overcome was the attitude of the people toward a woman so bold as to go around the country speaking to mixed audiences about new-fangled ideas in "schooling". Another obstacle was the indifference of the girls to garden work, which until then was considered suitable for servants only. And, there were the bad roads. Most travel was done by horse and buggy, farm wagons, horse back, or on foot.

By the middle of July, nevertheless, six small clubs were organized, three in Halifax and three in Nottoway counties, and the plants were set out. While the plants were growing, Agnew practiced demonstrations in canning in her own kitchen. She spoke at all meetings to which she could contrive an invitation, preaching the gospel of enlisting the girls in a crusade for better living at home. It was a difficult task for she had no experience on which to draw. Faith, determination, and vision were her assets.

The summer ended and the work had been sufficiently successful to insure its permanence. Agnew was forced, however, to break another precedent and appear before boards of supervisors to request appropriations to supplement the state appropriation and provide for local assistance the following year. She secured the requested cooperation and also received assistance from the Cooperative Education Association, the Farmer's Institute, and the Suffrage League.

From the beginning, Agnew strived to achieve several program goals:

- Work for girls and women should remain coordinate with that for men and boys.

- The program should be open to all who need it in rural districts.

- Women and girls should be aroused to realize their responsibility in establishing a democracy.

- "Learning by doing" should find a permanent place in the education system.

- All agents employed should be selected on the basis of merit rather than political affiliation.

- As soon as possible, special training for this work should be provided by schools, and all agents should realize their major responsibility is to demonstrate methods of home improvement, the home not bounded by garden fence.

For herself, she determined to establish the program on a firm foundation, well organized as part of a state college, and then to profit by the examples of other pioneers and leave before the public began to think of it as her work.

During the 10 years of her service, World War I was fought. In addition to her work as state agent in charge of home demonstration, she was assistant to the state food administrator and in charge of implementing the women's program. As such, she organized and carried out a house-to-house registration of homemakers in Virginia. Good reports were sent directly to Washington from 85 of the 100 counties and all the cities after a three-week campaign. She also sought the cooperation of the four Normal Schools in demonstrating successful wheat substitutes on the food train provided by the N&W Railroad, and traveled every mile with the train. During the "flu" epidemic in 1918, she and all her workers volunteered and served under the State Health Commissioner to establish diet kitchens and organize hospitals in high school buildings wherever needed.

Agnew left Virginia in 1920 to work with the YWCA national board as a secretary in the Finance Department, with the special assignment of visiting town and rural YWCAs throughout the U.S. and writing a bulletin to give methods for conducting financial matters in those centers. Her career continued to be an illustrious one that opened doors of opportunity for women and girls in this country as well as several countries abroad.

Agnew was the first woman to receive a certificate of merit from VPI in recognition of her service to rural Virginia. In 1939, she was one of three selected by Epsilon Sigma Phi for national recognition for Outstanding Service for Extension Work

in Virginia. She was a member of the House of Pioneers of the Epsilon Sigma Phi fraternity. A building on the VPI campus is named in her honor.

WILLIAM HENRY DAUGHTREY
"Give me the Facts"

William Henry Daughtrey was born at Handsom, Virginia, a thriving community in Southampton County. The first 18 years of his life were spent as an active participant on the home farm, producing corn, peanuts, pigs, pine trees, and cotton, where he developed an understanding of the problems and blessings of farm life and a solid foundation for his chosen profession.

He was graduated from high school in June 1923, and, after one more summer on the farm, enrolled at VPI where he received a B.S. degree in agronomy in 1927. Daughtrey served as a county Extension agent in Princess Anne and Dinwiddie for two years, after which he decided to continue his education at Michigan State University. In 1930, he received an M.S. degree in agronomy from that institution.

He was assistant extension agronomist at Virginia Tech from 1930 to 1933. When the Agricultural Adjustment Act was passed, the Secretary of Agriculture designated the Extension Service as the agency responsible for organizing state, county, and community committees to administer provisions of the Act. Daughtrey was designated by the director of Extension to administer these provisions in Virginia. He was appointed executive officer of the Agricultural Adjustment Administration in 1933, with headquarters at Blacksburg.

This was a critical time, not only on the farm, but also for the total economy, as a result of a severe economic depression, drought, and collapse of farm prices due to over-production and the loss of world markets for agriculture products. The Agricultural Adjustment Act of 1933 was designed to bring production of and demand for agricultural products in balance by reducing the production and marketing of agricultural commodities through acreage allotments and marketing quotas. The application of acreage allotments and marketing quotas in these early years limited the quantity of corn, hogs, tobacco, cotton, peanuts, and wheat that could be produced and marketed. Farmers had always enjoyed the freedom to produce and market agricultural commodities without restriction. Having the government tell them how much to plant, produce, and sell was a drastic change. Daughtrey apparently had the patience, good judgment, and understanding to deal successfully with farm people because, with the help of his co-workers, he guided the application of the A.A. Act into a satisfactory program in Virginia. He served in this

position until 1939 when he became executive assistant for the Farm Security Administration in the regional office at Raleigh, North Carolina.

Daughtrey returned to Virginia as district Extension agent in the Southeast District in 1940. He was named administrative assistant to the director of Extension in 1946, associate director of Extension in 1947, and director of Extension in 1962. He retired from the latter position in 1966.

He was a member of Phi Kappa Phi, Alpha Zeta, Phi Sigma. Epsilon Sigma Phi; a member and Deacon of the Blacksburg Baptist Church; a member and former president of the Rotary Club; and a Rotary International Paul Harris Fellow. He served as chairman of the State Rural Development Committee, Southern Extension Directors, National Committee on Organization and Policy, and the Board of Trustees of the 4-H Club Foundation.

The Progressive Farmer named him "Man of the Year in Virginia" in 1958, and he received the Superior Service Award of the U.S. Department of Agriculture in 1961.

He married Lois Dickerson of Kenbridge, Virginia, in 1932. They have two children, Binford and Bill, Jr.. Bill and Lois continue to make their home in Blacksburg.

LEANDER BURTON DIETRICK
"Deet"

L. B. Dietrick is a native of Carbondale, Pennsylvania, and a graduate of Penn State University. As a college student, he was elected to the honorary fraternities Alpha Zeta, Phi Kappa Phi, Gamma Sigma Delta, and Omicron Delta Kappa. He was actively involved in the work of each fraternity, and it was during this period of involvement with organized student groups that his leadership abilities began to emerge and grow--leadership that he later transferred to a people profession.

While he was in graduate school at Penn State, Dietrick met Mildred G. Engle of Engle's Switch, West Virginia, a dental hygienist with plans to work in Altoona, Pennsylvania. He married her in 1924 and brought her to Blacksburg where the couple established a permanent home. They had one son, Ronald Burton Dietrick, who is currently chief surgeon and director of a Presbyterian hospital at Kwanju, South Korea.

In 1925, Dietrick was promoted from an instructor in horticulture at VPI to associate professor, with an appointment as vegetable gardening specialist for the Extension Service. This did not exactly fit the career plan he had made. "I went into horticulture because I wanted to work with fruit trees and

small fruit. I always liked them," he said, "so what do I do when I take my first major position? I work in vegetables. You never know what you will do." His work as a vegetable specialist, however, proved to be so outstanding that he was awarded a master's degree from VPI in 1929, although he had completed his graduate work at Penn State.

In 1942, Dietrick became administrative assistant to John R. Hutcheson, who was Extension director at that time. He was named acting director in 1944, and became director when Hutcheson assumed the presidency of VPI in 1945. In a recent interview, Dietrick reminisced about that time. He said, "John called me one night and said there would be an article in the paper the next day saying he had been named president of VPI. I congratulated him, but he said that wasn't all. There would also be the notice that I was named director of Extension. I told him that by announcing it in the paper before telling a man made it difficult to turn it down. Hutcheson laughed and said that was the whole idea."

During World War II, and prior to his becoming director of Extension, Dietrick also served as an administrator of the Agricultural Adjustment Administration (a program to aid farmers), in addition to his Extension responsibilities.

In 1945, The Progressive Farmer named him "Man of the Year in Virginia Agriculture". Seven years later, on September 1, 1952, he was named dean of agriculture, a position that he held until his retirement in 1962. During his tenure as dean, Dietrick served on many state and national councils and commissions dealing with agriculture. He served as president of the Association of Southern Agricultural Workers in 1958.

Along with leadership in agriculture, Dietrick also gave active leadership to the home economics Extension program and did much to improve the status of professional women in Virginia. Through his efforts, salaries improved and more recognition was given to women out of respect for their contributions to families. These improved conditions for home economists were so exemplary that other states began to give added impetus to the Extension home economics program.

While Dietrick was dean, the 4-H program also grew. His actions contributed significantly to a doubling of membership and adding staff with expertise in the areas of weed control, food technology, marketing, television programming, motion picture production, and rural development.

Today, Dietrick is still in the people profession. He is active in the Presbyterian Church, civic clubs and organizations, and serves as a volunteer at Montgomery County Hospital. During

the growing season, he is an avid gardener who shares the fruits of his labor with friends and neighbors.

JOSEPH DUPUY EGGLESTON
"Crusader for Agricultural Extension"

Joseph D. Eggleston was born at "Marble Hill," Prince Edward County, November 13, 1867. He was graduated from Hampden-Sydney College in 1886 with an A.B. degree.

He taught in public schools, served as superintendent of city and county schools, and as state superintendent of education for Virginia from 1906 until his resignation on December 31, 1912. He waged a vigorous program for improving both schools and agriculture in rural districts.

In 1906, Eggleston heard of the demonstration work of Knapp. He invited him to Richmond to meet with a group of interested men, including T. O. Sandy, who was later employed to start demonstration work in Virginia. The result of this meeting was to place demonstration work on a firm basis until state and local authorities were interested and a state sponsor secured. He hoped VPI would accept this responsibility, but the college was not in a position to assume additional responsibilities at that time. Eggleston and Sandy worked with Governor Mann to draft a bill that the General Assembly passed in 1910, authorizing the Governor to appoint a state agricultural board to handle all funds for demonstration work for men, boys, girls, and women until a suitable sponsor was located.

Eggleston was elected president of VPI on March 13, 1913. One of the major tasks assigned him by the Board of Visitors was the re-organization of agricultural activities to include "Farm Demonstration Work". In January 1914, the United Board of Agriculture and the Board of Visitors of VPI jointly presented a petition to the legislature, requesting that the United Board be dissolved and that cooperative demonstration work be conducted at VPI. The legislature on Friday, March 13, 1914, passed legislation to place this work at VPI.

While Eggleston was urging the board, the faculty, the alumni, and the students to speak up for VPI, he was busy doing the same thing. As a result of his work, the farmers, the bankers, the industrialists, and the business community in general began to get a better understanding of the responsibilities assigned to the experiment station, the resident teaching staff, and the Extension staff. His real love was his agricultural Extension program. He recognized its importance in increasing farm production, but he thought its real importance rested in its power for improving all aspects of rural living.

In addition to serving as president of VPI, he was named the first director in 1914 of what is now the Cooperative Extension Service for Virginia. He served until 1916, at which time he accepted a position as president of Hampden-Sydney College.

FERNANDO SOUTHALL FARRAR
"State Corn Club Pioneer"

J. D. Eggleston claimed that T. O. Sandy rarely made an error in choosing his assistants. He certainly did not make one when he chose Southall Farrar to begin work with him in October 1907. Sandy's criteria for choosing agents must have reflected Knapp's closely. Always, Knapp's agents were men who could and would help the uneducated farmer. He selected agents with:

> a well-earned reputation for successful and superior farming practices; a readiness to serve. . .the cause of better agriculture, chiefly for the common good, since the cash remuneration was so low as to weed out those with other motives; a position of some authority and leadership in their communities arising from those attributes; and, finally, a good bit of the shrewd discernment and adroitness in converting skeptics and recalcitrants.

Farrar, appointed as district agent for southside Virginia, was the third person appointed as a demonstration agent in the state. He spent the fall months of 1907 and the winter months of 1908 soliciting the interest of the farmers in his group of counties, and started demonstrations in the spring of 1908.

Throughout the latter part of the 1800s and in the early part of the 1900s, agricultural clubs for boys had gained credibility and momentum. From a "Corn Club" formed in Mississippi, the idea spread throughout the South and into Virginia. Eggleston, Knapp, and Sandy collaborated on this added direction for demonstration work. "No more important thing can be done in Virginia for Virginia than this movement," declared Eggleston in a 1909 Richmond Times-Dispatch article. His vision for Virginia was to see its rural life improved so much that boys would want to stay on the farms. The idea of a state network of corn clubs was to show the boys the possibilities of country life, "where brains are mixed with muscle and soil." Eggleston's plan was to contact twenty school divisions, use two to six boys from each of the two to ten schools in that county, and, with their parents' consent, see that each boy got an acre of his father's farm. The boy had to promise to follow carefully the instructions laid down by the demonstration agents.

Once it became clear to Knapp that the General Education Board would fund a boys' corn club movement as a way to

strengthen public education throughout the South, he had state agents appoint corn club organizers. Sandy put Farrar in charge of the work, and in 1908 he began to organize corn clubs in Chesterfield and Dinwiddie counties. By fall of that year Farrar had enrolled 100 boys--75 in Dinwiddie and 25 in Chesterfield. This was the first club work in Virginia.

In a real way, the boys' corn club work was a series of contests in which boys competed, not only against each other but against less progressive farming methods used by their fathers. Although Farrar put the boys into clubs, most of the work was done individually through visits to farm homes. The boys were to use only average acres, not the best or the worst ones on their fathers' farms. The results were gratifying: the 100 boys made an average of 65 bushels of corn per acre when the average in the two counties was only about 18 bushels.

Farrar excited boys with this new venture. One of them was J. Arthur Hardy, Jr. In 1970, he wrote about his first year as a corn club member in Nottoway County:

> . . .in 1910 my two brothers, George E. Hardy and Isham T. Hardy, and I grew our first corn crop. This was from the seed my father had been growing for some time, the Boone County White. My brother Isham, who was 12 years old, won first place in the state in the Boys' Corn Contest by growing 95 1/2 bushels of corn on one acre. This was a measured acre and measured bushels of corn. My brother George was second with 94 1/2 bushels, and I was third with 92 1/2 bushels on one acre. The first prize was a two-horse Thornhill wagon which was made in Lynchburg, Virginia, and donated by the Thornhill Wagon Co. The second prize was a single row corn planter.
>
> We each received a certificate showing the amount of corn produced. These certificates were signed by Governor William Hodges Mann and Mr. B. O. James, Secretary of the Commonwealth. I have the originals now which were sent to us, and I prize them very highly.

Farrar, like Sandy, was a successful, progressive farmer. He was born in Amelia County at "Mohican", his old family home. His mother died while he was an infant, leaving him and five older children. The family physician, Dr. Joseph H. Southall, and his wife, who lived on the plantation "Selma" just a few miles away and whose property was almost adjacent to the Farrar property, offered to care for the infant. The Southalls were childless; eventually, they adopted the boy so that he might inherit the Selma property.

After completing his formal education in a private school and then at William and Mary College, Farrar married Katherine Vaughn in 1905. They established their home at Selma, the plantation where he had grown to manhood, and from which he later supervised operations in connection with his duties as district agent of the Virginia Extension Service.

In describing this man's work, John R. Hutcheson said: "Farrar is a man with a small foot, but he makes the biggest tracks of any man I ever knew. Wherever he walks over the fields of demonstration, great crops of corn, wheat, oats, and hay spring up." Farrar committed himself at age 36 and made big tracks for 32 years. His successful work among farmers and with the boys' corn clubs provided the basis for the later 4-H Club movement.

JOHN REDD HUTCHESON
"Dr. Jack"

John R. Hutcheson was born on a farm in Charlotte County to Robert Francis Hutcheson, of Scotch descent from the Clan MacDonald near Glasgow, and the former Mary Banksdale of Halifax County. When Hutcheson was nine, his father died, leaving his widow with seven children ranging from one to 17 years of age, and with an income of less than $50 a month. Yet, on this meager allowance, she reared the family well and inspired all of them to gain the equivalent of a college education.

After his father's death, his mother moved to Charlotte Court House to provide better educational and social advantages for the children. The town, at that time, was southside Virginia's center of culture and education, largely because of its proximity to Hampden-Sydney College.

Those formative years had a profound and lasting influence on Hutcheson. Rigid family discipline, motivated by a deep religious devotion steeped in love, fired him with an eagerness to learn and a zeal to serve--an enthusiasm that stood him in good stead throughout his long and useful career.

In his boyhood, Hutcheson wanted to be a lawyer, but he did not have sufficient funds to obtain such an education. When he was 17 years of age, his brother Tom, who was enrolled at VPI as a student in agriculture, wrote to him saying that "a boy with sufficient determination could get an education at VPI without money." So, in August of 1903, he went to Blacksburg and got a job on the college farm, which paid him eight cents an hour. When college opened, he enrolled as a student in agriculture and roomed with his brother Tom in the northeast corner of the dairy barn.

Tom and Jack milked 17 cows twice a day and went to school between milking times. By 1905, Hutcheson had saved enough money, through waiting on tables in the dining hall and doing other odd jobs, to enable him to live in the barracks and earn his college expenses.

This practical experience with dairy cows was the turning point in Hutcheson's life. When the Smith-Lever Act was passed in 1914, establishing Cooperative Extension work, Eggleston, then president of VPI, wrote Hutcheson, who was principal and teacher of agriculture at the Jones County Agricultural High School of Mississippi, extolling the great possibilities of this new form of education and inviting him to come back to VPI and become "livestock specialist". Hutcheson hesitated, stating that he had graduated in agronomy and doubted if he were qualified to serve effectively as livestock specialist.

To this Eggleston replied: "Any man who has lived two years in the VPI dairy barn and served as dairy maid for 17 contented bovines should at least know something about the business end of a milk cow." Hutcheson took the job and Mississippi's loss was Virginia's gain.

On April 1, 1917, he was made assistant director of Extension and served until 1919 when he was made director of the Agricultural Extension Service, a position he filled with honor and distinction for more than a quarter of a century. When he accepted the latter position, he was only 32 years old. Some of the older program administrators at VPI reproached Eggleston for appointing such a callow youth to so important a position. The president's reply was, "If that is all that is the matter with him, time will soon cure the trouble."

Early in Hutcheson's career as director of Extension, he emphasized integrity, ability, and dedication in Extension workers. He had learned early in life that farm people wanted their leaders to be straight in their thinking and clean in their living. He told the assistant director in charge of farm and home demonstration work that in selecting farm and home agents they should select men and women of integrity, faith, and vision, men and women who understood and loved farm people. In other words, he believed that the first qualification of an Extension agent should be character, followed by as much training and experience for the particular job as possible.

LIZZIE ARABELLA JENKINS
"The Wood and Water Lady"

Sometime before 1907, Hampton Institute sent one of its graduates into Gloucester County to teach Negro school girls manual work and to organize Mothers' Clubs. In the spring of

1907, after public schools had closed for the term, four other teachers went into four different counties to help spread the art of better homemaking. These teachers were called "Jeanes teachers" because their salaries were paid during the school year by a Philadelphia Quaker philanthropist, Anna T. Jeanes. During the summer, the teachers were paid by Hampton Institute.

During the regular school term, the Jeanes teachers taught sewing and manual training to Negro children in public schools and assisted regular classroom teachers with school management and instruction. They also solicited funds for new schools. J. B. Pierce supervised the work of the Jeanes teachers until Lizzie Jenkins was appointed district agent and Jeanes supervisor.

Jenkins, born June 22, 1877 in Warrenton, North Carolina, was one of eleven children, six of whom were educated at Hampton Institute and five at colleges in North Carolina. She entered Hampton Institute in 1901, completed her degree several years later, and remained to teach for a while. In May 1913, she was appointed to work with Negro families, and thus became the first Negro home demonstration agent in the Old Dominion. Her job was to organize and conduct canning clubs among Negro girls in thickly settled sections of the southeastern counties of Virginia. She was employed five months of the year. During her employment, she experienced the entire development of the home demonstration program for Negro mothers and daughters, but also worked closely with Pierce and district agents J. L. Charity, J. E. Bagley, and T. B. Patterson, each of whom believed in the concepts of family unity and community improvement.

In 1914, Jenkins became the special industrial supervisor for 38 Jeanes teachers working in 40 counties. An annual report published in 1915 states:

> The work done by these industrial supervising teachers is of the most practical kind. They are engaged in introducing the teaching and sewing and cooking not only in the colored schools, but in the homes of the colored people. They are introducing manual training into the colored schools; they visit the homes of the people; they organize the girls and women into garden and poultry clubs; they encourage the erection of better school houses, and have done excellent work in the improvement of sanitary conditions at the schools and in the home. They supervised 650 gardens in the spring and in the summer of 1914. The total number of quarts of vegetables and fruits canned by the club members was over 58,000.

At first, in addition to supervising the Jeanes teachers, Jenkins' concentration was on creating and unifying mother-daughter teams. The teamwork began with cultivating small

gardens and canning the produce, but it soon spread to making and mending clothing, improving rooms in the home, and finally to other phases of home economics.

As a result of visiting and working in the homes, Jenkins learned quickly what families needed, and based her program on these needs. For example, "what the farm homes needed was wood and water...enough wood to keep the house warm and do the cooking and some way to get water without going to the well or spring." She talked wood and water so much that she became generally known as the "wood and water lady", and was always delighted to learn from a farmer's wife that she at last had running water in her kitchen and a bathroom in her home.

Jenkins' Extension career spanned more than three decades and embraced programs to meet the farm and home needs of her people, basically those for women and girls, but also those for farmers and 4-H youth. She retired in 1945 with 32 years of meritorious service to the Virginia Agricultural Extension Service.

ROSS W. NEWSOME, SR.
"Green Pastures Make Green Dollars"

Ross W. Newsome grew up on a farm in Ashokie, North Carolina. After he was graduated from North Carolina Agricultural and Technical State University at Greensboro, he chose to become a member of the "people profession" by serving as farm agent in Campbell County, Virginia. He held the position (1930 to 1945) until his promotion to state agent. In the latter position, he supervised the Negro division of Extension at Virginia State College for 21 years. When Extension became a one-program concept as a result of the passage of the Civil Rights Act of 1964, Newsome became assistant state leader for administration at Virginia Tech. In 1969, he was promoted to full professor at Virginia Tech and served as assistant to the dean of Extension until his retirement in 1975. From July to October of that same year, Newsome served as interim administrator for the 1890 Extension program at Virginia State College.

Newsome was a good public relations person for Extension and inspired many people with whom he worked. His warm and friendly greeting was always accompanied by an outstretched hand. If he didn't know an individual, he would say, "I am Ross Newsome." Few could resist such a simple, humanistic approach. He possessed a unique sense of humor and used it as a means of reaching people and helping them face difficult situations. He was a special friend to all people regardless of race or economic, social, or educational background, and was held in high esteem by people from all walks of life.

Newsome was an avid reader and dynamic speaker. He was well versed on social, educational, political, and economic situations at the state, national, and international levels. He seemed always to have at his fingertips just the right words needed for a specific situation or occasion. Whenever he spoke before audiences, he encouraged them to be thrifty and self-reliant. He emphasized the importance of getting involved in community, state, and national issues that affected people. He encouraged them to get an education and own a home and a "piece of the rock" through some kind of investment program. One of his early slogans to farmers was "Green Pastures Make Green Dollars". These phrases were more than words to him; they expressed his ideals and goals, which he thought people needed to set for themselves. Newsome loved riding through the countryside observing the green pastures. He covered more miles with fewer cars than perhaps any Extension worker nationwide.

Newsome was committed to Extension even though he knew that it was not perfect. He believed that one needed to work within the system to help bring about change. He knew that Extension existed for the sole purpose of serving people and helping them improve their standards of living. He believed that people had potential, and opportunities needed to be provided to them to develop their potential.

Newsome consistently maintained a special interest in youths and their dreams. He made significant financial contributions to each of the 4-H educational centers to assist with future expansion for continued growth and development of Virginia's youths. A Ross W. Newsome scholarship fund was established to assist college-bound 4-H'ers to continue their education. In addition to 4-H work, he spent a great deal of time working with the Baptist Children's Home for underprivileged children, as well as with the Boy Scouts of America.

Newsome received the U. S. Department of Agriculture's second highest honor for outstanding leadership in helping to use the resources of Virginia State College to expand Virginia Extension Service resources to new audiences. He played a major part in unifying the staffs of Virginia State and Virginia Tech into one Extension staff, providing educational opportunities to all people in the Commonwealth. He was an honorary 4-H All Star and recipient of the Epsilon Sigma Phi Distinguished Service Award.

With the death of Ross W. Newsome, Sr., on March 3, 1979, the Extension Division, State of Virginia, and southeastern United States lost an individual and leader who had made outstanding contributions toward improving standards of living for all people.

THOMAS BOYNE PATTERSON
"Advocate of Home Ownership, Conservation, and Thrift"

Thomas Boyne Patterson was born in Columbia, South Carolina, January 15, 1866, and attended the public schools of that city. He was graduated from Hampton Institute in 1890 and later attended Miss Coppins' School in Philadelphia, the Pennsylvania State College, and Yale University.

After graduation from Hampton, Patterson was employed there for a short time. From Hampton he went to the Calhoun School in Alabama where he served for two years as a member of the teaching staff. After resigning the position at Calhoun, he went to Hegins Valley, Pennsylvania, and operated a farm for ten years.

Patterson was called from his farm to work in the Downington Industrial School, Pennsylvania, and from there to Livingston College in North Carolina, where he was employed until 1917. During his period of service at Livingston, he worked with farmers in the surrounding counties, in an unofficial capacity, giving lectures and demonstrations on better methods of farming. It was his ingenious leadership that influenced the Rowan County, North Carolina, officials to establish farm demonstration work in that county. He, therefore, began officially as a farm demonstration agent in that county in 1917 and served there for five years.

In 1922, Patterson was appointed district agent in Virginia, a position which he held until his death. His office was located at Hampton Institute until 1930. In that year he transferred to Virginia State College, along with the Extension Service headquarters. He soon won the admiration and confidence of the administration and of his associates, both at Hampton and Virginia State. Throughout his career, he made many friends and was held in the highest esteem by his co-workers, and by all who knew him. His courageous approach to many difficult problems, his outstanding ability, and his profound humanitarianism were well recognized.

In 1922, Patterson was an outstanding leader in religious and civic organizations. He was superintendent of a Sunday School while in Hegins Valley, Pennsylvania, a member of the National Grange, and--at one time--President of the Hegins Grange. He was an active member of the Hampton Alumni Association, and chairman of the Better Farm Division of the Negro Organization Society of Virginia. In Petersburg, Virginia, where he made his home, he was president of the Men's Club and an ardent worker in St. Stephen's Protestant Episcopal Church.

During the 26 years he worked in the Extension Service, he gave able, conscientious, and devoted service. He exemplified,

to a marked degree, the qualities of patience, tact, loyalty, and high moral standards. He inspired many persons with whom he came in contact to be thrifty and self-reliant. Whenever he appeared before an audience, he stressed "Home Ownership, Conservation, and Thrift." These words were more than a slogan for him; they were expressions of the ideals that dominated his own life. He deprived himself of many luxuries, but gave liberally to educational, religious, and civic organizations.

With the death of Thomas Boyne Patterson on December 22, 1943, the Agricultural Extension Service lost a substantial leader and an outstanding contributor to the improvement of standards of living among the Negro population of rural Virginia.

JOHN BAPTIST PIERCE
"Live-at-Home Crusader"

> Dr. H. B. Frissell, principal of Hampton Institute, came to my office in Richmond one day--I was then State Superintendent of Public Instruction--and asked me whether I [J. D. Eggleston] had heard of the work Dr. Knapp was doing in Mississippi. At my request, he outlined the work Dr. Knapp was undertaking. I said to him, "This is the greatest thing that has come into the South in 50 years. We must have it in Virginia. How can we get it?" We agreed that we should get Dr. Knapp to come to Richmond and explain the idea to a group of leaders.

When Eggleston invited Knapp and other Virginia educators to attend a meeting in Richmond, Frissell knew, of course, that a Knapp-Eggleston agreement to start demonstration work in Virginia would be for white farmers only.

Frissell, therefore, set about to supply the impetus for the program for Negro farmers; but, as one observer put it, "Dr. Frissell, a transplanted Yankee, modestly and wisely decided the impetus for such a movement should best come from native leaders." So, he worked out a cooperative plan between the General Education Board of New York, USDA, and his own Hampton Institute, which at that time was an 1890 school. "Eighteen ninety" schools were Negro colleges that began receiving land-grant appropriations in 1890 and were counterparts to white land-grant schools. By the early summer of 1906, Frissell was ready to send J. B. Pierce, who holds the distinction of being Virginia's first demonstration agent, to Norfolk County (now called the City of Chesapeake).

John Baptist Pierce was born in Greenville, Butler County, Alabama, August 6, 1875, and grew up in a family that stressed

education. Local teachers were boarded by the family so the children could have the added touch of better training. His father was a contractor and builder who taught him brickmasonry. Pierce got his first formal training, however, at Tuskegee Institute where he began immediately to "work at my trade...helping to build the church, Phelps Hall, Thrasher Hall, and other smaller buildings on the campus." After he was graduated he took a job as brickmason, but his interest in agriculture and the plight of Negro farmers eventually sent him back to school. This time he went to Hampton Institute to study agriculture and begin training for his life's work. He studied from 1898 to 1902, finished the graduate program, and took a position as teacher of biology and school gardening at the Institute for the next five years.

Frissell, in June 1906, a few weeks after talking with Eggleston about the Knapp Plan, asked Pierce to initiate demonstration work in Norfolk County, working directly under Hampton Institute, and according to Knapp's plan. The General Education Board donated money to cover the costs. In December of that same year, Knapp offered Pierce a job working directly under him and left it up to Frissell to place Pierce where he would be most effective. Frissell, "a wonderful man who was my teacher, counselor, and friend," Pierce said, sent him to Gloucester County "to help round out special work that T. C. Walker, a Hampton graduate, was doing..." "Pierce was 32, and for the next 35 years he would spend his life in the service of the USDA. R. D. Lemon, who followed Pierce to Gloucester as county agent, said:

> When J. B. Pierce, now field agent, began in Gloucester, the soils were very poor. Being of a light, sandy nature, they were adapted, with improvement, to truck raising. He started work in soil improvement with one farmer who did so well with green peas, melons, and potatoes, that Gloucester, from that small beginning, has developed into an important trucking county. The work started in soil improvement has continued under demonstration methods through the past 18 years, with the result that practically every farmer in the county is producing some truck, principally peas and potatoes.

Pierce's "live-at-home" farm work of balancing cash crops, food and feed crops, and livestock was a bulwark in the demonstration program through the years. A favorite slogan of his was:

> A garden, a cow;
> A smokehouse, and a sow;
> Twenty-four hens, and a rooster;
> And we'll all live better than we used to.

Live-at-home farm work was really another term for the Knapp Plan. Pierce tried to get farmers to raise their own food and livestock feed so they could make larger profits from their cash crops. John R. Hutcheson, Virginia's third director of Cooperative Extension, stated many years later that each farmer "should have a year-round garden to supply his home needs, enough corn and hay for his own use, a cow and pasture in which to keep her, and sufficient poultry and swine for the family meat supply."

It was not long until Knapp promoted Pierce. From 1908 through 1910, Pierce was agent for three counties--Gloucester, Mecklenburg, and Nottoway--and in 1911, five years after his first appointment, he was made district agent for Negro demonstration work in Virginia and the Carolinas. His territory kept expanding until in 1936 he covered Virginia, North Carolina, South Carolina, West Virginia, Kentucky, Maryland, Tennessee, Arkansas, and Missouri--the northern tier of southern states.

True to the spirit of pioneer workers in Knapp's demonstration work, Pierce, an agricultural missionary, carried with persistence, intelligence, and Christian fervor, the message of better farms, better homes, and better health, not only to the Negro farmers of Virginia but to those of the entire southern region.

A tribute to Pierce's years in demonstration and later in Extension work was his development of the farming community of Lummis in Nansemond County, now the City of Suffolk. Because of Pierce, Lummis represented one of the many communities that caught the vision of better agriculture and satisfying farm life. Pierce visualized a time when the lowest income farmers, Negro or white, could live at home, educate their children in nearby training schools, and build for themselves satisfying farm lives. His years of service were dedicated to the vision in which he believed.

THOMAS OLDHAM SANDY
"Superior Farmer"

T. O. Sandy, the father of demonstration work among white farmers in Virginia, was born in Essex County in 1857 and educated in private schools in the area and at VPI. After graduating from college in 1879, he farmed and raised cattle and horses in Westmoreland County until he married Fleetie Miller of Nottoway County. He then moved with his wife and her maiden sister onto their "desperately poor" plantation, Locust Grove, near Burkeville.

Like other farmers in the area, Sandy tried to grow dark-fired tobacco and failed. The crop was so poor one year that he sold his year's labor at a Farmville warehouse for just enough, after commissions, to buy himself a pair of buckskin gloves, and he swore he'd never grow another plant of the weed.

With this failure behind him, Sandy gradually turned Locust Grove into a handsome, thriving farm. In less than two decades, the plantation was an area showplace. Farming as scientifically as his knowledge allowed, Sandy built up high-producing dairy livestock and herds, diversified crops, and enriched the once-depleted red clay and sandy soil. He was a progressive farmer and the first in eastern Virginia to encourage farmers to grow alfalfa and mixed grasses, use lime, build silos, go into dairying, and breed better strains of dairy cattle. At times his neighbors thought he must be a radical. He earnestly believed, for example, that dairying could be made a great industry for it was near many large cities where markets could be found for milk and cream; and the South was ready to buy the surplus of improved cattle. Acting on this belief that dairying could be made to pay with the best cows that could be gotten and with the best feed and pastures, he sold out his herd and went to New York and purchased a small herd of highly bred animals, which became his foundation stock. At this time, that appeared a very radical thing to do, but the future indicated his great foresight. As a result, Sandy became an important person in the Burkeville area, respected by school, church, and community leaders as a force for progress.

Sandy initially became involved with the demonstration movement one Sunday morning in 1905 when S. C. Mitchell, first president of the Cooperative Education Association of Virginia, was preaching in the Burkeville Baptist Church. Sandy, in attendance at the service, invited Mitchell to dinner. "As soon as I entered his family carriage," Mitchell wrote, "it was clear from the harness and horses 'Here is a superior farmer.'" Once at Locust Grove, Mitchell's first impression was borne out. Inside, the set table was beautiful, the home orderly and efficient. Outside, the two men ambled over the farm after their Sunday dinner, and Mitchell observed that the fields were well kept. Corn crops were everywhere, and fences and barns excellent. Sandy showed Mitchell his fine herds and told him about separating the cream and sending it to Shepard's in Richmond. Mitchell saw at a glance that Sandy had a gospel for Virginia farmers, a gospel which had grown up in his own experience, the enrichment of rural life. He had a joy in his job as a farmer. As a result of this Sunday afternoon impression, Mitchell decided to keep Sandy in mind to head up Seaman Knapp's work in Virginia, if that time should ever come. It came in 1906.

While H. B. Frissell made arrangements to begin Negro demonstration work in Virginia, Eggleston made plans to begin

demonstration work among white farmers. Frissell, other Virginia members of the Southern Education Board, and Mitchell had discussed the Knapp Plan at length at a meeting in Richmond, and they had concluded it was well worth trying. They had talked about Sandy as a possible state coordinator, and it was at that time that Mitchell titled him "superior farmer". It was a respected title held by Sandy the remainder of his life.

The next step was to get in touch with Sandy to learn if he would be interested in coordinating the Knapp Plan for white farmers. Shortly thereafter, Mitchell was traveling to Lynchburg and stopped at Burkeville to talk with Sandy about beginning demonstration work in Virginia. "He seemed willing," Mitchell reported.

Meanwhile, Eggleston contacted Knapp and invited him to a meeting in Richmond to explain his demonstration idea to a group of Virginia's agricultural leaders and to meet Sandy. To this meeting Eggleston invited Governor Swanson; President E. A. Alderman of the University of Virginia; Mitchell of the Richmond College faculty; Jackson Davis, Editor of The Southern Planter, who later became assistant director of the General Education Board; George W. Koiner, Commissioner of Agriculture; and Mrs. B. B. Munford of Richmond, an active member of the Cooperative Education Association. No representative from VPI was present. At the meeting, Eggleston introduced Knapp and Sandy, and at his suggestion they went out into the hall. A few minutes later they returned, and Knapp said that Sandy had agreed to become the Virginia agent.

Another source of information, reported to have been written in 1953 as the result of a number of conversations Farrar Shelton had with Eggleston a year or two before his death, claimed that Knapp and Sandy met again in Burkeville. Sandy supposedly called a meeting in the auditorium of the new high school to have Knapp introduce his plan to a large group of farmers because Knapp, Eggleston, and others had decided that approval of, and the request for, such a revolutionary plan should come from the grass roots. Only 40 farmers showed up. As Shelton explained, farmers seldom met this way in those days, but important people were going to speak: Knapp, Eggleston, Frissell, Mitchell, and Sandy, the progressive farmers. The large auditorium was just about empty. Fortunately, school was in session; the school principal, embarrassed for the speakers' sakes, drafted all the boys in the upper and high school grades to fill the auditorium. "That's how I got into the meeting," remarked Shelton, who was a youngster then, "an eighth grader, little knowing that I would later be a county agent in a nearby county." With the speech-making over, the 40 farmers approved the Knapp Plan and requested that it be started in Virginia.

Early in 1907, demonstration work among white farmers was underway. Sandy's job at first was promotional. Since he had already demonstrated his intelligent use of modern farming methods at Locust Grove, his job was to go from community to community and tell what he had done by giving demonstrations to groups of farmers in different neighborhoods. On February 4, 1907, Knapp wrote to Wallace Buttrick, secretary of the General Education Board, and recommended that Sandy be asked to act as traveling agent among the whites, limited that year to three counties contiguous to Burkeville (Nottoway, Buckingham, Prince Edward).

The General Education Board appropriated a sum not to exceed $4,500 for 1907 for demonstration work in Virginia under Sandy's direction. Sandy was successful immediately. Within a few months, Knapp appointed him state agent for Virginia and authorized him to select eight or ten additional agents to help with the work.

J. Arthur Hardy, Jr., Nottoway County, wrote an engaging letter to W. E. Skelton in June 1970, in which he recalled having known Sandy. In part of his letter, he wrote about his father's having gotten many of his ideas about farming from Mr. Sandy. He said:

> I think my father was among the first farmers in this area to use lime as a soil conditioner. I remember when he bought a carload of the regular builders or quick lime in wooden barrels and left it exposed to the air until it burst the barrels open and slaked so it could be spread. He was also among the first in this county to grow alfalfa. This alfalfa was grown without inoculation, but it was found that sweet clover was growing around the field and this has the same inoculation as alfalfa. He was first in this county to seed Korean lespedeza. The seeds were ordered from some place in Alabama. We had the common lespedeza which had been brought here sometime during the Civil War.
>
> I will always remember the first manure spreader we had. It created quite a sensation when it was pulled through the main street of Blackstone, with one of the men from the hardware store riding in it and explaining what it would be used for in very plain language.
>
> My father was first in the county to build a silo. This was made with green pine lumber and used for several years. He also grew a variety of corn known as Boone County White, which was brought from Boone County, Illinois, and sold seed over a large part of Virginia and North Carolina.

Sandy resigned as state agent for Virginia on October 1, 1917, because of poor health. He, "who did yeoman service for Virginia Agriculture", died June 7, 1919. Eggleston, president of VPI, paid a powerful tribute to him when he wrote: "It has been a great privilege to me to be connected with him in the splendid services he has rendered the state. I know of no man in Virginia who has been of more real constructive service to the people of the state than he has been."

WILLIAM E. SKELTON
"Born to Lead"

Some people are just naturally doers in life. Not content to sit back and enjoy the status quo, they look for new ways and methods that lead to improvements. William E. Skelton is one of these doers.

Skelton, born in Dinwiddie County, January 10, 1919, has been a doer all of his life. As a seven-year-old Virginia 4-H'er in his native county, he worked at improving the production of his 16-chicken flock to increase the $12 income he derived from it. He soon saw his flock grow to 89 and his income increase seven times. When he started raising corn to improve the rations for his flock, he received additional income from the sale of that part of his crop not used to feed the chickens.

His early agricultural enterprises typify how Skelton worked during his life to "make the best better", a phrase borrowed from his 4-H interest. The trait of trying to improve life through involvement has been evident in all of his undertakings, whether as a student at Virginia Tech, a county Extension agent, head of Virginia's 4-H Program, director of the Virginia Cooperative Extension Service, dean of Virginia Tech's Extension Division, or as President of Rotary International.

Early in his career, he showed the leadership potential that is possessed by most doers. In high school, he was captain of the basketball team, and president of the 4-H Club, Future Farmers of America, the Southside Virginia Student Junior League and the Church Youth Council. He also was selected as a 4-H All Star and State Farmer.

Skelton credits William H. Daughtrey, director emeritus of Extension, for his career in Cooperative Extension. Daughtrey was the Dinwiddie County agent when Skelton was growing up on his parents' farm.

"Daughtrey encouraged me to go to VPI and keep active in

4-H. I remained active through the 4-H Alumni Club while I was a student," Skelton said.

He also remained active in many other activities while at VPI and graduated in 1940 in agricultural engineering. While earning nearly half of his expenses for college, Skelton found time to be a member of the Cadet Corps, Alpha Zeta, YMCA, Order of DeMolay, student chapter of the American Society of Agricultural Engineers, and the Mid-Virginia Club, as well as participate in intramural athletics. As a graduate student at Cornell, he added Phi Kappa Phi and Phi Delta Kappa to his list of memberships.

Skelton worked as a special 4-H agent in Appomattox, Prince Edward, Campbell, Amherst, Buckingham, Fluvanna, Nelson, and Cumberland counties before World War II. During the war, his army service included tours in the Caribbean, Africa, and Italy. After his discharge in 1945, Skelton continued to serve in the Army Reserves for 25 years and retired with the rank of Lieutenant Colonel.

Few persons spend their lives with one employer, but, except for his service in the army and graduate assistantships at Cornell University, Skelton worked only for Extension and Virginia Tech. He holds M.S. and Ph.D. degrees from Cornell and did post-doctoral work at the University of Wisconsin.

After army duty, he took a position as Extension agent in Henry County. In 1949, he joined the state 4-H staff and from 1950 to 1962 served as state 4-H Club agent. During the next four years, he served as associate director and director of the Virginia Cooperative Extension Service. In 1966, he was named dean of the Extension Division.

The Extension Division was authorized by the General Assembly in 1966, based upon the plan developed by Skelton in 1965, to improve response to citizen requests for programs. The Extension Division concept was the culmination of a belief that Skelton had relative to making the total resources of Virginia Tech available to the citizens of Virginia. It became a model copied by other states and the Southern Association of Colleges and Universities. The division included the off-campus graduate program, 4-H, agriculture and natural resources, family resources, community resource development, the Computerized Management Network, and a network of 109 Extension offices in nearly every Virginia city and county. An important step was taken a few years later when the Donaldson Brown Center for Continuing Education was established to provide an adult education center on the campus. During Skelton's leadership as dean and director of VCES, the Center continued to grow in its provision of continuing education services to citizens of the Commonwealth.

During the ten years Skelton was at the helm of Extension, the total organization grew and prospered. Large strides were taken in helping localities identify their problems and solve them. New services were offered without diminishing those traditionally associated with Cooperative Extension.

Extension specialists were granted faculty rank and tenure and became full-fledged faculty of the university. Extension agent positions were upgraded, 25 were the secretarial and support staff positions. Programs of work were redirected to respond to the changing needs of agriculture and other program areas of work. Salaries of the total Extension faculty and field staff were increased to competitive levels on a national basis. While the average salary increased 201 percent, the number of employees increased from 764 to 1,293 and the budget from $5,696,795 to $19,861,012. Even with increased services to the people, governmental bodies in counties and cities requested more local-level positions.

The esteem in which Skelton was held by his peers was recognized when the Virginia Extension Service Association, an organization that he helped form in the 60s, presented to him its first honorary membership. He also received a similar honor from the Virginia Extension Homemakers Council.

Skelton was also a doer outside of Virginia Extension. He is past president of Epsilon Sigma Phi, national Extension fraternity. The organization recognized his contributions and accomplishments by presenting him with the Distinguished Ruby Award, its highest honor. The soft-spoken Virginian also twice received the U. S. Department of Agriculture Superior Service Award and the Freedom Foundation George Washington Award.

A succession of Virginia governors recognized his abilities by appointing him to seven special state commissions that studied such Virginia concerns as rural affairs, manpower planning, conservation, and agricultural credit.

He stepped down as dean in 1976 and retired in 1979, but he did not stop being a doer. He continues to work closely with Extension and 4-H centers located across Virginia. While heading 4-H and/or Extension, he provided the input for establishing four 4-H centers and the revitalization and expansion of the two other 4-H centers. In recognition of his continuing commitment to youth, the West Central 4-H Educational Center named a lodge in his honor.

Skelton gave significant leadership to Extension for a ten-year period. The effects of this leadership paved the way for Extension to meet the needs and challenges of Virginia citizens during the remainder of the 20th century.

MAUDE E. WALLACE
"Woman of Distinction"

Maude Emma Wallace, reared on a farm near Pontiac, Illinois, was educated at Illinois Women's College and Lewis Institute of Chicago, with later study at Columbia University.

After teaching home economics in a Miami, Florida, high school for one year, she joined the Virginia Extension Service in 1918 and stayed long enough to participate in the food conservation program during World War I. She went to North Carolina in 1919 to become assistant state home demonstration agent, but returned to Virginia in 1929 when she was appointed state home demonstration agent. In 1938, she became assistant director of Extension in charge of home demonstration work, and served in that position until she retired in 1958.

When the temporarily suspended Department of Home Economics was reinstated at Virginia Tech in 1937, Wallace served as its head at the request of University President Julian Burruss. For two years she served in the dual role of department head and state agent.

Wallace's record shows that under her direction, home demonstration work in Virginia grew from limited programs in 36 counties to broad, extensive programs in 94 counties and two cities. With careful guidance, she took a small organization of women, known as The Virginia Homemakers Association, and developed from it the largest women's organization in the state. The name was changed in 1934 to The Virginia Federation of Home Demonstration Clubs, which in 1957 consisted of 1,730 clubs and a membership of 39,172 women. The organization is now called the Virginia Extension Homemakers Council and has a membership of 22,000.

Wallace was a charter member of the Virginia Council on Health and Medical Care, and helped develop the now nationally known program. As a member of the Virginia Rural Electrification Council, she and her staff worked closely with power suppliers to make electric power available to all rural people. She was active on various other state boards and committees and served on many national committees, including the Extension Committee on Organization and Policy of the American Association of Land-Grant Colleges and Universities; the planning committee of the National Project in Agricultural Communications; the Board of Trustees of the National 4-H Foundation; and the World Citizenship Committee of the American Home Economics Association.

ORGANIZATIONAL STRUCTURE OF THE VIRGINIA COOPERATIVE EXTENSION SERVICE

In the early days, the organization of the Virginia Extension Service was structured around the few staff members employed. When J. D. Eggleston, the superintendent of public instruction, and Seaman A. Knapp initiated the Extension Service in Virginia in 1907, the structure was very simple. T. O. Sandy, a progressive farmer living near Burkeville, Virginia, was employed as state agent for demonstration work in three counties near Burkeville. Sandy employed F. S. Farrar as his assistant and assigned him responsibility for developing boys' corn clubs in the state. About the same time, he employed Ella Agnew to develop girls' garden, canning, and poultry clubs. This was the beginning of 4-H in Virginia.

Early Extension work was financed by the General Education Board of New York City through USDA. This system of funding continued until the passage of the Smith-Lever Act in 1914. The State of Virginia, however, assumed some funding responsibility when the General Assembly on March 17, 1910, authorized funds to support "the United Board of Agriculture to coordinate the Virginia College of Agriculture and Polytechnic Institute and the Virginia Experiment Station, the commission and State Board of Agriculture, and the State Board of Education in cooperation with the USDA." It also authorized county boards of supervisors to appropriate funds for the work, not to exceed $20 for each 1,000 inhabitants.

On Friday, March 13, 1914, the Virginia legislature passed legislation necessary to place cooperative demonstration work at VPI. Eggleston, by then president of VPI, by request of the Secretary of Agriculture, agreed to serve as acting director of Extension on July 1, 1914, the effective date of the Smith-Lever Act. On July 9, 1914, the Extension Service of VPI was established.

Sandy and Agnew, state agents, continued to have offices at Burkeville. Sandy retired July 1, 1916, and at that time the headquarters for Extension work was transferred to VPI at Blacksburg. Jesse M. Jones was named director of Extension, a post he held until 1919.

Prior to the establishment of Extension headquarters at VPI, Hampton Institute also had staff working in the field. H. B. Frizzell, president of Hampton Institute, was among the leaders who arranged with Eggleston, then state superintendent of public

instruction, to invite Knapp to the state in 1906 to explain demonstration work and how to get started.

On December 14, 1906, John B. Pierce was appointed the first Negro farm agent in Virginia and the second in the nation. Pierce became district agent and eventually field agent for the lower South. He served the people of the state and the South until his death in 1942.

Other Negro leaders associated with the early development of programs for Negro families included Lizzie A. Jenkins, Mattie Holmes, R. D. Lemon, G. E. Oliver, W. H. Hayes, J. F. Wilson, A. W. Pegram, R. L. Wynn, Russell Washington, and J. W. Lancaster.

By 1920, the following area agents had been appointed: John Charity, J. E. Bagley, T. B. Patterson, and G. E. Oliver. Several local men and women agents were serving counties and/or areas under their supervision.

Reports indicate that as early as 1913 white district agents were without clearly identified geographic boundaries. It appears that districts were established around the district supervisor's place of residence. District agents at that time included W. C. Shackleford, F. S. Farrar, and W. P. Moore. In 1919, J. G. Bruce resigned as agent in Culpeper to become district agent in Charlottesville.

Jones stated on July 1, 1916, that the entire Extension staff totaled 142. The director of Extension reported to the president of VPI. The Negroes were supervised by an individual from Hampton Institute, white men by the director of Extension, and white women by the state leader for home demonstration work. The definite delineation of district lines between 1919 and the 40s is somewhat vague. By the late 20s, the program areas supervised by white men were as follows. Southwest Virginia, B. A. Warner; Northern, W. C. Shackleford; Louisa area, J. H. Quesenberry; Southeast, F. S. Farrar; and Charlottesville, J. G. Bruce.

In 1930, the programs serving Negro families were moved from Hampton Institute to Virginia State College at Petersburg. Following this move, funding, accountability, and supervision of programs for both Negros and whites became the responsibility of the director of the Cooperative Extension Service at VPI.

Area agents who were working out of Hampton Institute continued in the same roles. According to Thelma Hewlett, "When the office moved to Virginia State College in 1930, no new state and district staff were appointed until 1944." The leadership team at Virginia State in the 40s and 50s included Ross W. Newsome, state agent (1945-66); S. E. Marshall, district agent;

Blanche Harrison, district agent; Thelma Hewlett, district agent; and Heidi Ford district agent.

Newsome, as state agent, was in charge of the program and reported to the director of Cooperative Extension. Specialist assistance was provided from VPI. In 1966, Newsome was named assistant to the dean of Extension. He held this position until his retirement in 1975. Hewlett, and later Ford, were promoted to the administrative staff as Extension leaders with offices at VPI.

After President Eggleston served as acting director from 1914 to 1916, Jones held the position for three years. Upon Jones' retirement, John R. Hutcheson, livestock specialist, became director; and Moore, agent in Bedford, assistant director. Hutcheson held the position until 1945. In 1942, L. B. Dietrick, vegetable specialist, was named administrative assistant.

In 1944, Dietrick was appointed acting director. He became dean of agriculture and director of Extension in 1952. For the first time, the director of Extension would be reporting to the dean of agriculture. This arrangement remained in effect until 1966 when the Extension Division was established. In the meantime, W. H. Daughtrey, who had served as assistant Extension agronomist and district agent in the southeast district, was appointed administrative assistant to the director of Extension in 1946; associate director of Extension in 1947; and director in 1962. He retired from the position in January 1966.

Beginning in 1932, G. Warren Slusser was a member of the administrative staff at Blacksburg. Serving first with the position title Extension accountant, and later administrative assistant, his office was charged with accounting procedures, budget, personnel, retirement, insurance, and other employment benefits and functions which were divided among several faculty and staff members.

From 1929 to 1958, the home demonstration phase of the program was under the direction of Maude Wallace who came to Virginia Tech from North Carolina as state leader of home demonstration work. In 1939, Wallace was made assistant director of Extension in charge of Extension home demonstration work. She retired in 1958.

In 1952, the administrative team at the director's level consisted of Wallace, Dietrick, Daughtrey, and P. H. DeHart, who had moved from Extension agronomist to associate director. Prior to DeHart's appointment, the position was filled by H. E. McSwain who previously had served as district agent. In 1953, George C. Herring, swine specialist, was appointed assistant director. Upon his retirement in 1962, W. E. Skelton, state 4-H leader, was appointed as his successor.

Prior to 1950, boys' and girls' 4-H programs were under separate supervisory heads. For a number of years, Hallie Hughes was state 4-H agent for girls; and Gordon Elcan, state 4-H agent for boys. Skelton joined the 4-H staff in 1949. In 1950, as state 4-H leader, he reorganized 4-H, action which resulted in one person's being in charge of all 4-H programs in the state. Skelton, as head, reported to the director of Extension.

A redistricting of white home demonstration work occurred in 1942 and the following area/district assignments were made: Helen Ricks, Southeast (southeast of the James River); Sylvia Slocum, north of the James River; Edith Vaughn, southern Virginia; Billie Burke, northern Virginia; and Sally Guy Davis, East and West Central Districts.

In 1955, a sixth Extension district was established in Virginia. This realignment of counties created the West Central District, with district headquarters in Roanoke. Margaret R. Svoboda, Extension agent in Roanoke County, and J. B. Flora, Extension agent in Franklin County, were named district agents for the West Central District.

In the early years, three different Extension representatives were requesting funds from boards of supervisors. Beginning in 1952, DeHart, associate director, assumed leadership for working out a new approach to combine county budgets and for designating one contact person for county boards of supervisors. The programs supervised by men and women were brought together and the district agents worked as a team in the six districts. In the early 50s, the district teams included, in addition to West Central: Southwest, P. B. Douglas and Edith Vaughn; Northern, G. H. Clark and Eva Minnix; East Central, E. W. Carson and Lucy Blake; Southeast, Joe W. Rogers and Ann Wills Frame; and Northeast, John R. Hutcheson and Betty Kyle. Other district agents who served at various times throughout the period included: Helen Ricks, Slocum, Burke, Davis, Sam Cox, Daughtery, McSwain, Jim Norment, D. T. Rogers, Cary Tomlinson, Ben Weddle, Ed Allen, Wayne Keffer, Lucy Blake, Mabel Best, Mary Moorman, Ethel R. Grubbs, Mary Hille McCoy, and Helen Rowe (Edwards).

The next significant change in structure came as a result of legislation passed by the General Assembly in 1966, which created the Extension Division at Virginia Tech. All university Extension activities were consolidated in this new division. DeHart, when he retired January 1, 1971, was quoted as saying, "The most significant change took place four years ago (1966) when the Extension Division was created. The Extension Division was created to make the total resources of Virginia Tech available to the people of Virginia...for the industry of agriculture to survive, it must make use of the resources of all

segments of the university because the problems are more complex than ever before."

By this time, Skelton had succeeded Daughtrey as director of Cooperative Extension. Skelton was named the first dean of the newly created division. The Extension Division was to include all of the Cooperative Extension Service, the new State Technical Services program, the Donaldson Brown Continuing Education Center, and the off-campus graduate program. The budget included Extension funds for each college, and a college Extension director or coordinator was named for each of the seven colleges.

Early efforts of the reorganization following the 1966 legislation and the establishment of the Extension Division included the Division of Program and Administrative Functions. This resulted in state leader and area program leader positions. In a letter from Skelton on June 17, 1966, the following staff appointments were announced.

State Leaders

State Leader, Agriculture	Dr. M. Frank Ellmore
State Leader, Administration	Dr. W. E. Lavery
Ass't State Leader, Administration	Mr. R. W. Newsome
State Leader, Training	Mr. M. C. Heckel
State Leader, 4-H Programs	Mr. J. M. Tyree
State Leader, Resource Development	Dr. G. E. Russell
State Leader, Home Economics	To be announced (later filled by Ann Thompson)

Area Program Leaders

Name	Program Leader for
Mr. R. W. Blanton	4-H
Mr. E. W. Carson	Agriculture
Mr. G. H. Clark	Agriculture
Mr. O. W. Cundiff	Resource Development
Mr. P. B. Douglas	Agriculture
Miss Heidi E. Ford	Home Economics
Mrs. Ann W. Frame	Home Economics
Mr. H. B. Franklin	Resource Development
Mrs. Thelma T. Hewlett	Home Economics
Mr. William H. Judy	Agriculture
Mr. C. N. Lester	Agriculture
Mr. S. E. Marshall	Agriculture
Mr. C. M. McBride	4-H
Miss Mary Hille McCoy	Home Economics
Miss Eva S. Minnix	Home Economics
Mr. James B. Norment	Agriculture
Mr. D. T. Rogers, Jr.	Agriculture
Miss Helen A. Rowe	Home Economics

Mr. John B. Shryock	Resource Development

District Agents

Name	District
Mr. E. W. Carson	East Central
Mr. G. H. Clark	Northern
Mr. P. B. Douglas	Southwest
Mr. C. N. Lester	West Central
Mr. J. B. Norment	Northeast
Mr. D. T. Rogers, Jr.	Southeast

The state leaders' titles were later changed to state directors, and additional associate and assistant dean positions were added. Also, several personnel changes occurred. W. E. Lavery became vice president, finance, on December 1, 1968, and university president in 1972, G. E. "Buddy" Russell left Extension to head the university alumni office. W. R. Van Dresser, who had been Extension veterinarian and head of the Chemical, Drug, and Pesticide Unit, became Lavery's replacement in Extension. Ann Thompson became associate dean, and Margaret Groseclose was appointed director of family resources, a position she held until the latter part of the 70s. Gene McMurtry, Extension specialist, agricultural economics, was named director of resource development, following Russell.

According to an announcement by Skelton, dean of the Extension Division, in March 1969, DeHart, Heckle, and Van Dresser were the first Extension Division administrators to be titled associate deans.

Early leaders in the non-cooperative program who reported to the Extension dean included Stuart B. Rowe, an engineer who was professor of general Extension. General Extension, at that time, included State Technical Services, off-campus instruction, and coordination with colleges. Roger Smith succeeded Rowe upon his retirement on September 10, 1968. When Smith moved to Virginia Commonwealth University, Robert Pusey was appointed director of state technical services.

The Donaldson Brown Center for Continuing Education was also a part of the Extension Division and a responsibility of the Extension dean. Heckel, state leader of training, became director of the Continuing Education Center when it opened January 2, 1968 (dedicated May 13, 1968). When Heckel resigned in 1971 to become the director of Extension in New Hampshire, the position was filled by W. L. Flowers from North Carolina State University at Raleigh. Flowers later was assigned other responsibilities in the Division and Norris Bell was named director of the center. Roger Comley joined the Center staff in

November 1967 as director of operations and assisted with the opening.

A. R. Slayton of the 4-H staff succeeded Heckle as director of training. The off-campus graduate program received leadership from Ed Simpson, assistant dean of the Extension Division.

This structure remained without modification of any significance until 1978, after Van Dresser had become dean of the Extension Division. In the meantime, some changes had taken place in the flow of funds from Washington, D.C., to the 1890 institutions. This brought a new relationship between the Virginia Tech and Virginia State College staffs. From 1966 until 1972, funds in support of the 1890 program at Petersburg were part of the state budget. During that period, M. T. Carter was 1890 coordinator. Upon his retirement, M. C. Harding, Sr., Extension agent in Lunenburg County, was named coordinator. In 1972, Congress designated funds for 1890 colleges and the title of 1890 Extension coordinator was changed to administrator. Although there were designated federal funds for 1890 programs, all funds were routed through the 1862 institution and were a responsibility of the state director of the Cooperative Extension Service. The 1977 Farm Bill directed the 1890 appropriations directly to the 1890 institutions. This change created a co-equal relationship between the 1890 administrator of Extension and the 1862 director of the Cooperative Extension Service.

In September 1976, Skelton asked to be relieved of his responsibilities as dean of the Extension Division. In March 1977, Van Dresser was appointed dean. The administrative staff at that time included, in addition to the dean, the following associate deans: Thompson, Lester, and Flowers. Also on the administrative staff were J. A. Reynolds, Extension leader serving as administrative assistant; Harding, administrator of 1890 programs; and Simpson, director of off-campus graduate programs. In August 1977, Reynolds was named associate dean, and later Simpson was given the new title of assistant dean of the Extension Division. The administrative assistant position held by Reynolds to this date was filled by Roberta Minish of the Donaldson Brown Center staff.

Under the structure that prevailed between 1966 and 1978, Extension field staff received administrative guidance from one set of leaders and program supervision from another set. With five program emphasis areas (including Technical Resources), Extension agents were receiving program supervision through five different routes. The district agents were in charge of budgets, office space, and all administrative matters including travel, appointments, and non-program-related functions. After careful study and many months of laying plans, Van Dresser put into effect another reorganization that portrayed the "one boss" concept with someone in charge at each level of the organization.

Thompson was named associate dean for field operations and Reynolds was named associate dean for programs. A district chairman, with full responsibility for administration and program functions, was appointed in each of the six districts. A unit chairman was made responsible in each unit of the state for both program and administrative functions. This person was accountable to the district chairman. All program directors were relieved of responsibilities for supervising field staff and designated the policy decision-making body at the administrative level. Programs were coordinated through the district chairmen and all supervision for each unit staff came from the district chairmen, through the unit chairmen.

When the new structure was implemented, Van Dresser's administrative staff included, in addition to the associate deans and assistant deans mentioned previously: Minish, administrative assistant; and program directors Milton B. Wise, agriculture; Kenneth E. Dawson, 4-H; Barbara Fite, family resources (acting, while Ruth Harris was on foreign assignment); O. W. Cundiff, community resource development; and Robert Pusey, technical resources; Bell, director of the Donaldson Brown Center; and Slayton, staff development. Ford, former district agent at Petersburg, was on the administrative staff, working primarily in the area of civil rights. Robert Swain was fiscal officer, and Kennith Martin held the position of director of administrative management. District chairpersons named at this time included: Edith Friend, Southwest; Wayne Keffer, West Central; Clark Jones, East Central; Clinton Turner, Northeast; John Huddleston, Northern; and Charles Perkins, Southeast.

The position of director of agriculture and natural resources was originally established outside the College of Agriculture and held by M. Frank Ellmore until his retirement in 1978. At that time, the position was moved to the College of Agriculture and made a responsibility of the dean of agriculture, with program responsibility to the Extension dean.

In 1966, Newsome, who had succeeded T. B. Patterson at Virginia State College as state leader of Negro work, was named assistant to the dean, a position he occupied until his retirement in 1975.

The evolution of the position holder heading Extension home demonstration work is noteworthy. Agnew, Mary Moore Davis, and Wallace in the early days were known as state agents or state leaders. Wallace was appointed assistant director of Extension in charge of home demonstration work in 1939. The position from then on was an integral part of the administration as some carried a dual title--assistant director in charge of home economics or family resources, and later director of family resources. Thompson, for example, carried the title director of family resources and later, associate dean and director of family

resources. Groseclose was director of family resources, followed by Harris and Fite (acting).

Although the structure of Extension has changed a great deal throughout the years, the function and purpose of the Extension Division of the land-grant university have remained the same: to extend the resources of the total university to the people of the Commonwealth. The total Extension staff has been dedicated to this purpose and strives to maintain the best possible administrative delivery system to accomplish these goals.

AWARDS AND RECOGNITION

A basic belief of Extension is that people respond to recognition for a job well done, and that a job well done deserves to be recognized by one's peers. The very fact that most Extension personnel do an outstanding job means that a large number have been recognized in one way or another. Since it is impossible to include the miscellany of awards that have been earned by all Extension personnel, only selected awards and recognitions appear in this section.

Epsilon Sigma Phi Awards

Epsilon Sigma Phi, the National Honorary Extension Fraternity, organized in 1927, selects one person each year to receive the National Distinguished Service Ruby Award for exceptional service to the people of the nation and world. Virginians who have been recipients of this award are:

1970 - William E. Skelton
1979 - Ann E. Thompson

State Certificates of Recognition awarded to Virginians by Epsilon Sigma Phi have been presented to the following:

1936 - John R. Hutcheson
1947 - Cephas A. Montgomery
1951 - Maude E. Wallace
1955 - Joseph E. Delp
1959 - George G. Herring
1963 - Leander B. Dietrick
1971 - Patrick N. Dehart
1972 - Thelma T. Hewlett
1973 - Ross W. Newsome
1975 - Curtis C. Mast
1976 - Margaret G. Skelton
1977 - Ann W. Frame

In 1978, the State Certificate of Recognition was renamed the State Distinguished Service Award. The following Virginia Extension workers have earned this award:

1978 - J. Andrew Reynolds
Milton C. Harding, Sr.

Ann E. Thompson

1979 - Nancy H. Ascue
George A. Allen, Jr.
Willette T. Merritt

1980 - Roy F. Heltzel
Elizabeth C. Donald
Aubrey R. Slayton

In addition to the foregoing, the national fraternity has also recognized persons by presenting a National Certificate of Recognition for outstanding support of Extension programs. Many of these awardees are not Extension personnel, but occasionally an Extension person has been recognized. The following Virginians have received this award:

1939 - Ella G. Agnew, Extension
1961 - Maude E. Wallace, Extension
1974 - Earl Jones Shiflett, former Extension sociologist and Secretary of Commerce and Resources for Virginia

In 1978, the name of this award was changed to National Friend of Extension. One such award has been presented to a Virginian:

1980 - William C. Wampler, Congressman, 9th District

Virginians who have served as Grand Directors of the National Fraternity of Epsilon Sigma Phi are:

1966-67 - William E. Skelton
1974-75 - Ann E. Thompson

Mildred A. Payne served as National Executive Secretary-Treasurer from January 1, 1975, to December 31, 1980.

In 1962, Virginia's Alpha Gamma Chapter of Epsilon Sigma Phi began to recognize one or more county staffs that had done an outstanding job as a total unit. The Unit Award has been received by the following counties and cities:

1962 - Patrick County
1963 - Fairfax County
1964 - Buckingham County
1965 - Smyth County
1966 - Henrico County
1967 - Nansemond County
1968 - Montgomery County
1969 - Lunenburg County
1974 - City of Virginia Beach
Halifax County
1975 - Amherst County
Buchanan County
1976 - Loudoun County
City of Norfolk
1977 - Appomattox County
Culpeper County

1970 - Arlington County
York County
1971 - Greensville County
Tazewell County
1972 - Campbell County
Franklin County
1973 - Gloucester County
City of Chesapeake
Isle of Wight County
1978 - Augusta County
Russell County
Chesterfield County
1979 - Nelson County
1980 - Buckingham County
Dickenson County

The Alpha Gamma Chapter also makes Individual Awards "for outstanding achievements in Extension programs." This award, begun in 1974, has been presented to the following Extension workers:

1974 - Judy B. Burtner
Joseph L. Chase
Bonnie F. Heimbach
Elizabeth A. Andrews (Payne)
Sadie G. Fleming
Chapman L. Huffman
Betty S. Mifflin

1975 - Freedom B. Goode
Pattie O. Snodgrass
Roy F. Heltzel
Elizabeth C. Donald
E. Wayne Compton
Evangeline C. Swain
John H. Lane, IV
Mildred A. Payne

1976 - Kenneth C. Williamson
H. Jean Robbins
Frances H. Graham
Cary L. Franklin
Betty K. Munsey
Herbert W. Pettway
John David Barrett
James Fred Diem
Janette K. Newhouse

1977 - Jo Anne Barton
Albert S. Beecher
Hilda Dailey
Goston R. Epperson
Willette T. Merritt
Rita Rufty
Joyce Simmons
Aubrey R. Slayton

1978 - George Allen
W. R. Cassell
Ethel L. Grubbs
Ralph LaRue
Cecil M. McBride
Wanda F. Parker
John W. Parrish, III
Harvey Shelton
Allen G. Strecker
Kathleen Wampler

1979 - R. S. Ellis, Retired
Shirley W. Walton
Charlie A. Elliott
Sallie Gochenour
Robert K. Reynolds
Eugene W. Taylor
Betty Jean Moore
Lawrence W. Boitnott
Evans R. Scyphers
Fan G. Panton
John F. Shoulders
Fannie Charlene Coker

1980 - Joe Beard, Retired
Mary Jane Bell
William F. Murphy, Jr.
C. Dean Allen
Mildred A. Brady
Bertha M. Brown
Charles O'Dell
James L. McDonald
Edwin B. Morse
Mary W. Wells
Hattie P. West

Agents' Associations

The three national associations to which Virginia agents belong have awards programs for agents who have made outstanding contributions during their careers. A list of Virginia's national distinguished service awardees follows:

National Association of County Agricultural Agents (NACAA)

1948 - C. L. Hall
John B. Whitehead
Herbert W. Ozlin
J. C. Price
Norman H. Williams
Ernest C. Grigsby
J. Ernest Delp
Thomas O. Scott
Garland H. Clark
Dayton H. Crosby
Joseph C. Stiles

1949 - Richard Shelton Ellis
P. E. Bird
Stanley J. Dawson

1950 - R. A. Farmer
Erastus Fain Striplin
Lewis Banks Wilkins
Oliver Bruce Ross

1951 - A. G. Birdsall
Charles Ellis
Edward Lee Wood
Homer Bryan Eller
I. Fred Stine

1952 - Tillman Miller Hepler
J. Berman Flora
E. A. Davis

1953 - Charles W. Richards
P. H. France
Joseph Edgar Beard

1954 - Daniel Jennings Kelly
Henry B. Powers
Joe Paxton Lyle

1955 - George B. Allison
Volney Barney Perry
J. F. Blair

1956 - E. B. Morse
Guy R. Davis
R. J. Copenhaver

1957 - D. A. Jackson
T. E. Mallory

1958 - G. A. McLearen
T. E. Starnes
H. C. McSwain

1959 - W. H. Lyne
Swanson S. Hylton
J. W. Freeman

1960 - George Pollard
S. D. Woods
D. T. Rogers

1961 - George H. Hall
Fred O. Olinger
Eugene L. Seay, Jr.

1962 - C. B. Lanford
K. C. Peterson

Graften C. Price

1963 - John C. Rogers
Ashton W. Sinclair
C. C. Tucker

1964 - Harold Little
Roy V. Nottingham
James A. Smith

1965 - Hugh M. Jones
Edgar L. Rawls
John C. Estes

1966 - Edward S. Allen
Lewis B. Smith

1967 - Larry Blair
James McDonald
M. L. Dalton
N. P. Ptucha

1968 - Melvin W. Bryant
Bobby L. Leonard
Everette Parson, Jr.
John Gerken, Jr.

1969 - Joe W. Derting
Earl C. Truett
Norvall Boone
Edwin C. Adams

1970 - N. Neel Rich
Lowell M. Gobble
Hiram A. Holmes
Ernest R. Cockrell, Jr.

1971 - C. E. Carson
Lewis Copley
Bobby Flippen
Curtis Mast

1972 - Freedom B. Goode
Herbert Jones
W. W. Lewis
Tom Tabor

1973 - R. L. Coffey
W. O. Holland
John Shoulders

1974 - Paul Cassell
C. L. Hall, Jr.
Bill Patterson
Evans Scyphers

1975 - George Abbott
Francis Lay
L. T. Richardson
Charles Sedivy

1976 - Allen G. Strecker
K. C. Williamson
James Butler

1977 - Delbert O'Meara
Dick Cassell
Frank Clements
W. H. Brown

1978 - Swanson Jennings
Chapman Huffman
Mike Altizer
Herman Macklin

1979 - George Allen
Austin Shepherd
Stevens S. Jones

1980 - George W. Hawkins
Mason W. Hutcheson
Eugene W. Taylor
Milford D. Welch

An achievement award program was established by the NACAA Recognition and Awards Committee to recognize agents with less than ten years of service. One agent from each state may be recognized. Virginia agents who have received these awards are as follows:

1974 - Henry Maxey
1975 - Gary P. Dingus
1976 - Ted Carrol
1977 - Rajandra N. Waghray
1978 - Henry Snodgrass
1979 - John Trimble
1980 - G. Stewart Bunn

Jim Smith served as national president of the NACAA in 1979-80.

National Association of Extension Home Economists (NAEHE)

Virginia agents who have been recipients of the Distinguished Service Award are:

1958 - Bertie Yates
Mary Stowell

1959 - Leona Barlow
Ester LaRose

1960 - Karle Bundy
Louise Tune

1961 - Mary Virginia Fletcher
Elizabeth Donald

1962 - Anna Elcan

1963 - Helen Griffin
Sally Welsel
Mildred Payne

1964 - Ina Glick
Vella Knapp
Maude Weems

1965 - Ethel L. Grubbs
Georgie Wilkerson
Virginia Bailey

1966 - Bertha Brown
Julia Carson

1967 - Ann Cofer
Youtha Turner
Mary Helen Loftin

1968 - Willette Merritt
Marie Turner
Doris Whitmore

1969 - Helen Feagans
Joan Ricketts
Evangeline Swain

1970 - Otelia Harris
Eunice Mottley
Ella Rice

1971 - Jarnice Chapman
Erna Pettibone
Phyllis Hockman

1972 - Helen Edwards
Ann Sanderson
Hattie West
Madge Bush

1973 - Suzanne Perry
Emma Thrasher
Cleopatra Robinson
Mary Wells

1974 - Betty Jean Moore
Edith Friend
Grace Jennings

1975 - Margaret Walsh
Sarah Walden
Esther Hawks

1976 - Catherine Revell
Ocie Mack
Virginia Nance
Ila Williams

1977 - Betty Thornton
Diana Bradshaw
Carolyn Albritton

1978 - Elnora Perry
Fan Panton
Wanda Parker

1979 - Jane Ewing
Jean Robbins
Ethel Jones

1980 - Lelia Mayton
Janette Newhouse
Elise Noel
Mary Stokes

National Association of Extension 4-H Agents (NAE4-HA)

1970 - Larry Blair

1971 - Mason Hutcheson

1972 - Nancy Ascue
Charlie Elliott

1973 - Milton Harding
Jack Tyree
Amanda Thomas

1974 - George Blume
Elizabeth Donald
James Reed

1975 - C. Dean Allen
Elma Carter
N. Neel Rich

1976 - Richard Booker
Jack Sisk
Emma Thrasher

1977 - Betty Munsey
Rita Rufty
Phyllistine Mosley

1978 - Wayne Keffer
Evangeline Swain
Ben Lee

1979 - Fan Panton
Clarence Stith
Cecil McBride

1980 - Johns Bailey
Herbert Pettway
Sarah Walden
Rudolph Powell

Nancy Ascue served as national president of the NAE4-HA in 1975.

Virginia Tech Alumni Award for Extension Excellence

In 1976, the Virginia Tech Alumni Association established an Award for Extension Excellence for the purpose of honoring one Extension professional (or Extension team) "who has reached a level of Extension achievement judged to be the most significant within the university." Recipients of this award follow:

1976 - George A. Allen, Jr.
Professor, Department of Animal Science

1977 - Delwyn A. Dyer
Specialist, Community Resource Development

1978 - Betty S. Mifflin
Specialist, Family Resources

1979 - Benjamin S. Blanchard, Jr.
Director of Engineering Extension and
Professor, Civil Engineering

1980 - Kenneth C. Williamson
Specialist, Animal Science

USDA Superior and Distinguished Service Awards

The USDA annually makes national awards to individuals and teams for superior and distinguished service. The individual award is given to a person who has made meritorious achievements in agriculture, home economics, 4-H clubs, or public service or who has exhibited outstanding skill in public administration. The unit award is given to three or more individuals who shared in the accomplishments. Recipients of the USDA Superior Service Individual Awards from Virginia have been:

1957 - Maude E. Wallace
Assistant Director of Extension

1962 - W. H. Daughtrey
Director of Extension

1964 - Patrick Henry DeHart
Associate Director and Associate Dean of Extension

1972 - William E. Skelton
Director and Dean of Extension

1974 - Ross W. Newsome
Assistant Dean of Extension

1975 - Delwyn A. Dyer
Extension Specialist, Community Resource Development

Gene McMurtry
Director, Community Resource Development

USDA Superior Service Unit Awards have been earned by the following teams in Virginia:

1959 - Madison County Extension Staff -- Virginia R. Crigler, G. Allan McLearen, W. Ralph Owings, and

Sara U. Gibbs. Citation: "For notable achievements in developing local leadership, in program planning to meet recognized needs, and in cooperating with civic groups, businessmen and other organizations for the benefit of Madison County."

1962 - Virginia 4-H Staff -- William E. Skelton, State 4-H Leader; and Associate 4-H Leaders J. M. Tyree, Shirley Patton Richards, Evelyn Barker Starling, George E. Russell, W. A. Turner, J. Andrew Reynolds. Citation: "For superior organizational ability, leadership, and knowledge in developing an outstanding 4-H program, thereby rendering notable service to the people of Virginia and the nation."

The USDA Distinguished Unit Award has been earned by only one unit in Virginia:

1978 - Southwest District Staff -- P. B. Douglas, District Agent; and Program Leaders Mary E. Harris, Richard L. Hill, N. Neel Rich, and John B. Shryock. Citation: "For quick and effective staff leadership in bringing assistance to the victims of the flood in Southwest Virginia. Through their efforts and quick response to the emergency, engineers and specialists from Virginia Tech were mobilized to help citizens in the area."

A USDA Administrative Award was presented in 1967 to William E. Skelton. The citation read: "For superior administrative ability in organizing the Extension Division and cost cutting so as to be more cost effective."

Virginia Tech Buildings

On the campus of Virginia Tech stand numerous buildings named for former Extension employees who have made distinguished contributions to the development of Virginia's Extension programs and the university. Two of the oldest of these buildings are Price Hall, named for Harvey L. Price, dean of agriculture, and Sandy Hall, named for T. O. Sandy, first farm demonstration agent in Virginia. Saunders Hall was named for William D. Saunders, Extension cheese specialist.

Hutcheson Hall, still a nucleus for agricultural programs on the campus, honors Thomas B. Hutcheson, Sr., professor of agronomy and dean of agriculture, and John R. Hutcheson, director of Extension and later ninth president of VPI.

Agnew Hall was named in honor of Ella G. Agnew, first home demonstration agent for Virginia. Agnew Hall was built to house the Home Economics Department, which was later moved. Wallace Hall, which currently houses the College of Home Economics, was named for Maude E. Wallace, assistant director of Extension for home economics.

Eggleston Hall, a dormitory, honors Joseph D. Eggleston, president of VPI and director of Extension work from 1914 to 1916. Dietrick Hall, a dining facility for students, was named in honor of Leander B. Dietrick, dean emeritus of agriculture. Cassell Coliseum honors Stuart K. Cassell, Extension specialist, agricultural economics, and later vice president of Virginia Tech.

Highway Markers

Virginia highway markers honor two Extension pioneers: T. O. Sandy and Ella G. Agnew. The marker for Sandy is located in Nottoway County near where Sandy lived. It reads (in part): "Under his able leadership, programs in farm and home demonstration work, boys' corn clubs and girls' canning clubs were developed ..." Also located in Nottoway County is the marker honoring Agnew, "first woman Extension agent for Virginia and U. S. Department of Agriculture..."

At this writing, a highway marker has been approved to honor J. B. Pierce, first Negro farm demonstrator. The marker will be placed in Gloucester County where he worked from 1906 to 1919.

VPI Certificates of Merit

Beginning in 1923, the VPI Board of Visitors awarded certificates of merit to outstanding individuals in Virginia for distinguished service to agriculture. These certificates were awarded at the Institute of Rural Affairs, an activity which was discontinued in 1965. Agricultural Certificates of Merit Awards have been presented to the following persons:

1923 - Dr. W. B. Alwood
Mr. J. F. Jackson

1924 - Mr. Albert J. McMath
Dr. Henry W. McLaughlin

1925 - No certificates awarded

1926 - Miss Ella G. Agnew
Major J. T. Cowan
Mr. J. G. Eberwine
Mr. Joseph A. Turner

1927 - Mrs. F. C. Beverley
Dr. S. S. Guerrant

1928 - Hon. Westmoreland Davis
Hon. Henry C. Stuart

1929 - Hon. J. B. Watkins
Mr. Frank S. Walker

1930 - Mr. H. L. Bonham
Prof. D. O. Hourse

1931 - Mr. C. Purcell McCue
Mr. G. F. Holsinger

1932 - Mrs. C. Nelson Beck
Judge F. S. Tavenner

1933 - Mr. Edgar S. Nininger
Mr. T. Bedford Glascock

1934 - Mr. T. B. Byrd
Mrs. Sally J. Atkinson

1935 - Mr. W. H. Densmore
Mr. J. Stuart Agnew

1936 - Mr. J. Hurt Whitehead
Mr. Lyman Carrier

1937 - Mrs. George T. Winn
Mr. Samuel H. Saunders

1938 - Mr. C. W. Wampler
Mr. W. G. Wysor

1939 - No certificates awarded

1940 - Mr. John H. East
Mr. Mark Turner
Mr. Phil H. Golf
Mr. W. T. Parker

1941 - Mrs. Guy Roop
Mr. Justus H. Cline

1942 - No certificates awarded

1943 - No certificates awarded

1944 - No certificates awarded

1945 - Miss Lizzie A. Jenkins

1946 - No certificates awarded

1947 - No certificates awarded

1948 - No certificates awarded

1949 - Mrs. Ben Wailes
Mr. E. Turpin Willis

1950 - Mr. J. H. Quesenberry
Mr. W. L. Kirby

1951 - Mrs. E. Floyd Yates
Mr. C. T. Rice

1952 - Mr. Thomas B. Hall
Dr. Paul D. Sanders

1953 - Mr. Robert S. Graves
Mr. Waverly S. Green

1954 - Mr. H. Guy Blalock
Mr. T. T. Curtis

1955 - Mrs. Will S. Dickinson
Mr. Chester C. Housh

1956 - Elizabeth T. Walton
Mr. M. A. Hubbard

1957 - Mr. S. F. McClure, Jr.
Mr. E. B. Bonham

1958 - Mr. H. H. Gordon
Mr. Paul Mellon

1959 - Mr. A. G. Willis
Mr. Frederic Heutte

1960 - Mr. Ralph B. Douglass
Mr. Harold W. Craun

1961 - Mrs. A. S. Nicholson
Mr. Arthur Neuhoff

1962 - Mrs. Mavis M. Gibbs
Mr. Giles H. Miller

1963 - Mrs. Max A. Murray
Mr. J. Kenneth Robinson

1964 - No certificates awarded

1965 - Mr. Douglas Terpstra
Mrs. Olive G. S. Myers

Negro State Agricultural Advisory Board

An awards program was initiated in 1953 to recognize Outstanding Farm Families. One such award was made annually until 1964. These families were recognized for "making considerable progress in areas of soil and water conservation, crop, livestock and poultry production, sound business methods for the farm and home, and leadership." Recipient families were:

1953 - The Harvey M. Thomas Family, Caroline County

1954 - The Theodore B. McClenny Family, Southampton County

1955 - The Arthur R. Glover Family, Isle of Wight County

1956 - The John H. Maclin, Sr., Family, Brunswick County

1957 - The Frank E. Owens Family, Nansemond County

1958 - The James Tucker Family, Greensville County

1959 - The A. D. Curley Family, Sussex County

1960 - The McKenzie Talley Family, Mecklenburg County

1961 - The P.S. Brown Family, New Kent County

1962 - The C. R. Vaughan Family, Brunswick County

1964 - The Jacob Ashton Family, Westmoreland County

Master Farm Families

In 1925, a Master Farmer movement was begun in the west by The Prairie Farmer magazine. The Progressive Farmer magazine began a selection of Master Farmers in Texas that same year, and this movement spread throughout the United States. This award was made to "recognize among farmers the same ability, initiative, business sense and enterprise that are so widely recognized in other fields of activity." The Extension Service cooperated with The Progressive Farmer in making these selections.

Virginia families who have been recognized as Master Farm Families are:

1929

H. L. Bonham, Smyth
H. E. Boswell, Nottoway
William Buchanan, Washington
T. L. Calhoun, Grayson
Henry Good, Halifax
Ben Middleton, Fairfax

G. B. Morehead, Wythe
O. N. Nuckols, Henrico
F. M. Powell, Southampton
C. B. Robertson, Mecklenburg
S. H. Saunders, Bedford
C. H. Seeley, Sussex
E. M. Slauson, James City
W. T. Smith, Loudoun
R. D. Stewart, Orange
W. L. Turner, Rappahannock

1938

Howard S. Zigler, Rockingham
J. H. Wheeler, Lee
J. O. Davidson, Appomattox
J. Ray Barlow, Isle of Wight

1946

B. B. Jessee, Russell
L. J. Crowgey, Wythe
G. Dayton Hodges, Augusta
D. C. Craun, Rockingham
E. T. Willis, Culpeper
R. H. Nelson, III, Henrico
W. A. Beale, Sussex
W. J. Darden, Isle of Weight
Otho H. Wilkerson, Accomac
P. G. Cocke, Pittsylvania

1949

Riley E. Brubaker, Franklin
Claude T. DeBusk, Smyth
Carlton N. Elam, Powhatan
E. A. Jordon, Rockingham
J. Harden Massie, Amherst
Adolph Mistr, Henrico
Alfred F. Mohler, Augusta
J. Everett Sanders, Richmond
Frank P. Wickline, Botetourt

1952

Charles E. Allison, Washington
S. F. McClure, Augusta
Charles Moyer, Amelia
Edward C. Norman, Loudoun
W. N. Stoneman, Henrico
John L. Turner, Rockingham

1955

Ernest W. Adams, II, Frederick
Jack Davis, Tazewell
Irvin Foltz, Page
John W. Nelson, Henrico
Earl W. Spitzer, Augusta
Owen Thomas, Jr., Loudoun
E. Neal Umbarger, Smyth
W. Watkins Wesson, Brunswick

1958

Harold Craun, Roanoke
Wm. Henry Ford, Brunswick
C. E. Johnson, Jr. Rappahannock
A. L. Leffel, Tazewell
John F. Townsend, King William
Frank S. Walker, Madison

1962

T. T. Curtis, Orange
Ralph Lee Frost, Princess Anne
James Latane, Westmoreland
S. D. Scott, Smyth

1966

William T. Holland, Accomack
Grover Craig Boothe, Pulaski
Oscar Taliaferros, Essex
Russell Inskeeps, Culpeper
G. Weston Wall, Montgomery

Progressive Farmer Men of the Year

Since 1937, The Progressive Farmer magazine has selected a "Man of the Year" to receive an award for serving his state's agriculture and its people in some special way. The Virginia Man of the Year Award has been presented to the following persons:

1937 - Julian A. Burruss
1938 - Dr. T. B. Hutcheson
1939 - Dr. John R. Hutcheson
1940 - W. P. McGuire
1941 - Walter S. Newman
1942 - L. M. Walker, Jr.
1943 - J. H. Quisenberry
1944 - G. F. Holsinger
1945 - Dr. Lyman Carrier
1946 - J. W. Flannagan
1947 - Henry C. Groseclose
1948 - L. B. Dietrick
1949 - Dr. H. N. Young
1950 - Charles W. Holdaway
1951 - Dr. W. E. Garnett
1952 - Thomas V. Downing
1953 - Parke C. Brinkley
1954 - Charles E. Seitz
1955 - H. L. Dutton
1956 - George W. Dean
1958 - W. H. Daughtrey
1959 - Howard W. Gordon
1960 - George W. Litton
1961 - Wilson B. Bell
1962 - B. M. Priode
1963 - Richard D. Chummey
1964 - J. Kenneth Robinson
1965 - Samuel Hollis Shoma
1966 - William Vincent Rawling
1967 - Roy B. Davis, Jr.
1968 - Maurice B. Rowe
1969 - Paul Mellon
1975 - James R. Nichols
1977 - Robert B. Delano
1979 - Galen B. Brubaker
1980 - Milton B. Wise

In addition to the individual state award, a Southwide Man of the Year was also selected. Virginians who have received this honor are:

1966 - Roy B. Davis
1976 - Harry W. Young
1978 - Joseph P. Fontenot

Miscellaneous Awards

It seems appropriate to mention a few other special recognitions given to some of the early pioneers in Virginia's Extension work.

Ella G. Agnew received an honorary Degree of Doctor of Laws at William and Mary in June 1952. A scholarship to aid rural girls to train in the field of nursing was established in her name by the Virginia Extension Homemakers Council.

F. Southall Farrar was honored by having a 4-H Camp at Virginia Beach named for him. This camp was closed in 1974.

Hallie L. Hughes, the first 4-H Club agent for girls, had a scholarship established in her honor in 1926 by the Virginia Extension Homemakers Council. The scholarship is given to a

student who plans to major in home economics and work toward the position of Extension agent.

Gordon Elcan, state 4-H leader, had a scholarship named in his honor by the 4-H All Stars. This $200 award is made to a senior or graduate student who is preparing to work with youths.

Maude E. Wallace was also honored by having a scholarship named for her by the Virginia Extension Homemakers Council. This scholarship is restricted to students enrolled in home economics at Virginia Tech.

Bessie Dunn Miller, for many years home demonstration agent in Albemarle County, had a memorial established in her honor in the form of a clinic located at the University of Virginia Hospital. The purpose of this clinic, the first of its kind, is to detect early signs of cancer.

Elephare Hood, former home demonstration agent in Orange County, has a home economics scholarship at Virginia Tech named in her honor.

Ruth Burruss Huff, former home demonstration agent in Albemarle County, has a home economics scholarship at Virginia Tech named in her honor.

Mary Settle has a scholarship in the College of Home Economics named in her honor.

At the West Central 4-H Center, there are lodges named for Berman Flora and Margaret Svoboda (Flora-Svoboda Lodge) and for William E. Skelton (Skelton Lodge). These were named in recognition of their work to build the Center.

SECTION IV

Extension Pillars

EXTENSION INFORMATION

Virginia Extension has been concerned with disseminating information to help the citizens of Virginia improve the quality of their lives almost since the Cooperative Extension Service came into being. Extension Information efforts formally started in 1916, only two years after the Smith-Lever Act created the Cooperative Extension Service and Extension activities were transferred from Burkeville to the Blacksburg campus.

Horticulture Hall, a building once located in front of Williams Hall, served as Extension headquarters when the operation was moved in 1916 to the VPI campus. Sandy Hall, named for Thomas O. Sandy who was the state's first agricultural agent named under the Act, was completed in 1924 and became its headquarters. The publications supply room remained in that building until the 50s. Into the 40s, the building had only one telephone on each floor, so Extension personnel had to plan ahead to make calls from that building.

When E. R. "Flopsy" Price was appointed the first Extension editor in 1916, it marked the beginning of nearly half a century when one of two men would direct the Extension Information efforts for the state. Price and Rudolph D. Michael laid the foundation on which today's information structure at the university is built.

Price, who served as head of what then was called the Agricultural Information Office, was appointed head of the Extension information operation in early 1916 and continued in that position until 1943. Michael, who came into Extension in 1933 as Extension associate editor, Price's first assistant, assumed leadership duties in 1943 and held the position until he retired in 1965.

Price founded and was editor of the Extension Division News, served as a professor of agricultural journalism, and was a local correspondent for many state newspapers. For more than two decades, he, more than any other individual, was responsible for keeping the citizens of the Old Dominion informed about agricultural and home economics happenings at the land-grant university.

The Extension Division News, which Price founded as a monthly newspaper in 1918, was published until December 1982. It remained a monthly newspaper during those 64 years but the makeup and layout were changed periodically to keep up with the times. The name also changed: The publication was called Extension Service News, Extension News, and finally, Virginia Extension News. In March 1983, it became a quarterly, entitled Virginia Extension.

Price also founded and edited the 4-H newsletter in 1918. It first was called the Agricultural Club Letter, but in 1929 the name was changed to Head, Heart, Hands and Health (the Virginia 4-H Club Letter) and was issued monthly.

Until the appearance of Michael on the scene, Price handled all duties himself. Michael recalls that gathering the information for the two monthly publications left Price little time to send out news releases to the newspapers. Price therefore concentrated upon getting as much information as possible into the monthly Extension newspaper. Not only were the activities of specialists of Tech reported, but the activities of the black Extension personnel and Home Demonstration Clubs also were relayed to state audiences. These latter activities were directed from the sister land-grant institution, Virginia State College.

Price also achieved a national reputation within his profession. An article about him by Reuben Brigham, national director of Extension work, appeared in "The Ace", the publication of the American Association of Agricultural College Editors, which related several anecdotes about Price and his work. Brigham closed the article by noting that Price's life was an inspiration and asked, "When comes again such a man or such an agricultural college editor?"

Michael, who started working on the campus shortly after receiving his agricultural engineering degree from VPI in 1926, originally joined the staff to establish a radio unit for President Julian R. Burruss. The Virginia Tech executive wanted to get the college "on the air". Originally working for the Agricultural Adjustment Administration, Michael did not transfer to Extension until 1933, but he had worked closely with Price and other Extension personnel before the official transfer.

The radio operation officially began January 6, 1930. Michael had to hurry back from his honeymoon to put the first VPI radio program on the air. The first broadcast from the campus was by telephone line to WDBJ radio in Roanoke. At the time, it was the only radio station between Roanoke and Bristol.

It was a distinguished group that gathered in the fifth floor tower of the War Memorial Gymnasium for the first broadcast. Participants, in addition to Michael, included President Burruss, Extension Director John R. Hutcheson, a student orchestra, and a local minister, the Rev. G. C. Zeigler.

The program was an hour in length, Michael recalls, "because we had to rent the telephone lines an hour at a time." It later was reduced to 30 minutes a day, six days a week, and then became three one-hour programs weekly as the Depression caused cutbacks in expenditures. The Farm and Home Show remained the flagship

broadcast for Virginia Tech until the 70s when radio demands changed and most stations wanted two- or three-minute programs.

The original program had a simple format of 10-minute Extension Information material interspersed with musical interludes. The music featured university organizations and local faculty and community talent. Michael kept a stockpile of magazine material available in the event a person did not show for a scheduled broadcast or if an interview did not last the required length of time. "I would just read the information available to fill the time," he said.

He remembers one program in 1932 when, to demonstrate the sensitivity of a new condenser-type microphone, "I held it against my chest to let the audience hear my heartbeat. On another program, the late Dean of Engineering, John W. Whittemore and I started the show by smashing dishes. The program, entitled 'Breaking Dishes to Save Dishes', was about testing chinaware."

The radio unit, which today is part of Educational Communications, remained on the fifth floor of the gym until 1969 when it was moved to the second floor of the Media Building.

Radio progressed rapidly from the time when 78-rpm records were available to the development of electronic recordings so all programs could be on tape. The Farm and Home Show, which originally was heard on one station only, grew to the point where more than 40 stations around the state carried the information.

One of the first persons added to the radio staff was Roberta Clark whom Michael described as having one of the most important qualifications--a good voice. Others who worked on the initial programming in the first 15 years were Jane Bryne Thayer, Graham Coulter, and Gene S. Moody.

The period immediately following World War II was hectic. As in all periods of change, there was a reorganization. Prior to 1946, the editorial aspects of the Agricultural Extension Service were handled by Price and Michael. Agricultural Experiment Station bulletins, published since 1888, were handled by the station director. The Agricultural Information Office was established in 1946 to administer the production and editing of bulletins and information news releases for both organizations. The office also was responsible for disseminating information through radio and television.

By 1948, the press of many duties in the new organization forced Michael to relinquish much of the radio work he had pioneered and to add another assistant. Ted Hyman worked in the position for about a year and then was succeeded by Robert Rees. Rees stayed with the college for a number of years and worked

with Michael on the development of television and motion picture activities.

In 1949, William P. Bradley was hired to form and head a visual aids unit, which included photography. A photography lab, with the help of the late Esther Wickham who had been working at a local studio, was put into place. The unit was concerned with providing support to Extension publications, and also with supplying pictures for news stories that were being sent to newspapers across the state. Eventually, the photo unit and the visual aids or art unit became separate units. This also was the period during which Extension began sending a group of news stories weekly to all weekly and daily newspapers in the state.

The 40s also provided some firsts in Extension broadcasting efforts across the state. The Roanoke County unit began a daily 20-minute program in December 1946 on WSLS radio in Roanoke. Each afternoon, Extension agents John Hill, Margaret Svoboda, and O. A. Motley called the station from their Salem office and an engineer put their remarks on record. The program would air the next morning at 6:40 a.m. This was the first reported instance of agents transcribing their programs. In Norfolk County, agents L. B. Wilkins and Mary Walker broadcast 60 minutes of agricultural and home information each weekday. Both programs reportedly did well in the ratings and had large followings.

Virginia Tech Extension clothing specialist Iva Byrd Johnson is given credit for being the first Virginia Extension representative to appear on television. On May 3, 1949, she appeared on the "Modern Woman" program on WMAL-TV in Washington to demonstrate new self-help overalls.

As radio stations began appearing across the state, Extension representatives quickly began using the medium to reach their audiences. The stations soon became aware of the information resource that Extension represented.

The 50s saw Extension Information continue to grow. Its capabilities took a giant leap forward when, thanks to a grant from the Mellon Foundation, equipment to make motion pictures was added. One of the first films was "How To Grow Tomatoes", a 10-minute documentary.

In the 50s, 43.5 manhours and $162.50 were required to produce one minute of film. It is estimated that the number of manhours remains approximately the same, but the cost per minute has risen to $500. Gerald N. Scheeler, motion picture supervisor, said the new equipment and film techniques have not affected the time it takes to produce a quality motion picture. The cost of the manpower was not counted in either cost estimate.

Eventually, the motion picture offerings were tailored for television. Not only was it possible to make information programs for audiences around the state, but also it was found that if the film would fit into a 15 or 30-minute time slot, television stations across Virginia would use it. This greatly expanded the audiences of the filmed productions.

In 1966, the university formed the Division of Information Services and pulled all information efforts on campus under one umbrella. William A. Hamilton succeeded the retired Michael as head of the Extension effort within that organization. Most Extension communication operations were placed within units serving the total university; and Extension, research, and teaching information efforts were performed by many individuals within the organization.

In the early 70s, the university produced its first monthly television program "Mountains and Mortarboards". The 30-minute magazine-type program was produced monthly and finally was discontinued because of high production costs. The program was put together by Kenneth H. Haines, who headed the unit at the time.

Reorganization in 1978 saw the formation of two large units, University Public Affairs, the public relations arm; and Educational Communications, a service unit. Educational Communications is composed of Extension Information, photography, publications, the radio-television-film unit, and graphic design. Warren G. Mitchell headed the Extension Information effort at this time.

The list of those who have served Extension Information since its beginning is long. Some stayed but a brief time, while others gave many years of service. The following is a list of persons not previously mentioned who contributed to the Extension efforts:

Tony Atwater (radio-tv), Connie J. Blackwood (radio-tv), James L. Bradley (graphics), Beverly Brinlee (publications), Joseph J. Bryant (information), William C. Burleson (information), Sherman A. Cable (tv-motion picture), Hugh E. Cameron (publications), James N. Cranor (publications), Ronald J. Dahlgren (radio-tv), Maynard Deeken (publications), Damon F. Flanary (radio-tv), D. D. Galyean (photographer), E. J. Gardner (radio-tv), Frank L. Gilmore (information), Carl W. Goodman (information), Diane T. Hand (information).

Also, Keith B. Hawkins (tv-film), James Jenkins (radio-tv), Julio J. Jimenez (publications), Mary Ann H. Johnson (information), Robert F. Luce (tv-film), John F. Merrifield (radio-tv), Anne S. Milhouse (publications), Thomas G. Moore (radio-tv), L. W. O'Neil (graphics), Susie J. Richburg

(information), Virginia L. Shriver (information), Alice M. Starcke (information), Stuart H. Sutherland (tv-film), Christine M. Sykes (radio-tv), Frank H. Titlow, Jr. (information), Caroline Pace Chermside (graphics), Hope M. B. Vandenburg (graphics), Sherrie R. Whaley (information), and William M. Vogt (publications).

Those who worked in Extension Information over the years kept busy publicizing others and not themselves. Some of those named in this section were not truly Extension employees, but they made significant contributions to the Extension effort. There are others who also made contributions, but the limitation of space, memory, and adequate records have precluded their being named.

FACULTY AND STAFF DEVELOPMENT

Faculty and staff development deals with the professional improvement of all Extension employees in Virginia (faculty members, district chairmen, agents, technicians, and secretaries).

Recognition of the need for continuing professional improvement of Extension personnel dates back many years. Among the early advocates of various professional improvement opportunities for Extension employees were individuals such as L. B. Dietrick, dean of the College of Agriculture, and W. H. Daughtrey, associate director of Extension. In the early 50s, for example, these two gentlemen stressed the importance of Extension employees continuing to update their knowledge and skills, not only in technical agriculture and home economics, but also in Extension educational methods. No Extension employee gave primary attention to faculty and staff development. Dietrick and Daughtrey did expect each Extension specialist, however, to help Extension agents keep up to date in specific subject-matter areas. Hallie Hughes, during her many years of dedicated service as a state 4-H staff member, taught an undergraduate course in Extension methods and later a course in Extension program development. James Duncan, a specialist in programs for young men and women, also devoted part of this time to teaching credit courses to undergraduates at Virginia Tech who were planning to become Extension employees.

In 1957, Maynard Heckel, now director of Extension in New Hampshire, was employed as an Extension training specialist to give primary leadership in coordinating continuing education programs for Extension personnel. During a ten-year period (1957-67), he initiated and planned numerous orientation and in-service education programs. Also, he developed a master's degree program in Extension education that first became available in

1960. Paul J. Moore was employed as an additional training specialist in the mid-60s. He assumed leadership for the Extension education master's degree program in 1967. Today the basic content of that degree program is included in the adult and continuing education master's degree curriculum, College of Education, Virginia Tech.

When W. E. Skelton was named Virginia's Extension director in 1962, he emphasized that each employee must accept primary responsibility for his own continuing professional improvement. Having served previously as Extension agent, state 4-H agent, and as assistant director, however, he also recognized that administration must devote additional resources to help employees update their competencies.

W. R. Van Dresser, who became director in 1977, also stressed the importance of continuing professional development of all Extension faculty and staff. During his administration, the number of agents completing advanced degrees increased markedly.

A. R. Slayton was appointed state leader, training, in 1967 and director, staff development, in 1969. Barbara A. Fite was employed as Extension specialist, staff development, in 1974. Following Fite's promotion to interim director, family resources, in 1979, C. Stephen Scheneman was appointed to replace her.

Today the faculty and staff development function of the Extension Division encompasses pre-service education, orientation education, in-service education, and graduate education Overall leadership for coordinating the planning, implementation, and evaluation of these four types of professional improvement opportunities is provided by A. R. Slayton. Extension program directors, department heads, project leaders, specialists, and district chairmen, however, share the important responsibility of helping plan and conduct appropriate learning experiences for Extension faculty and staff members.

Many citizens who participate in Extension's programs have bachelor's and master's degrees. They expect that Extension employees be equally well qualified educationally. For example, many farmers in northern Virginia counties such as Culpeper and Fauquier are highly educated and some hold advanced degrees in technical agriculture. When these people ask Extension for help, they expect that Extension's employees will have the latest available research-based information. If Extension does not have this type of information, the farmers turn elsewhere for educational assistance.

To help its staff employees develop and maintain competencies required to fulfill their important responsibilities, Extension provides a variety of orientation, in-service, and graduate education learning experiences. New

secretaries, for example, are brought to Virginia Tech for an orientation education workshop, usually within their first few months of employment. One of these orientation sessions is conducted at the university each fall. All Extension field staff secretaries are brought back to the campus periodically for a refresher in-service education workshop.

All of Virginia's six Extension districts now have Extension secretarial professional improvement associations. A similar association was organized on the Virginia Tech campus for resident Extension employees. The purpose of these associations is to promote and provide a variety of professional improvement opportunities for clerical and stenographic personnel.

Appropriate orientation education learning experiences also are provided all new Extension faculty members and agents. Basic guidelines and procedures for providing these opportunities are developed by the staff development unit team. The responsibility of planning and conducting these opportunities, however, is shared by department heads, project leaders, program directors, program leaders, district agents, and selected Extension agents.

Extension agents are allotted a maximum of 15 days annually and partial travel expenses to participate in selected in-service education workshops. With counseling assistance from unit chairmen and district chairmen, each agent selects specific learning opportunities from an in-service education catalog that contains more than 175 non-credit workshops and credit courses. These workshops/courses are developed, implemented, and evaluated by Extension specialists, program leaders, directors, and other resource persons under the overall leadership of the staff development unit team.

Extension administration also provides faculty members and agents opportunities to further their professional improvement through graduate education. Advanced degrees are becoming necessary not only for faculty members' tenure and promotion, but also for agents who seek advancement in the organization. If approved by the immediate supervisor, a full-time agent or faculty member is permitted to take one three-credit graduate course during normal working hours each quarter of the academic school year. A limited number (usually not more than 15) of faculty and agents (usually not more than 15) are granted educational leave with one-half salary to participate in full-time graduate study programs each year. Individuals who are approved for this type of study activity must sign a memorandum of agreement with the university, which is similar to a promissory note at a bank. The employee's agreement is that after completion of the advanced degree program, he or she will return to work with the university for twice the length of his absence, or he or she will pay back the total principal received during the period of absence, plus three percent interest.

Extension faculty members and agents also have the option of requesting educational leave without pay to participate in graduate study programs.

The tremendous variety of continuing professional improvement opportunities available to Extension employees is almost unlimited. Each employee, for example, has the opportunity to participate in self-study activities, in professional improvement association activities, and in special faculty and staff development functions such as the annual four-day Extension conference held at Virginia Tech. While the major leadership responsibility in coordinating the planning, implementation, and evaluation of all of these activities is assigned to the staff development unit team, the success of each of these activities is dependent upon the dedicated contributions of all Extension deans, directors, department heads, project leaders, and district chairmen.

SECTION V

Vignettes

CEC Promotion

In a letter written to Mrs. Will S. Dickinson in May 1953, Maude Wallace drew up a speaking itinerary for promotion of the continuing education center. A part of the letter follows:

> This morning I tried to work out a schedule of meetings and avoid conflicts especially with the important people, such as you and Dr. Hutcheson. How does this schedule sound to you?
>
> Tuesday, June 9, Districts 5 and 6 meet in Marion at Hotel Lincoln or in Wytheville at George Wythe Hotel. I have not had a chance to discuss this with Miss Vaughan but she will be in tomorrow morning. At this meeting we would count on Dr. Hutcheson, Miss Cameron, Mrs. Arnett, Mrs. Clifton, and Miss Vaughan being present.
>
> Wednesday, June 10, Districts 3 and 4 meet in Lynchburg at the Virginian Hotel. At this meeting we would count on Dr. Hutcheson, Mrs. White, Mrs. Carr, and Miss Blake being present. I have not been able to contact Miss Blake regarding this matter.
>
> Thursday, June 11, Districts 7 and 10 meet in Charlottesville at the Monticello Dairy. Those to attend this meeting would be Dr. Hutcheson, Mrs. Carr, and Miss Minnix.
>
> Tuesday, June 16, Districts 8 and 9 meet in Warrenton in the Home Demonstration Agent's office. This is fairly small, but I think it would do and we have no home agent there at this time to arrange for another meeting place. For that meeting we would count on you, Dr. Hutcheson, and Miss Minnix being present.
>
> Wednesday, June 17, Districts 11 and 12 meet in Richmond probably at Richmond Hotel. For that meeting we would count on Dr. Hutcheson, Mrs. Myers, and Mrs. Yates being present (Miss Slocum also).
>
> Thursday, June 18, Districts 1 and 2 meet in Petersburg at the Petersburg Hotel. We would count on Dr. Hutcheson, Mrs. Yates, and Miss Wills attending this meeting. If you can attend it would be fine.
>
> Perhaps Mrs. Walton might be asked to attend the Charlottesville meeting. What do you think?

Prisoners of WWII as Agricultural Laborers

E. W. "Kit" Carson, district agent, southside Virginia, supervised the placement of prisoners of war (POWs) as agricultural laborers in the Franklin County area. The POW camp at Sandy Level, Virginia, had over 200 prisoners. A few of these were assigned to a fertilizer plant in Danville. The rest, approximately 200, were placed on farms to help alleviate the labor shortage caused by the war. They picked apples, harvested crops and timber (primarily pulp wood), and so on. Troy Brown, working under Carson, handled the POW work placement program. It was his responsibility to find out on which farms these prisoners were needed, how many should go to each one, and then see that they were transported there. The POWs were transported each day-they could not leave Sandy Level before dawn and had to be returned before nightfall. The program was called "dawn-to-dusk".

A number of interesting things happened while Carson supervised the POWs. Once, prisoners refused to continue working in an orchard because they had misinterpreted a local newspaper treatment about the success of American troops in Europe. They resented the way the story was pictured and written; but with the help of a German sergeant who explained the news item to them, Carson was able to convince the soldiers to return to work within a couple of hours. Carson said, "Germans are no different from anybody else. If they find that they are treated better at one place than another, then that place is where they like to be." For example, and orchardist with a rather large operation in the Roanoke-Botetourt area always treated POWs who came to his place with refreshments at mid-morning and again at mid-afternoon. Such kind treatment created near trauma each time a truck going to this particular man's orchard came to the war camp. Each soldier wanted to ride on it.

A fellow from Washington and I (Earl Swink) were two specialists talking one night at a Mecklenburg Cooperative meeting. It was summertime and hot. We spoke to a large crowd. The fellow from D.C. got so excited as he talked that foam nearly ran out of his mouth. He started talking about safety aspects of electric service, about using proper fusing, proper circuit breakers, and so on. He was building up to a crescendo in his talk as he said, "Now, we all don't want our houses to burn down, do we?" And from the back seats of the meeting room came a chorus of "Amen, Amen, Brother!". Afterward I told my friend from D.C. that he missed his calling. All he needed was a tent and a Bible and he could have been a traveling evangelist the way he was putting that thing on.

I (Catherine Peery) remember going during WWII to a home for a demonstration meeting near Goshen in Rockbridge County. I had never been there before, so all the women I was going to meet would be new to me. I dressed up in my best clothes--high heels and all--since I wanted to impress the women on my first visit. I traveled with a friend and we took a picnic lunch along with us. When we got to Goshen Pass, I suggested to her, "Let's go over to one of those large rocks in the creek there and eat our lunch."

So we ate our lunch on one of the large rocks and, when we finished, we stood up to go. We had given ourselves ten minutes to get from the rock where we ate to the demonstration meeting. But as I started back to the bank, I slipped and fell into the creek up to my armpits! Since I didn't have time to go back home to change clothes, I went to the meeting dripping wet, knocked on the lady's door, and introduced myself: "Hello, I'm the new demonstration agent. I have fallen in the creek." "Oh my dear," she exclaimed. "Come in! I'll give you one of my dresses." She gave me a chartreuse chiffon dress to wear, the only one big enough to fit me. And she hung my wet clothes up near the old wood stove to dry.

When all the women arrived--15 or 20 of them--they of course asked, "Where is the new agent? We want to see what she looks like." "She's over there in the corner with the chartreuse dress on," replied the hostess.

Well, it turned out to be fun getting to know the women like this. I never forgot that dear woman who was the hostess that day. She was so lovely. We would often laugh after that about my coming to the meeting dripping wet.

Mrs. Mary Moore Davis liked to play "set back". She lived at one of the local boarding hotels, as did many of the young, single male specialists. They got her into a game one night and decided to gang up on her and make her play all night. As dawn was breaking after the all-night card game, she said to the boys, mostly young specialists, "What time tomorrow night?" They were without words. They had sleep in mind for the next night! She could play "their" game by their rules.

In her own history of the first ten years of home demonstration work in Virginia, Ella Agnew tells about her first experience with a board of supervisors. She asked the Halifax

County board for a very small sum to help carry on the girls' tomato and canning work for 1912. "A small sum," Agnew quips, "to risk on the daughters of the county."

> As I entered the room that morning and saw 12 serious-looking men seated around a table, I knew I had never seen so large a table nor talked to such a large crowd of men!
>
> I was called upon to present my cause first, and I did it in what I thought was a clear and concise manner, and sat down. There was a thunderous silence! Finally one kindly-looking man turned in his seat and inquired, "Miss Agnew, if we allow this appropriation, just what will you do with it?"
>
> What a blow! I gasped for a second, then slowly rose and said, "I can tell you what we <u>hope</u> to do, but the Lord only knows what we will do..so much depends upon the people of the county." Laughter, and the tension broke.

They voted her the "infinitesimal" appropriation.

I (Mary Thompson) remember the time I cooked bear. I went to Monterey in Highland County to give a training meeting to home demonstration leaders on preparing meat. Of course, I had the usual list of pork, beef, and so forth that I was going to prepare. I remember just perfectly that 24 leaders were there, and one of them said, "Mrs. Thompson, if I go up to my freezer locker and get some bear meat, will you show me how to cook it? I want a new way to cook bear meat." I thought to myself, "I'll take care of this quickly." So I said, "How many of you cook bear meat regularly?" I figured no one would be interested. But 23 hands went up out of 24. "Well," I thought, "I have to do something." So I said, "Yes, I'll cook it." I was thinking so hard that I didn't have sense enough to ask the women how many different ways they had to cook it. I just couldn't imagine how I'd cook that bear in the pressure cooker I had brought along. First, I thought I'd find out whether it was a young bear or an old bear, so I asked the woman, "How much does it weight?" She said, "Dressed up, three hundred pounds." Well, I still didn't know if that was an old bear or a young bear. But she came in with some bear tenderloin; it looked just like a pork shoulder from a very large hog that was very coarse in texture. Well, I knew it would be tough, or at least I thought so. So I put it in the pressure cooker and then I remembered that summer while I was in school in Arkansas, a girl from Wyoming had a bulletin that she'd gotten out with the wildlife department; she had a recipe

in it for barbecued bear sauce. That gave me an idea. So I made up some barbecue sauce, figuring that the sauce would cover up any unfamiliar flavor, and served bear gravy with it. Anyway, the women said it was good and that they hadn't ever barbecued bear before Well, I hadn't either, but I didn't tell them.

Mr. W. P. Moore was the first agent in Bedford County, 1911-12. He later became the carrier of the red pencil at VPI and was assistant director of Extension. He worked on budgets and on expense accounts. It has been told that a clothing specialist in the early 30s spent a week at a hotel in Richmond and turned in her expense account for lodging and bath for seven nights. Moor red-pencilled all but two nights with bath and sent her a memo saying that two baths a week were enough for everyone. He couldn't approve any more!

This same gentleman, one Christmas after he was on the VPI campus, was receiving Christmas wishes from many friends and the usual hope that Santa Claus would be good to him. He said, "Thank you, yes, Christmas is pretty simple at our house. My mother is a widow and we just exchange $10.00 bills without fanfare, but we do have a good Christmas," and a good family relationship.

Sarah Pitts, county home demonstration agent, jotted down a few disconnected statements in her notebook for January 6, 1931. Apparently, she was going to address a 4-H Club meeting soon and wanted a few one-liners to help keep her thoughts straight. One item she wanted to remind the club members about, perhaps as some sort of apology she knew she would have to make in advance, was, "Read while you run - only way for farm and home agents." The picture conjured up here of the itinerant missionary agent reminds one of St. paul on any one of his three big missionary journeys; it has been true of Extension work from the start. Consider F. Southall Farrar, organizer of boys' and girls' agricultural clubs that grew into the 4-H movement.

The scene is Jetersville, Virginia, and the date is May 10, 1910. F. Southall Farrar has been on the go so much that his wife, Katherine Vaughan Farrar, has to write a brief report for him to T. O. Sandy. Among other news, Katherine gives Sandy her husband's itinerary for the next few days.

Southall is in Buckingham with Mr. Oliver today and will go from there to Cumberland to see Mr. Adams Thursday. Next week he

goes to meet Mr. Wood Tuesday, to address a Corn Club in Henrico Thursday, and to Lawrenceville to see Mr. Wright Friday.

The pay was not good either; yet everybody involved seemed to live with this fact of agent life. At least the Farrars didn't feel they needed to excuse themselves even to Southall's boss. Katherine closes her report:

I am enclosing your check for $40.00 as a payment on the "cattle" bill we owe you. Southall says he can't promise when you'll get the rest. Much love to Coz. Flutie and Coz. Anne.

The Automobile Club of America actually urged motorists in 1921 to bypass the state. Mary Settle, a home demonstration agent in Prince Edward at that time, related the following incident:

> We had one stretch of road from Farmville to Prospect that had been treated with sand clay. That was our one improved road and was part of the main road from Richmond to Lynchburg. Nothing had ever been done to it, although culverts were built where creeks crossed it. You got to where you were going the best you could. One time I had planned with the chairman of my county committee to hold a meeting that was coming up. So I just had to go. When the time came, I went. I drove my car a little ways, about six miles out from Farmville, where I parked it at one family's house, and borrowed a horse. But before that, since I knew about the road, I first had to borrow somebody's riding pants, somebody else's boots, and take them with me out to Farmville. I finally mounted on that horse and rode 12 miles through mud..and I mean mud!..to get to that woman's house.

T. M. Hepler, Extension agent, Montgomery County took part in a farm management plan that involved farm property owned by T. Marshall Hahn, president of VPI from 1963 to 1973. Just before Hahn moved to Portland, Oregon, in 1973, he bought a farm in Montgomery County, where he hoped someday to retire. Hepler did farm consulting work for him and got a local farmer to build some fence for his property. Hahn was a sawmill man, farmer, cattle raiser, carpenter, and good manager himself. So when he saw that William Grubb, the local farmer who built the fence, was a good man to have around, Hahn hired him full-time as his farm manager. Grubb, still working there, has built two miles of fence,

renovated Hahn's pasture and hay land, and fertilized his entire farm, all of which Grubb did under the direction of the Extension Service.

Having been president of VPI, Hahn certainly knew a great deal about Extension, but he was not too familiar with what agents and specialists actually did on the county level. So when the Montgomery County Extension office worked with him; he always tried to compensate them in some way. But Hepler reminded him that his tax money already helped support Extension. He began to see Extension work in action as a farmer himself and appreciated the value of this information to farmers generally.

It happened in the summer of 1915 that a polio epidemic was sweeping through parts of the United States. When it was at its height, Ella Agnew was in Harrisonburg at the Madison Normal School, giving leadership to the first short course for girls. Local Harrisonburg officials were nervous. The short-course girls had come to Madison on a Monday, and on Wednesday night, two days before the course was to end, Agnew heard the county health officer say that Harrisonburg would be quarantined by sunrise the next morning. She immediately grasped the problem for her group. The girls would be forced to remain several more days, and parents would panic; they would get practically no information or at best misinformation about what was going on in Harrisonburg. Agnew realized that all the confusion and fear would spell the end of the short-course programs, at least for a few years. There were fewer than nine hours for the girls to be out of town if they were to escape the quarantine. They all made it as a result of some last-minute team work. With the use of telephone and telegraph, and with the cooperation of the girls and the district manager of the B.& O., who stopped the train at the little station outside the city limits at 6:30 a.m., it was accomplished and future short courses made possible. "For the first time," Agnew said, "we were seeing in a fuller measure the value of team work."

This poem was written by Betty Kyle and Ann Wills. It was given by Ann Wills (Frame) to Joseph Wheeler Rogers at his retirement party at Hardie's Restaurant in Blacksburg, October 25, 1960.

TO JOE

Tonight we gather to honor Mr. Joe.
We'll do it well before we go.
And talk about times at work and play
As he travelled the district day by day.
Now with the supervisors he always won
From them he usually got the mon.
When he came out you'd hear him say,
"The ole boogers just gave it away."

Other days thru the district he'd stray
To Extension offices down the road
His wealth of knowledge to unload
On county agents so tried and true
So they a better job could do
On program projection, too,
But his agents insisted it was nothing new.
"You're just contrary," Joe would say,
"So I'll come back some other day."

On cotton, peanuts and swine
He placed much stress,
But on camp he did his best,
And even at Virginia Beach
He always found a lesson to teach
So very often he was heard to say,
"Ann, make the snowballs, I'll throw them away."

So I took a handful of plastic snow
And idly fashioned it row by row.
I cannot write like Edgar Guest,
But for Mr. Joe we wish the best.

Paul S. Blandford, Sr., Extension Agent in Nansemond County, 1923-27, wrote this poem in April 1928.

LINES TO THE BULLS OF SHENANDOAH VALLEY

We've praised Virginia's mounts and streams,
Her fields and ocean shore,
We've written many a fulsome phrase
Of deep historic lore,
About her soldiers great and brave
Her statesmen and crusaders,
Essayists, poets, novelists,
And e'en of her invaders;
Her pioneers, and cavaliers
Her farmers and inventors,
And in the prohibition days
Her demon rum preventors.

We've lauded in both rhyme and prose
Her maidens and her matrons,
And of the cause of liberty
Her many gallant patrons.
We've sung of both her balmy air
And sunshine warm and cheerful,
In many a stately rhythmic verse,
And many a couplet fearful.
Just one thing's left for me to write
That's not already written
When in the springtime by the muse
Of poetry I'm bitten;
And so I smite my lyric harp
And make its strings to roar,
With wild and crashing, bellowing chords
To Bulls of Shenandoah.

The burly Bulls of Shenandoah
The curly Bulls of Shenandoah
Oh Muse! NOW spread thy wings and soar
To praise the Bulls of Shenandoah.

The prancing Bulls of Shenandoah
The dancing Bulls of Shenandoah,
Sing, sing their splendor o'er and o'er
The bounding Bulls of Shenandoah.

The gaudy Bulls of Shenandoah
The bawdy Bulls of Shenandoah,
Go praise their vices even more
The ranting Bulls of Shenandoah.

Their arched necks, their curly brows
Their harems of complacent cows,
Their nostrils red, their buttocks wide
And other things of bullish pride.
Oh Bulls! May ne'er your beauties fail.
"Gesundheit to you and Was Hael!"

Their arched necks, their curly brows
Their harems of complacent cows,
Their nostrils red, their buttocks wide
And other things of bullish pride.
Oh Bulls! May ne'er your beauties fall.
"Gesundheit to you and [illegible] [illegible]!"

Virginia Tech and Virginia State
Virginia's Land Grant Universities

September 1987
Publication 478-025

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, and September 30, 1977, in cooperation with the U.S. Department of Agriculture. Mitchell R. Geasler, Director, Virginia Cooperative Extension Service, and Vice Provost for Extension, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061; Clinton V. Turner, Administrator, 1890 Extension Program, Virginia State University, Petersburg, Virginia 23803.