

Virginia Cooperative Extension

A partnership of Virginia Tech and Virginia State University



Animal & Poultry Sciences (0306)
366 Litton Reaves
Blacksburg, Virginia 24061
540/231-9159 FAX 540/231-3713
E-mail: sgreiner@vt.edu

Livestock Update

Beef - Horse - Poultry - Sheep - Swine

August 2010

This LIVESTOCK UPDATE contains timely subject matter on beef cattle, horses, poultry, sheep, swine, and related junior work. Use this material as you see fit for local newspapers, radio programs, newsletters, and for the formulation of recommendations.

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Scott P. Greiner, Extension Project Leader
Department of Animal & Poultry Sciences

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Dates to Remember

BEEF

AUGUST

16-17 Tri-State Stocker Conference. Abingdon. **Contact:** Scott Greiner, (540) 231-9159, email: sgreiner@vt.edu

GENERAL

OCTOBER

29 16th Annual Hokie Harvest Sale. Alphin-Stuart Arena. VA Tech Campus. Blacksburg. **Contact:** Dan Eversole (540) 231-4738, email: deversol@vt.edu

HORSE

SEPTEMBER

16-19 State 4-H Horse and Pony Show. Virginia Horse Center. Lexington, VA
Contact: Celeste Crisman, (540) 231-9162, email: ccrisman@vt.edu or Joi Saville, (540) 231-2257, email: joi.saville@vt.edu
25-26 State Fair Horse Show Competition. Doswell. **Contact:** Eleszabeth E. McNeel, email: e7aquila@aol.com

SHEEP

AUGUST

28 Sheep Field day. Shenandoah Valley AREC. Steeles Tavern. **Contact:** Scott Greiner, (540) 231-9159, email: sgreiner@vt.edu
28 Virginia Performance Tested Ram Lamb Sale. Shenandoah Valley AREC. Steeles Tavern. **Contact:** Scott Greiner, (540) 231-9159, email: sgreiner@vt.edu

SEPTEMBER

4 11th Annual Virginia Tech Sheep Center Production Sale. Alphin-Stuart Arena. **Contact:** Scott Greiner, (540) 231-9159, email: sgreiner@vt.edu

August Beef Management Calendar

Dr. Scott P. Greiner

Extension Animal Scientist, VA Tech

Spring Calving Herds

- End breeding season early in month (if not already stopped); remove bulls
- Manage 1st calf heifers separately- provide access to highest quality forages and supplement if needed
- Plan marketing program for calf crop
- Line up pre-weaning vaccinations for calves to be sold value-added programs such as VQA
- Continue fly control program
- Continue feeding high Selenium trace mineral salt
- Continue creep grazing and grazing warm season grasses
- Fertilize pastures that will be stockpiled for fall-winter grazing
- Move cattle to some hay fields to give pastures a rest
- Evaluate winter feed supply and options

Fall Calving Herds

- Body condition score cows
- Separate thin cows from rest of the herd- provide access to highest quality forages and supplement if needed
- Prepare for calving season; make sure you have all equipment and supplies
- Continue fly control program
- Continue high Selenium trace mineral salt
- Move cattle to some hay fields to give pastures a rest
- Fertilize pastures that will be stockpiled for fall-winter grazing
- Market calves early in month if not already done or continue backgrounding program
- Evaluate winter feed supply and options

Summer Slump to Summer Shortage

Dr. Mark A. McCann

Extension Animal Scientist, VA Tech

As beneficial as late spring moisture was for Virginia pastures and cattle performance, we annually brace ourselves for the heat and many times the dryness of our July and August. This seasonal decline in pasture and cattle performance during this period is usually called “summer slump”. Infected Kentucky 31 tall fescue gets most of the blame and is certainly a major contributor, but there are other factors in addition to fescue toxicity that come into play and contribute to this seasonal slump. Unfortunately, this year dry conditions across parts of Virginia have escalated pasture conditions from summer slump to a simple shortage of available forage.

Different strategies exist for each situation. If there is adequate forage available, but quality is suspect, consider the following management suggestions:

- 1) The age old suggestion for diluting infected tall fescue still works. The dilution can be other grasses, legumes or even supplemental feed, anything that takes the place of infected tall fescue.
- 2) Managing pastures through clipping or grazing management to reduce seed heads and stems which contain higher toxin levels. These management practices will produce a more open forage canopy which will prevent shading of diluting forages such as clovers and warm season grasses.
- 3) Limited creep supplementation of calves. Rather than maximizing calf feed intake, consider a target intake of 1-2 lbs of feed/hd/day. Resulting performance impacts will not be as dramatic but they will be more efficient and cost effective. Past research would indicate that 1lb/d of soybean meal could increase daily gain .25-.33lb/d. Salt can be added to limit feed intake to the desired level.

If drought has severely limited forage availability, one of the most effective strategies is to wean spring calves early. Calves can be retained and offered the best remaining pasture and limited feed while dry cows can rough it on low quality forages or poor quality hay. Early weaning reduces both the quantity and quality of forage that a cow requires. Calves weaned early can quickly adjust to palatable rations and are very efficient in their feed conversion. Early weaning also allows culling of open cows from the herd. Pregnancy diagnosis will identify open cows which can then be sold saving the remaining forage for your pregnant cows. This is also an excellent time to cull any other undesirable cows.

In closing, remember every drought is followed by a good rain. In the midst of dealing dry times, don't forget to plan for fertilization and stockpiling of tall fescue for the upcoming fall and winter.

2010 Across-Breed EPD Table

Larry Kuehn and Mark Thallman
USMARC Geneticists, Clay Center, NE

The table of adjustment factors to be used to estimate across-breed expected progeny differences (AB-EPDs) for eighteen breeds was presented at the Beef Improvement Federation Annual Meeting in Columbia, MO, on June 30 (see Table 1). Across-breed adjustment factors have been calculated for growth traits and maternal milk since 1993. Adjustment factors for carcass traits have been calculated since 2008; to be included, breeds must have carcass data in the U.S. Meat Animal Research Center (USMARC) database and report their carcass EPDs on an actual carcass basis using an age-adjusted endpoint. Bulls of different breeds can be compared on the same EPD scale by adding the appropriate adjustment factor to the EPDs produced in the most recent genetic evaluations for each of the sixteen breeds. The AB-EPDs are most useful to commercial producers purchasing bulls of more than one breed to use in cross-breeding programs. For example, in terminal cross-breed systems, AB-EPDs can be used to identify bulls in different breeds with high growth potential or favorable carcass characteristics.

As an example, suppose a Shorthorn bull has a weaning weight EPD of + 19.2 lb and a Red Angus bull has a weaning weight EPD of + 38.9 lb. The across-breed adjustment factors for weaning weight (see Table 1) are 20.6 lb for Shorthorn and -2.3 lb for Red Angus. The AB-EPD is $19.2 \text{ lb} + 20.6 \text{ lb} = 39.8 \text{ lb}$ for the Shorthorn bull and $38.9 \text{ lb} - 2.3 = 36.6 \text{ lb}$ for the Red Angus bull. The expected weaning weight difference when both are mated to cows of another breed (e.g., Hereford) would be $39.8 \text{ lb} - 36.6 \text{ lb} = 3.2 \text{ lb}$.

Most breed associations publish EPDs on an annual basis. These EPDs predict differences expected in performance of future progeny of two or more bulls within the same breed for traits including birth weight, weaning weight, yearling weight, and maternal milking ability (as reflected in progeny weaning weights). Normally, the EPDs of bulls from different breeds cannot be compared because most breed associations compute their EPDs in separate analyses and each breed has a different base point. The across-breed adjustment factors allow producers to compare the EPDs for animals from different breeds for these traits; these factors reflect both the current breed difference (for animals born in 2008) and differences in the breed base point. They should only be used with EPDs current as of July 2010 because of potential changes in EPD calculations from year-to-year.

It is important to note that the table factors (Table 1) do not represent a direct comparison among the different breeds because of base differences between the breeds. They should only be used to compare the EPDs (AB-EPDs) of animals in different breeds. To reduce confusion, breed of sire means (i.e., when sires from two different breeds are mated to cows of a third, unrelated breed) between 2008 born animals under conditions at USMARC are presented in Table 2.

The adjustment factors in Table 1 were updated using EPDs from the most recent national cattle evaluations conducted by each of the eighteen breed associations (current as of May 2010). The breed differences used to calculate the factors are based on comparisons of progeny of sires from each of these breeds in the Germplasm Evaluation Program at USMARC in Clay Center, Nebraska. These analyses were conducted by USMARC geneticists Larry Kuehn (email: Larry.Kuehn@ars.usda.gov; ph: 402-762-4352) and Mark Thallman (email: Mark.Thallman@ars.usda.gov; ph: 402-762-4261).

**TABLE 1: ADJUSTMENT FACTORS TO ADD TO EPDs OF EIGHTEEN
DIFFERENT BREEDS TO ESTIMATE ACROSS BREED EPDs**

Breed	Birth Wt.	Weaning Wt.	Yearling Wt.	Maternal Milk	Marbling Score ^a	Ribeye Area	Fat Thickness
Angus	0.0	0.0	0.0	0.0	0.00	0.00	0.000
Hereford	3.4	0.5	-15.5	-17.6	-0.33	-0.14	-0.050
Red Angus	2.6	-2.3	-5.5	-4.2	-0.06	-0.06	-0.051
Shorthorn	6.4	20.6	47.4	22.4	-0.10	0.20	-0.158
South Devon	4.8	4.6	-4.0	-8.0	-0.03	0.11	-0.118
Beefmaster	7.3	41.0	42.9	3.2			
Brahman	12.5	42.0	2.6	24.4			
Brangus	4.9	20.9	20.6	3.6			
Santa Gertrudis	7.4	27.5	23.9		-0.60	-0.30	-0.137
Braunvieh	7.3	25.6	26.8	30.9	-0.31	0.89	-0.165
Charolais	9.3	41.9	50.8	3.1	-0.42	0.75	-0.233
Chiangus	5.0	-16.7	-39.4		-0.48	0.60	-0.155
Gelbvieh	4.3	5.7	-10.2	8.3			
Limousin	4.2	1.4	-29.1	-15.5	-0.75	1.05	
Maine-Anjou	4.8	-9.2	-25.0	-2.3	-0.88	1.06	-0.208
Salers	2.6	2.2	-5.5	-0.1	-0.20	0.80	-0.214
Simmental	5.2	28.4	28.3	11.8	-0.55	0.94	-0.224
Tarentaise	2.2	34.2	23.4	22.7			

^aMarbling score units: 4.00 = SI⁰⁰; 5.00 = Sm⁰⁰

**TABLE 2: BREED OF SIRE MEANS FOR 2008 BORN ANIMALS
UNDER CONDITIONS SIMILAR TO USMARC**

Breed	Birth Wt.	Weaning Wt.	Yearling Wt.	Maternal Milk	Marbling Score ^a	Ribeye Area	Fat Thickness
Angus	91.5	601.1	1020.2	591.6	5.62	12.58	0.538
Hereford	96.4	599.1	993.2	569.0	4.97	12.46	0.477
Red Angus	92.3	584.9	989.2	582.9	5.27	12.40	0.474
Shorthorn	98.1	592.2	1011.1	595.3	5.15	12.66	0.353
South Devon	96.8	601.8	1010.9	583.8	5.54	12.72	0.417
Beefmaster	97.2	605.6	993.7	575.8			
Brahman	103.7	612.6	964.4	601.0			
Brangus	93.9	598.5	1000.6	581.4			
Santa Gertrudis	97.3	588.0	968.6		4.67	12.10	0.388
Braunvieh	96.6	588.1	977.0	601.9	4.96	13.30	0.361
Charolais	99.3	622.5	1031.7	580.4	4.88	13.33	0.293
Chiangus	95.6	581.9	976.3		4.93	12.92	0.390
Gelbvieh	95.0	603.2	1003.5	597.0			
Limousin	95.2	600.6	989.9	576.6	4.52	13.82	
Maine-Anjou	96.1	587.5	992.6	588.5	4.59	13.62	0.317
Salers	93.9	599.7	1011.4	590.4	5.17	13.22	0.312
Simmental	95.8	616.1	1022.7	586.9	4.85	13.45	0.311
Tarentaise	93.6	606.7	990.7	594.0			

^aMarbling score units: 4.00 = S1⁰⁰; 5.00 = S5⁰⁰

Tri-State Stocker Conference

August 17-18, 2010
Washington County Fairgrounds
Abingdon, VA

August 17	Optional tour of Virginia stocker operations leaves at 1:00 p.m.	Contact your county Extension Agent for registration information.
August 18	Registration begins at 7:45 a.m. Program begins at 8:30 a.m.	Pre-registration assures you a space on the tour and lunch at the conference.

The conference is presented by the University of Tennessee Extension, Virginia Cooperative Extension and North Carolina Cooperative Extension



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Virginia Simmental Field Day Set for October 6

Dr. Scott P. Greiner

Extension Animal Scientist, VA Tech

Virginia Tech and the American Simmental Association (ASA) will host an afternoon and evening of activities at the Virginia Simmental Field Day, October 6, 2010, at the Culpeper Ag Enterprises, Culpeper, VA. Field day hosts, sponsors and featured speakers will focus on "The Value of Crossbreeding in the Beef Business".

Activities will begin at 3:00 pm and will conclude by 8:30 pm. The day will include a cattle display, dinner and an educational program. Dr. Wade Shafer from the American Simmental Association will lead off the evening presenting "The Genetic Tools for Profit". Dr. Tom Field, NCBA, will present "Virginia Cattle, American Beef, the World's Food"; and Dr. Scott Greiner, VA Tech, will end the day's educational program with a Breeder Panel discussing "The Value of Crossbreeding to Virginia Cattle Producers."

All beef producers and allied industry professionals are invited to attend the Virginia Field Day. There is no fee to attend the events; however, in order to plan for meals, we encourage you to contact the American Simmental Association at 406-587-4531, or simmental@simmgene.com.

Sheep Update

Dr. Scott P. Greiner

Extension Animal Scientist, VA Tech

Sheep Field Day, Performance Tested Ram Lamb Sale and Replacement Ewe Lamb Sale is August 28

A full day of sheep activities are planned for Saturday, August 28 at the Virginia Sheep Evaluation Station near Steeles Tavern, Virginia. At 10:30 a.m., a Sheep Field Day with educational programs will be held. Topics and speakers include: Reproductive Management Using CIDRs- Dr. Allen Strecker, Blue Ridge Animal Clinic; Teff as a Forage Crop- Jason Carter, Augusta VCE; Fall/Winter Forage and Feeding Strategies- Dr. Mark McCann, Virginia Tech; and Lamb Market Outlook- Mike Carpenter, VDACS. The 35th Annual Performance Tested Ram Lamb Sale will begin at 1:00 p.m. The top end of the fifty-five Suffolk, Dorset, Hampshire, Katahdin, White Dorper, North Country Cheviot and crossbred rams being evaluated on the 63-day test will be sold. All rams sold will be evaluated for structural and reproductive soundness and will be sold as guaranteed breeders. Complete performance information will be available, including ultrasound measurements for carcass traits. Following the ram sale, the Virginia Sheep Producers Replacement Ewe Lamb Sale will be held. A select group of 30 ewe lambs ready to breed will be offered. The Virginia Sheep Evaluation Station is located at the Shenandoah Valley Agricultural Research and Extension Center, 0.5 mile east of I-81 at Exit 205 (just south of Staunton, VA). For sale information and a catalog, contact Scott Greiner, Department of Animal and Poultry Sciences, Virginia Tech, Blacksburg, VA, 24061, phone (540)231-9163 or email sgreiner@vt.edu. Current information is also available on the Virginia Tech Sheep Extension and Education website at <http://www.vtsheep.apsc.vt.edu/>.

Virginia Tech Sheep Center to Host 11th Annual Production Sale September 4

The 11th Annual Virginia Tech Sheep Center Production Sale will be held Saturday, September 4 at the Alphin-Stuart Livestock Arena on the campus of Virginia Tech. The sale offering will include Suffolk and Dorset ram lambs, along with Suffolk and Dorset ewe lambs. Complete performance data including EPDs and carcass ultrasound records are available. Proceeds from the sale will be used to support the sheep teaching, extension, and research missions of the Department of Animal & Poultry Sciences. Sale details and catalog are available on the web at http://www.apsc.vt.edu/centers/sheepcenter/index_sheep.htm For additional information contact Dr. Scott Greiner, phone 540-231-9159 or email sgreiner@vt.edu .

Fall Lamb Management

Dr. Scott P. Greiner

Extension Animal Scientist, VA Tech

For many late winter and spring-lambing flocks, a substantial portion of lamb gain typically comes from grass. This year's widespread drought has resulted in lower lamb performance with little or no weight gain for an extended period of time. Increased parasite loads also contribute to the static performance of grazing lambs during the summer months. In these instances, placing the lambs on feed is advantageous to the sheep enterprise by allowing for more effective use of forage resources by the ewe flock and enhancing the performance of the lamb crop. Additionally, supplemental energy will provide needed body condition for lambs coming off grass and provide body condition needed for optimum market acceptance.

Lamb feeding need not be complicated nor expensive. Growing and finishing lambs on whole grain rations has advantages of promoting feed efficiency and rate of gain, decreases days on feed, and results in lower costs of gain. The principle behind whole grain diets is to utilize the grain as a "built in roughage factor." The preference of very young lambs for finely ground diets gradually switches to feeds with increased particle size as the lambs grow older, and by weaning they should be able to consume whole grains. The simplest and usually the most economical ration during this period will consist of whole corn (or barley) and a commercially available pelleted protein supplement. These protein supplements normally contain 36% to 40% crude protein and are designed to be mixed with whole grain or barley for a complete ration. An added benefit to many of these supplements is that they may contain Bovatec which aids in the prevention of coccidiosis and also promotes weight gain and feed efficiency. These diets can be readily mixed to create total rations ranging in protein from 11% to 16% (see table for requirements). Feeding grain in the whole form provides adequate "scratch factor" as a roughage source. To avoid excess feed costs, it is important not to overfeed protein. Regardless of the source, protein will be more expensive than energy. Altering the protein content of the ration to match the weight and performance level of the lambs will keep feed costs down and add to the profitability of the feeding program.

There are several factors to consider if diets for growing/finishing lambs are to be put together from feedstuffs available on the farm or purchased. First, maintain a proper calcium to phosphorus ratio of at least 2:1. Ratios below 2:1 may lead to problems with urinary calculi. Providing fresh, clean water is also critical. Ammonium chloride added at the rate of 10-15 lb. per ton or .5% will also aid in the prevention of urinary calculi. Secondly, energy grains such as corn and barley are low in calcium and high in phosphorus. Therefore, limestone or another calcium source will need to be added to ensure adequate calcium intake and proper Ca to P ratio. Thirdly, intake of hay should be kept to a minimum. If some hay is offered, it should be lower quality and long stem. Feeding high quality hay is not economical as it is an expensive source of energy and inefficient use of protein. The final ration should be formulated to contain approximately 78% TDN.

There are several key management considerations when placing lambs on feed after coming off pasture. To avoid digestive disturbance and enterotoxemia, lambs need to be adjusted to a grain ration gradually. Start by feeding the lambs .25 lb. of grain per day. This amount can be adjusted up slowly over a two week period based on how the lambs are cleaning up their grain. It is important that lambs be vaccinated for enterotoxemia properly during this period.

Table 1. Protein concentration (%) of rations for lambs of varying weights and performance levels^a

	Average Daily Gain			
<u>Lamb Wt.</u>	<u>.50</u>	<u>.65</u>	<u>.80</u>	<u>.95</u>
40	17.3	21.3	25.4	29.4
65	12.2	15.0	17.7	20.5
90	9.7	11.8	13.9	16.0
115	9.0	9.2	10.8	12.5

^a From Morrill in Proceedings 13th Annual Iowa Sheep Sym., 1991.

There are some important holidays approaching which typically result in strong lamb prices due to an increase in demand associated with these holidays. The Islamic holiday of Ramadan begins on August 11 and lasts through September 10 with the celebration of Eid al Fitr (Ramadan ends). Later in the year, Eid ul Adha occurs on December 20. An integrated marketing and management strategy that targets the strong demand for lambs during these times is warranted.

Strategies for Coping with Drought for the Sheep Flock

Dr. Scott P. Greiner

Extension Animal Scientist, VA Tech

Areas of Virginia are coping with moderate to severe drought conditions. The following management considerations may be useful for flocks considering their options:

1. Wean lambs. The ewe nursing lambs has energy and protein requirements 200-300% that of dry ewes. Lambs older than 60 days of age are not receiving significant nutrition from a lactating ewe particularly when nutrition is limited. Lambs can be removed from pasture and placed on feed in a drylot facility or sold. Removing the lambs from pasture also serves to decrease the grazing pressure on pastures and allows for existing forages to be used for maintenance of the ewe flock. The decision to sell or feed lambs to heavier weights will be based on market prices, weight and condition of the lambs, and cost of additional gain. In most cases, the cost of additional gain through grain supplementation is economically beneficial. There are several protein supplements that are formulated to be mixed with whole shelled corn for growing/finishing lambs. These diets can be provided relatively inexpensively and do not require supplemental hay when whole shelled corn is fed. Target these lambs to be sold in the fall.
2. If pastures become short enough that supplemental feed is necessary for the ewe flock, consider feeding corn or barley or other energy supplements (corn gluten feed) to ewes. Feeding 0.5 to 1.0 lb. per head per day will help "stretch" pastures and decrease the ewe's dependence on limited pasture forages as the sole nutrient source. Prior to breeding, additional energy through grain supplementation also has the added benefit of flushing the ewes which has a favorable impact on number of lambs born.
3. In some situations, pastures may become so depleted such that the ewe flock must be provided their entire diet through supplemental feed. In these situations, remove the flock from pastures to allow forages to recover once moisture is received. Since the ewe's nutritional requirements are low (assuming ewes are dry), utilizing poor to average quality hays is an option. A 175 pound ewe would require 3.5 pounds of hay (50% TDN, 9% crude protein) to meet her maintenance requirements for energy and protein. Limit feed hay to prevent consumption above requirements and to minimize wastage. If hay supplies are short, supplementing with grain will help limit the amount of hay needed. Supplementing grain will be most economical if hay needs to be purchased. However, ewes need to consume 1% of their body weight as roughage to maintain rumen function. For the 175 pound ewe, a minimum of 1.75 pounds of hay needs to be fed. To meet maintenance requirements, an additional 1 pound of corn per day would need to be fed.
4. Be sure to follow a strategic deworming program even during dry conditions. Excessive worm loads will cause additional stress on the flock and short pastures are conducive to parasitism.
5. Provide a selenium-fortified complete mineral formulated for sheep to the ewe flock at all times.
6. Evaluate the productivity of the flock. Cull poor performing ewes.

For additional information, contact your local ANR Extension agent.