

PART III

Turfgrass

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Current publications on turfgrass management and other turfgrass industry related information can be found in the Virginia Tech Turfgrass Science World Wide Web Home Page at the following website location: <http://sudan.cses.vt.edu/html/Turf/turfhome.htm>

Turfgrass Establishment

Steps involved in successful establishment of turfgrasses:

Submit a soil test sample to the Virginia Tech Soil Testing Laboratory and determine lime and fertilizer needs.

Control any perennial grass or broadleaf weeds present.

Where soil compaction is severe, phosphorus or lime needs to be incorporated, or significant surface re-grading is required, complete soil tilling will be necessary. On other areas, light surface tillage will suffice.

Grade the area to establish surface drainage. Save the topsoil by moving it to the side if extensive grading or internal drainage is required.

Apply the recommended lime and soil amendments. Apply 2/3 of the establishment fertilizer recommended by soil test.

Till above materials into a depth of 4-6"

Finish grade by fine raking.

Apply the remaining 1/3 of the establishment fertilizer and rake into the surface inch.

Seed, sod, sprig, or plug the area.

If seeding, rake the area very lightly to incorporate the seed in the surface 1/4 - 1/2"

Roll the area with a moderately heavy roller.

If seeding in the spring, apply Siduron preemergence herbicide for crabgrass control. Follow label recommendations closely. Siduron should not be used on bermudagrass.

Uniformly mulch the area (1 1/2 - 2 bales of weed-free straw per 1000 sq ft) if frequent and uniform irrigation is unavailable. Other mulching solutions could include granular-type products made from shredded newsprint or other recycled paper fiber. Some mulch products are suitable to be applied as a hydromulch using a hydroseeder.

Keep the seed zone moist. New seedings may require several shallow waterings per day to insure rapid germination. Only the top 1/4 - 1/2" needs to be kept moist. Sprigs easily desiccate without frequent daily irrigation immediately after planting. Sod and plugs also require frequent, sometimes daily irrigation in the first three to four weeks after planting.

After seed germination, maintain moisture in the soil to a depth of 4 - 6" until plants are well established.

Planting, sodding, and seeding

Plugging and Sprigging. Zoysiagrass and bermudagrass can be vegetatively established, using either plugs or sprigs. The plugs should be fitted tightly into pre-cut holes on 6 - 12" centers and tamped into place. Sprigs can be broadcast and lightly disced or pressed into shallow rows on 6 - 12" centers and covered with soil. Sprigging rates for bermudagrass and zoysiagrass range from 7 - 10 bushels per 1000 sq ft and frequent irrigation is required for establishment. Zoysiagrass is very slow to establish from sprigs.

Sodding. Soil preparation is similar to that described for seeding; a smooth, firm surface is needed. On hot days, moisten the soil to cool it before laying sod. Premium quality, certified sod is easier to transport and install than inferior grades. Good sod is light; does not tear easily; and quickly puts a root system into prepared, well-watered soil. Install sod as soon as you get it; it is perishable and should not remain in a stack longer than 36 hours. Establish a straight line lengthwise through the lawn area; lay the sod on either side of the line with the ends staggered as when laying bricks. A sharp masonry trowel is very handy for cutting, forcing the sod tight, and leveling small depressions. Roll and water the new lawn immediately; irrigate to moisten the soil below the sod until it is well rooted into the soil.

Seed versus sod. Successful, weed-free establishment is more difficult with seed than with sod. Also, because of the time required for germination and root growth of seed, the area is exposed to erosion. Sod use practically eliminates such problems, an especially important factor on steep slopes.

Seeding and mulching. Prepare a smooth, firm seedbed. Rake the seedbed to create shallow, uniform depressions (rows) about a quarter-inch deep and 1 - 2" apart. Divide seed in half; sow first half of seed in one direction (north/south); sow the remaining seed in the opposite direction (east/west). Cover the seed by raking lightly. Next, the seedbed should be rolled. Mulch the area with straw or other suitable material so that approximately 50 - 75% of the soil surface is covered. This is normally accomplished by spreading 1/2 - 2 bales of high quality, weed-free straw per 1000 sq ft. A light mulch does not need to be removed after establishment of the turfgrass.

Seeding rates

Turfgrass Species	Seeding Rate lbs/1000 sq. ft
Kentucky bluegrass	2 to 3
Tall fescue	4 to 6
Fine fescue	3 to 5
Perennial ryegrass	3 to 5
Bermudagrass (hulled)	1 to 1 1/2
Bermudagrass (unhulled)	5 to 10

When to plant cool-season grasses*

Area of Virginia	Seed	Sod
Northern Piedmont, areas in and west of the Blue Ridge	Aug 15 to Sept 15 or March to early April	Anytime soil is not frozen
Southern Piedmont and Eastern Virginia	Sept 1 to Oct 15 or Feb and March	Anytime soil is not frozen

When to plant warm-season grasses**

Area of Virginia	Seed	Sod	Sprigs	Plugs
Northern Piedmont, areas in and west of the Blue Ridge	Not recommended for this area	June 1-July 15	June 1-July 1	June 1-July 15
Southern Piedmont and Eastern Virginia				
a) hulled and Eastern bermudagrass	May to July 15			
b) hulled bermudagrass	late fall or winter prior to growing season	Late May-Aug 15	Late May-Jul 15	Late May-Jul 15

* Cool season grasses include Kentucky bluegrass, tall fescue, creeping red fescue, and creeping bentgrass.

**Warm season grasses include bermuda, zoysiagrass, centipedegrass, and St Augustinegrass.

Soil testing and determination of nutrient needs

Samples should be taken 1 - 2 months prior to establishment. Standard tests will provide recommendations for phosphorus, potassium, and lime. Exchangeable calcium and magnesium are also determined in the standard test.

If soil tests are not available, incorporate 0 - 2 1/2 lbs of nitrogen (N), 3 1/2 - 5 lbs of phosphate (P_2O_5), 2 - 3 1/2 lbs of potash (K_2O), and 80 lbs of agricultural limestone per 1000 sq ft. See the following table for specific nitrogen recommendations. Extreme care should be taken with regard to excessive application of nitrogen and phosphorus due to their possible movement off-site through surface runoff or nitrogen leaching. Such movement into ground-water and surface water threatens water quality. Use soil testing to determine soil phosphorus requirements and consider incorporating slowly available forms of nitrogen.

When the sod is rooted or the seed is established, fertilize in accordance with maintenance fertilization recommendations. Begin mowing with a sharp mower as soon as the grass reaches a height 1/3 greater than the recommended mowing height.

Water-soluble nitrogen to be incorporated to a 4-6" depth prior to seed or sod establishment. If fertilizers used contain more than 50% water-soluble nitrogen, multiply recommended amounts by 1.5.

Date	Sod		Seed	
	Cool-season*	Warm-season**	Cool-season	Warm-season
	lb N per 1000 sq ft			
Aug 15 to Jan 15	2	0	2.5	0
Jan 16 to June 15	1	2	2.0	2.5
June 16 to Aug 14	0	2	1.0	2.0

*Cool-season grasses include Kentucky bluegrass, tall fescue, creeping red fescue, perennial ryegrass, and creeping bentgrass.

**Warm-season grasses include bermudagrass, zoysiagrass, centipedegrass and St. Augustinegrass. These are normally established between May 1 and August 15.

Fertilization of established turfgrass

Phosphorus and potassium requirements should be determined by soil test. Turf grown on irrigated sandy soils, or turf subjected to frequent and heavy traffic, may require higher amounts of nutrients. Turf grown in the shade requires less nitrogen.

Do not apply readily-available nitrogen sources in excess of 1.0 lb of actual nitrogen per 1000 sq ft in any single application. Phosphate (P_2O_5) and potash (K_2O) may be applied in single or multiple applications, but no more than 2 lbs of K_2O per 1000 sq ft should be applied in any one application. If possible, water-in all fertilizers following application.

Timing and rate of fertilization is influenced by turf species, existing turf conditions, desired level of quality, type of fertilizer, time of year, etc. Established cool-season turfs are fertilized predominantly in the fall and lightly in late spring, while established warm-season turfs are fertilized from late spring through August. Avoid summer fertilization on cool-season grasses if at all possible. Do not apply urea within two weeks of liming.

Phosphorus and potassium levels can be high enough in the soil that there is no need to apply additional amounts of these nutrients. This can be determined by soil test.

Nitrogen fertilizers will state from what source (or carrier) the nitrogen is derived. The nitrogen carrier has a great impact on how you fertilize because different nitrogen carriers make nitrogen available to the turf at different rates. Consequently, the carrier will affect how much nitrogen to apply as well as when to apply it.

Calculating how much fertilizer to purchase

In deciding what type of fertilizer to purchase, it is usually helpful to first look at the Virginia Tech recommendations for fertilizer programs that best fit your situation (grass species and location). Recommendations are commonly made on the basis of the number of lbs of actual nitrogen (N) per 1000 sq ft of lawn area. To convert lbs/1000 sq ft to lbs/acre, just multiply the lbs N/1000 sq ft by 43.5 (which is the number of 1000 sq ft units in one acre).

The amount of fertilizer to be purchased for any one application will depend upon the percent of nitrogen (N) contained in the fertilizer. For example, to apply 1 lb N/1000 sq ft from ammonium nitrate (33% N), divide the desired application rate by the analyses (1 lb N/0.33 N = 3 lbs of ammonium nitrate fertilizer are needed to apply 1 lb N/1000 sq ft). The total quantity of fertilizer material needed for an area is calculated by multiplying 3 lbs of material by the number of 1000 sq ft units of lawn area to be fertilized. For example, if a homeowner had 8500 sq ft of lawn area and wanted to use a 46-0-0 (46% N) fertilizer to apply 1.25 lbs of actual nitrogen per 1000 sq ft of lawn, he would make the following calculations:

$$\frac{1.25}{0.46} = 2.72/1000 \text{ sq ft}$$

2.72 lbs of fertilizer per 1000 sq ft x 8.5 units of 1000 sq ft = 23.12 lbs of fertilizer needed /8500 sq ft lawn

Applying the right amount of fertilizer

Getting the most out of every fertilizer dollar involves knowing how to accurately apply fertilizer to your lawn. Most lawn fertilizers are usually applied by the homeowner as dry granules using either a drop-type or spinner-type fertilizer spreader. Each fertilizer spreader will have a dial to adjust the spreader openings that determine how much fertilizer is applied as the spreader travels across the lawn. Changing to a fertilizer of different granule size or weight and varying speed of spreader operation can alter application rates. Therefore, homeowners should be able to calibrate or adjust their fertilizer application.

Calibrating a drop-type spreader

1. Attach a pan, bag, bucket, or other apparatus to the spreader to collect the fertilizer during operation.
2. Fill the spreader.
3. Determine the width of spreader application.
4. Operate the spreader to cover 435.6 sq ft. NOTE: for a spreader 18" wide, the distance should be

$$\frac{435.6 \text{ sq ft}}{1.5 \text{ ft}} = 290.4 \text{ ft}$$

5. Weigh the amount of fertilizer collected.
6. Multiply the weight collected by 2.3 to calculate fertilizer applied per 1000 sq ft.
7. If a per acre delivery rate is desired, multiply the weight collected by 100 to calculate fertilizer applied per acre.
8. Repeat this procedure and continue by trial and error adjusting the applicator dial each time until the desired application rate is reached.

Calibrating a spinner-type spreader

The procedure and calculations are the same as the drop-type spreader except the width of the fertilizer throw is used as the spreader width.

Example: If a spinner spreader has an application width of 5 ft, then the operating distance would be:

$$\frac{435.6 \text{ sq ft}}{5 \text{ feet}} = 87 \text{ ft}$$

This type of applicator gives the best results when half of the desired fertilizer application rate is applied traveling in one direction while the other half is applied in a direction at a 90 degree angle (right angle) to the first in a crisscrossing pattern. This ensures more uniform coverage by minimizing the effect of leaving too much space between swaths. However, when using this half plus half crisscrossing method, be sure to calibrate the spreader to apply half of the fertilizer to the 435.6 sq ft area because the lawn area will be covered twice.

Spreader calibration without a collection device:

Method A: The procedure and calculations are the same except the fertilizer material is repeatedly applied onto wrapping paper or a smooth concrete floor until an area of 435.6 sq ft is covered. The material is then swept up and weighed to determine the application rate per 435.6 sq ft.

Method B: A quantity of fertilizer is weighed and then put in the spreader. The spreader is operated over a 435.6 sq ft lawn area (this fertilizer material cannot be recovered) and the fertilizer remaining in the spreader is then weighed. Subtracting the weight of the remaining fertilizer from the weight you started with will equal the fertilizer application rate per 435.6 sq ft.

Applying at the proper time

Proper timing of nitrogen applications is different for warm-season and cool-season turfgrasses because of their different growth cycles. The following four charts show the recommendations for pounds of actual nitrogen per 1000 square feet of established lawn area using both quick release and slow release nitrogen sources for both warm- and cool-season grasses. The charts can be used to determine the most effective times of application for different levels of turfgrass quality.

Programs for Cool-season grasses. The best time to fertilize cool-season grasses, including Kentucky bluegrass, tall fescue, perennial ryegrass, and fine fescue (creeping red fescue, hard fescue, sheep fescue, and chewing fescue), in Virginia is from August 15 through November. Excessive spring application of nitrogen to cool-season grasses in Virginia leads to excessive leaf growth at the expense of stored food reserves and root growth, increasing injury to lawns from summer disease and drought.

Program 1. Nitrogen Fertilization of Cool-season Grasses Using Quickly Available Nitrogen Fertilizers (less than 50% slowly available nitrogen)

Acceptable Quality	Nitrogen Application by Month - lbs N/1000 sq ft			
	Sept	Oct	Nov	May 15-June 15
Low	0	1	0	0 - 1/2
Med	1	1	0	0 - 1/2
High	1	1	1	0 - 1/2

Program 2. Nitrogen Fertilization of Cool-season Grasses Using Slowly Available Fertilizers (50% or more slowly available nitrogen or WIN)

Acceptable Quality	Nitrogen Application by Month - lbs N/1000 sq ft		
	Aug 15 to Sept 15	Oct 1 to Nov 1	May 15 to June 15
Low	1.5	0	0
Med	1.5	1.5	0
High	1.5 to 2	1.5	0 to 1.5

Important comments about Programs 1 and 2.

1. Fine fescue performs best at 1 - 2 lbs of nitrogen per 1000 sq ft per year.
2. Applications in successive months should be approximately four weeks apart
3. Natural organic and activated sewage sludge products should be applied early in the application periods in Program 2 to maximize their effect.
4. One lb of nitrogen in Program 1, and up to 1.5 lbs of nitrogen in Program 2, may be applied per 1000 sq ft in the May 1 - June 15 period if nitrogen was not applied the previous fall, or to help a new lawn get better established.

Fertilizer Programs for Warm-Season Grasses. Warm-season grasses, including bermudagrass, zoysiagrass, St. Augustinegrass and centipedegrass, perform best when fertilized between April 1 and August 15 in Virginia.

Program 3. Nitrogen Fertilization of Warm-season Grasses Using Quickly Available Nitrogen Fertilizers (less than 50% slowly available nitrogen)

Acceptable Quality	Nitrogen Application by Month - lbs N/1000 sq ft			
	April	May	June	July/Aug
Low	1	1	0	0
Med	1	1	1	0
High	1	1	1	1

Program 4. Nitrogen Fertilization of Warm-season Grasses Using Predominantly Slowly Available Nitrogen Fertilizers (50% or more slowly available nitrogen or WIN)

Acceptable Quality	Nitrogen Application by Month - lbs N/1000 sq ft	
	April/May	June/July
Low	2.0	0
Med	1.5	1.5
High	2.0	2.0

Important notes about Programs 3 and 4:

1. If overseeded for winter color add 1/2 to 1 lb of readily available nitrogen per 1000 sq ft in October and November.
2. Applications in successive months should be approximately four weeks apart.
3. Centipedegrass and mature zoysiagrass perform best at 1 to 2 lbs of nitrogen per 1000 sq ft per year.
4. Improved winter hardiness on bermudagrass will result from the application of potassium in late Aug. or Sept.

Description of cool-season grasses used in Virginia

Kentucky Bluegrass is a medium textured turfgrass best suited to well-drained soils and moderate to high levels of sunlight and management. It can be established from seed or sod. Mixtures or blends of 3 or 4 Kentucky bluegrass varieties are recommended in Virginia since they are more likely to provide good quality turf over the wide range of management conditions. Kentucky bluegrass is best suited for full sun or moderate sunlight conditions under high levels of maintenance in the central and northern Piedmont and areas in and west of the Blue Ridge mountains in Virginia.

Tall Fescue is well adapted throughout Virginia. It has a somewhat coarser texture than Kentucky bluegrass and is well suited for many different turf situations. Varieties of tall fescue have been especially developed for turf. These varieties have come to be called “turf-type” tall fescues. The main management problem with tall fescue is the summer occurrence of *Rhizoctonia* brown patch disease. It is not uncommon for tall fescue sod to contain up to 10 percent Kentucky bluegrass

Fine Fescue— For use in low maintenance areas or in partial to full shade. Summer quality can be poor in open sun and under close summer mowing. Limited research does not indicate any advantage to blending or mixing varieties from the different fine fescues (e.g.; creeping red fescue, chewings fescue, hard fescue or sheep fescue). Fine fescues are best adapted in the Northern Piedmont and areas in and west of the Blue Ridge Mountains in Virginia. Fine fescues sometimes are mixed with Kentucky bluegrass to provide a seed mixture that will perform well in shade and open sun.

Turfgrass Management Table Based Upon Use And Location In Virginia

Grass Species & Recommended Use	Adaptation ¹		Nitrogen (N)	Phosphorus (P ₂ O ₅)	Potash (K ₂ O)	Mowing Height ³	Overseeding Rate ⁴ lbs/1000 sq ft
	Northern Piedmont & Areas West of The Blue Ridge	Southern Piedmont & Eastern Virginia Areas					
Bermudagrass ^{5,6}							
Lawns	NA	A	2-4.5	0-3	1-3	1 1/2-1"	2-10
Athletic Fields	SA*	A	2.5-4.0	0-3	0-3	1/2-1 1/2"	5-10
Fairways	SA*	A	2.5-4.0	0-3	0-4	1/2-3/4"	2-7
Tees	SA*	A	3.0-6.0	0-3	0-4	1/2"	5-10
Greens	NA	SA*	7.0-10 1/2	0-3	0-4	1/4" or less	40-50
Zoysiagrass ^{5,6}							
Lawns	A*	A*	1-2.0	0-3	1-3	3/4-1"	2-10
Tees	A*	A*	2-4.0	0-3	1-3	1/2-3/4"	5-10
Kentucky Bluegrass							
Lawns	A	NA	1-4.5	0-3	0-3	1 1/2-2 1/2"	
Athletic Fields	A	NA	3-5.0	0-3	0-3	1 1/2-2 1/2"	
Fairways	A	NA	2-4.0	0-3	0-3	3/4-1 1/4"	
Tees	A	NA	3-5.0	0-3	0-3	3/4-1 1/4"	
Tall Fescue							
Lawns	A	A	1-4.5	0-3	0-3	2-3"	+
Athletic Fields	A	A	3-4.5	0-3	0-3	1 3/4-2 1/2"	+
Fine-leaf fescues (Red, chewings, hard and sheep fescue)							
Shaded lawns and low maintenance areas	A	SA	1-2	0-3	0-3	1 1/2-3"	
Creeping bentgrass							
Tees	A*	A*	3-5.5	0-3	0-4	1/4"	
Greens	A*	A*	2.5-6	0-3	0-4	3/16" or less	
Perennial ryegrass ⁷							
Lawns	SA	NA	1-4.5	0-3	0-3	1 1/2-2"	+
Athletic Fields	SA	NA	3-5.0	0-3	0-3	1 1/4-2"	+
Fairways	SA	NA	2-4.0	0-3	0-3	3/4-1"	+
Tees	SA	NA	3-5.0	0-3	0-3	3/4"	+
St. Augustinegrass ⁵							
Lawns	NA	SA*	2-5	0-3	0-3	2-2.5"	
Centipedegrass ⁵							
Lawns	NA	SA	1-2.0	0-3	0-3	1-2"	
Buffalograss ⁵							
Lawns	NA	NA	2-3	0-3	0-3	1.5-2.5"	

A = Adapted.
 SA = Semi-adapted (may not persist under normal management).
 NA = Not adapted (better grass species are available for that use).
 1 = Turfgrass species may become more adaptive to a climate through increased management (i.e., irrigation, variety selection, fungicide applications, traffic control, proper fertilization, proper mowing, and supplemental cultural practices).
 2 = Fertilization requirement will depend upon geographical locations and management level, nitrogen source, and soil test results.
 3 = The ability of a specific turf species to tolerate a particular mowing height is dependent upon the variety and time of the year. Raising the mowing height toward the high end of the range during summer stress will help cool season grass tolerance to heat and drought stress. Never remove more than 1/3 of the leaf tissue in any one mowing.
 4 = Mono-stands or blends of perennial ryegrass varieties are satisfactory for winter overseeding of lawns, athletic fields, fairways, and tees at those rates listed. However, a mixture of 65% perennial ryegrass, 30% fine fescue, and 5% bentgrass will produce superior quality on greens and the rate listed for greens is for using this mixture only. Zoysiagrass, St. Augustinegrass and centipedegrass are typically not winter overseeded.
 5 = All varieties of these species go off-color, turning brown at the first frost and remaining dormant until spring.
 6 = The yearly nitrogen requirement will depend upon whether the turf is overseeded in the fall for winter turf.
 7 = Not recommended for planting as mono-stands except under special circumstances.
 * = Requires high levels of management and appropriate variety selection.
 + = May need to be periodically overseeded to maintain adequate density, to repair damaged areas, or to make up for the lack of persistence from year to year.

Ryegrass is available in two types, perennial and annual. Annual (Italian) ryegrass will provide rapid germination and fast growth but will live only 1 year. This, along with poor persistence under adverse conditions, makes annual ryegrass only suitable where a temporary turf is desired. However, there are a number of good perennial ryegrasses available for lawn use. Perennial ryegrass lawns perform best at the higher elevations (>1000 ft) in Virginia. The best use for the perennial ryegrasses for Virginia is in a mixture with Kentucky bluegrass where the perennial rye-grass component is less than 15% by weight. A pure ryegrass lawn is not recommended since summer quality often declines in July and August due to its lack of drought tolerance and susceptibility to heat stress and fungal diseases.

Description of warm-season grasses used in Virginia

Bermudagrass is a warm season turfgrass that is best adapted in eastern Virginia. It does best in open sun and is not shade tolerant. Some varieties do not produce viable seed and are therefore only vegetatively established using sprigs, plugs or sod. Commonly used varieties that are vegetatively propagated include Vamont, Midiron, Midlawn, Tifway, and Tufcote. Typically, seeded-type varieties have had the greatest persistence in eastern Virginia while the more cold hardy varieties (Midiron, Vamont, and Midlawn) have been established on athletic fields and golf course fairways as far west as Roanoke and Charlottesville. Varieties vary greatly in cold tolerance, texture and color. Bermudagrass is sometimes overseeded with perennial ryegrass in early autumn to provide winter color while dormant. However, spring transition back to bermudagrass can be hindered by spring-summer conditions that favor perennial ryegrass growth and delay bermudagrass spring regrowth.

Zoysiagrass is a warm season grass that can be used on lawns, golf course fairways and areas that do not receive concentrated traffic. Zoysiagrass is very suited as a low maintenance turf; it grows slowly and does not recover quickly from severe damage. There are varieties that can only be vegetatively propagated by using sod or plugs. Sprigging zoysiagrass is difficult due to its slow rate of establishment. The more cold hardy varieties like Meyer are adapted from just east of the Blue Ridge mountains to eastern Virginia.

St. Augustinegrass and centipedegrass are both lawn grasses that grow best in the Hampton Roads area of Virginia, benefiting from the coastal climate. Both are vegetatively propagated (stolons, plugs or sod) while centipedegrass can also be established from seed. St. Augustinegrass requires more management and higher nitrogen levels than does centipedegrass. However, these grasses are not as common to coastal Virginia as they would be in more southern states.

Mixtures versus single species or variety

The individual species and the conditions under which they are grown determine whether a pure species, variety or mixture of species or varieties are preferred. Under Virginia conditions these general rules have given best results.

1. Mixtures or blends of adapted Kentucky bluegrass varieties have been superior to single varieties grown alone.
2. In shady areas, adding an adapted variety of creeping red fescue improves the turf.
3. Tall fescue may be grown alone or in mixtures with Kentucky bluegrass, but in mixtures 90% or more of the mixture should be tall fescue.
4. Single varieties grown alone are preferred for all warm season grasses.

When purchasing turfgrass seed, it is extremely important to buy quality seed. Consumer protection programs have been devised to identify quality seed of the varieties recommended by Virginia Cooperative Extension.

Purchasing quality turfgrass seed

The purchase of lawn seed is a long-term investment, because the seed you buy will greatly influence whether you succeed in developing a beautiful lawn that is perennial in nature. It is not possible to evaluate the quality of seed by looking at it. However, information printed on seed packages can help you make a wise choice when buying turfgrass seed.

There are large differences in lawn seed, and it pays to compare. The price you pay for the seed is only a small portion of the total cost of planting, fertilizing, mowing, etc. Don't let low cost be the only factor you use when selecting lawn seed. Choose those varieties that have been tested and have proven to be best suited for your area of Virginia.

Certified seed

The best guarantee of varietal purity is to purchase CERTIFIED SEED. Such seed will contain fewer weed and other crop seed contaminants and will be free of unneeded inert filler. Certified seed of single grass varieties and certain grass mixtures and blends are available in Virginia. Even with uncertified seed, it is still very important to buy seed by variety name. Varietal purity would not be certain, but there would be an indication that a percentage of the seed is of the variety claimed. When seed is purchased by kind (species) only (e.g., Kentucky bluegrass, red fescue, tall fescue, etc.) you have no indication as to variety adaptation or expected performance. Purchasing turfgrass seed without some assurance that it contains adapted varieties should be avoided except where the quality or persistence of the turfgrass stand is unimportant.

Purchasing quality turfgrass seed

When purchasing turfgrass seed there are several questions you need to consider. The following list is offered to assist you in making the best choice of grass for your location:

1. Most types of turfgrass are perennials and are expected to grow back year after year. When you select and purchase grass seeds consider it a long term investment. You usually get what you pay for so consider purchasing a recommended variety that has been tested in Virginia.
2. Deal with a reliable retail store that can answer your questions and provide good information and advice.
3. Factors such as temperature, moisture, and light determine the kinds of grasses that are adapted to your location.

In order to make the best selection, take the time to consider **a few basic questions** such as:

1. In what temperature zone or region of the state will the grass be grown? Examples: Eastern, Northern Piedmont, Southern Piedmont, or Western Virginia.
2. Under what moisture conditions will the grass be grown?

Examples: irrigated or non-irrigated with light sandy well drained soil, loamy deep medium texture soil, or heavy clay soil.

3. Is the area to be planted an open area with full sun, partially shaded or heavily shaded?
4. What type of use will the area have, and how much traffic and maintenance will it receive?

Examples: home lawn with low or high maintenance, commercial business with high visibility, athletic field, or other use.

After gathering this information, consult with a knowledgeable garden center or Extension Service professional and review your turfgrass options.

Over the past several years many new turfgrass varieties have been introduced in the Virginia market. The University of Maryland, USDA, and VA Tech conduct extensive turfgrass variety trials to identify which varieties perform well in the different regions of the state. Performance data from these trials, along with seed quality are reviewed and published annually, and the varieties that have the best performance are recommended. The **Virginia Turfgrass Variety Recommendations** list is available through your local Extension Service office.

The best way to insure you are purchasing quality turfgrass seed is to ask for **blue tag certified**. This insures that the seed has been inspected by an independent third party and has met established standards of quality.

Purchasing quality sod in Virginia

There are several types of sod being grown in Virginia. The basic types are Kentucky bluegrass blends, Kentucky blue grass mixtures, tall fescue Kentucky bluegrass mixtures, bermudagrass, and zoysiagrass. Each of these types of sod is best suited to particular uses and geographic areas of Virginia. Some sod producers grow sod in the Virginia Crop Improvement Association (VCIA) certified sod program, which means that the sod produced must meet established standards of quality.

VCIA certified sod is of high quality, meeting rigid standards requiring pre-planting field inspections, prescribed varieties and mixtures, periodic production inspections, and a final preharvest inspection. This program serves as a marketing tool and provides the consumer with guaranteed standards of quality. Consumers purchasing VCIA certified turf will receive a blue certified turf label as proof of purchase.

VCIA certified turf label (Blue)

High-quality sod is also available outside of the VCIA certified sod program. When purchasing this sod, the consumer is encouraged to be aware of factors which are important in determining sod quality. High-quality sod will contain the best varieties and be free of serious disease, insect, or weed problems. It will be dense, have good color, and hold together well.



