

1  **Turf**

Frank Reilly

Past Lawn Client of a Prince William Master Gardener

2  **Why Turf?**

- Savannahs, Grasslands & Steppes
- Native North Americans
- Italianate Gardens
- Levittown

3  **What is Turf?**

- Short grasses
- Mosses
- Other ground covers
- The dreaded mixture of all of the above!

4  **Why do you need to know turf?**

5  **Why do you need to know turf?**

6  **Why do you need to know turf?**

7  **Why do you need to know turf?**

8  **Why do you need to know turf?**

9  **Poaceae**

- 3<sup>rd</sup> largest family in Plant Kingdom
- Over 8,000 species,
- Important family for food - includes forage, grains, wheat, rice,
- Taxonomy is a nightmare
  - Based on flower and seed parts.
- Only about a dozen make good turf grasses

10  **Grass plant**

- Whole other vocabulary to describe
- Crown at soil level where growth originates (grazing)
- Culm = stem
- 2-ranked arrangement

11  **Grass plant**

- Inflorescence
- Spikelets made of individual florets
- Flower is key characteristic to ID, so to ID a grass, usually need mature seed head

- 12  So it is easiest to Identify by
- Growth habit
    - Tillers (bunch grass)
    - Rhizome(spreading grass)
    - Stolon(running grass)
  - Environmental requirements
    - Cool Season
    - Warm Season
- 13  Growth habits
- Tillers – “bunch grass”
  - Eg. Fescue
- 14  Growth habits
- Rhizome
  - Eg. Bluegrass
- 15  Growth habits
- Stolon
  - Eg. Centipede, Bermuda
- 16  Environmental requirements
- Cool
    - Thrive between 50-75 degrees
    - Requires irrigation
    - Sun or shade
    - Rye, Bluegrass, Bentgrass and Fescue
- 17  Environmental requirements
- Warm
    - Thrive between 85-95 degrees
    - Drought tolerant
    - Full sun
    - Zoysia, Bermuda or Centipede
- 18  We live in a ‘transition’ zone
- 19  Tall Fescue –
- cool season
  - 75 – 85% grow it
  - Bunch-type
  - Deep-rooted for drought tolerance
  - Coarse texture, wide blade (breeding varieties for thinner blade)
- 20  Tall Fescue
- Grows in from full sun to lightly dappled shade
  - Fertility range is from kinda’ poor to doing better
  - 3-4 week germination

- 21  **Kentucky Bluegrass**
- Cool Season
  - Spreading
  - Strong rhizomes
  - Fine texture, thin blade, dark green
  - Requires full sun
  - Some are shade tolerant, but they're stressed
- 22  **Kentucky Bluegrass**
- Shallow roots - Requires more moisture
  - with 2 weeks of dryness, goes into dormancy
  - With 4 weeks of dryness, some dying
  - Some insect and disease problems
  - Takes up to 3 weeks to germinate
- 23  **Kentucky Bluegrass**
- Identification Look at tip for canoe point = Bluegrass
- 24  **K-31**
- Not Kentucky Bluegrass, but a tall fescue developed in 1931
  - Coarse texture
  - "Contractors' Blend"
- 25  **Perennial Ryegrass**
- Bunch
  - Texture and color like Kentucky Bluegrass
  - Special use-type grass
  - Doesn't tolerate hot, dry periods
  - Is durable
  - Germinates quickly (found as part of blend to make us feel better)
- 26  **Creeping Red Fescue**
- Dry soil
  - Shade tolerant
  - Low fertility
  - Fine texture, doesn't stand up to traffic
  - Flops, never get a nice clean- mowed appearance
- 27  **Zoysia**
- Warm season
  - Aggressive stolon
  - Propagated by plugs
- 28  **Bermuda grass**
- Almost a weed for long stolons
  - Thrives under hot dry conditions
  - Straw-colored in winter
  - Does well under low fertility
  - Chokes out weeds

- Few diseases
- Less clippings

29  **Bermuda grass continued**

- propagated vegetatively plugging or sprigging
- Expense of establishment
- Seeded varieties slow to germinate, have a low germination rate
- Bermuda grass – use on ball fields
- It's at its most northernmost edge here (new seed coming)
- Can be overseeded with perennial rye for fall color
  - @PW Waterpark

30

31  **Buying Seed**

- Pays to spend the extra \$ to get good seed
- Germination rate
- Variety
- Weeds
- Noxious weeds
- Date

32  **How Can I Grow Grass?**

- Cultural Conditions
  - Sun 6-8 hours
  - pH 6.2-6.8
  - Well-drained
  - 2 inches of water every 2 weeks
- Use Best Management Practices

33  **Should I overseed or should I renovate?**

- New Construction – means new turf
- 50% rule
- Don't obsess
  - Mostly green rule or "Dashboard Rule"

34  **Should I overseed or should I renovate?**

- 50% rule

35  **Should I overseed or should I renovate?**

- 50% rule

36  **Should I overseed should I renovate?**

- Don't obsess

- Mostly green rule or “Dashboard Rule”

37  **Should I overseed or should I renovate?**

- Don’t obsess
  - Mostly green rule or “Dashboard Rule”
  - This isn’t Augusta
    - If it is we would have greens crews
    - And THEY would know what to do

38

39  **How to plant?**

- Seed
- Sod
- Plug
- Sprig

40  **New Lawns**

- Soil test
- Kill off existing weeds
  - Insolation
  - Herbicide – watch your timing
- Amendments can be added all at once
- Till
- Smooth – roll
- Seed – roll - mulch
- Water – Water -

41  **Renovating lawns**

- Soil test
- Soil amendments as prescribed
- Herbicides if needed – watch the timing
- Rough up the soil
- Seed – mulch
- Roll
- Water

42  **How Much Seed?**

Look in your handout

43  **Managing weeds**

- Use the magic bullet
- There is no magic bullet
- March 15th 6:30-9:30 WEED Class
  - Stonewall High school room 2A

- 44  **Managing weeds**
- Cultural control
  - Maintain density through proper mowing, fertilization
  - Hand digging weeds
  - Chemical control
- 45  **Managing weeds**
- Identify the weed
  - Herbicide selection based on mode of action
  - And weed life history
    - Annual weeds – use pre-emergent
    - Perennial weeds – use post-emergent
- 46  **Crabgrass for example**
- Summer annual
  - Germinates in soil temperature above 50 degrees
  - Full sun
  - Dies with first frost
  - Control with pre-emergent
  - Apply prior to germinate
  - Pre-April 1 (not *Forsythia* but Dogwood)
- 47  **CAUTIONS for Chemical Control**
- Pesticide safety
  - Get the right one – Ask VCE
  - Look for interactions with desirable species
  - Ornamentals and drift
  - not used on new lawns – wait until after 3 mowings when lawn is “established”
- 48  **Best Management Practices**
- Selection
  - Mowing
  - Thatch
  - Fertilization
  - Irrigation
  - Overseeding
- 49  **How much to mow?**
- No more than 1/3 of blade at any one time
  - short clippings are more aesthetic and recycle quicker
  - SHARP BLADE!!!
- 50

51  **Mowing heights**

52  **Thatch**

- Accumulation of woodier parts of plants (crowns, stolons, etc.)
- A bit of thatch is good, acts like mulch
- Bluegrass and Zoysia = thatch problems
- Fescues don't have as much problem

53  **Problem Thatch**

- Above 1 inch is a problem
- Prevents water infiltration
- Roots come to surface (dehydration)
- Harbors pests
- Makes pesticides less efficacious

54  **What to do about Thatch?**

- Core aeration
- Cores help spread bacteria and fungi (composting action)
- Helps alleviate compaction,
- Improves cultural conditions for turf
- De-thatching not usually recommended
- May remove with mechanical rake for small areas

55  **Disease triangle**

- Susceptible host
- Pathogen
- Favorable environment
- Call a MG for help
  - 703-792-7747
- Might need a sample

56  **Disease Treatment**

- Know the disease
- preventative applications may not be the smartest
- don't know if the disease will start
- may not be the best thing to expose yourself to
- doing nothing can be a viable alternative

57  **Irrigation**

- 1 inch per week (slowly, at one time)
- but dependent on grass species, previous rain and temperature
- Water early
  - Less evaporation

- Don't water late
  - disease

58  **Insects**

- White grubs,
  - Japanese beetles,
  - Green June bug,
  - European chafer
- Know their life cycle for best control

59  **Life cycle**

- June adults feeding on plants, into July
- Late July mating time
- Females burrow into thatch layer, lay eggs
- Adults die
- Larvae start feeding on roots in July and August
- As temperatures decrease (September, October), they migrate into soil 8 – 10 inches
- April, May start their way back up, feeding on roots as they go

60  **Control - Chemical**

- Best time is late summer, targeting young grubs which are close to surface and most vulnerable to insecticide
- Pre-water to draw grubs into cool, moist soil, apply insecticide
- All insecticides used are broad-spectrum, do kill worms and beneficial insects that are near or at the surface (but there are others deeper in soil)
- Beware of the endless cycle

61  **Control - Other**

- Milky spore – specific to the Japanese beetle
- Bacteria – takes 2 – 3 years for 100% cover
- Predatory nematodes
- Patience

62  **Fertilization**

- Essential to good stewardship
- Apply it when the plant can use it

63  **Look at the effects of Fertilization**

- Prince William MG Teaching Garden Photo
- Good turf prevents erosion
- Good turf aids water infiltration
- Lowers ambient temperature in summer
- Raises it in winter
- Good turf needs less pesticide

64  **Apply it when the plant can use it**

65  **Fertilization Program**

- Cool season program
- SOD is now SON
- Get a soil test
- Calibrate spreader

66  Enjoy March Madness

- Don't buy that weed 'n feed they advertise
- Loobey doesn't have a good lawn  
and his kids can't play on it

# 2005-2006 Virginia Turfgrass Variety Recommendations

Mike Goatley, Turfgrass Specialist, Virginia Tech  
David McKissack, Research Specialist, Sr, Virginia Tech

The Maryland-Virginia Turfgrass Variety Recommendation Work Group meets each Spring to consider the previous year's data from Virginia and Maryland National Turfgrass Evaluation Program (NTEP) trials and to formulate these recommendations. Maryland and Virginia variety recommendations are identical for Kentucky bluegrass, tall fescue, fine leaf fescue and perennial ryegrass. Bermudagrass and zoysiagrass variety recommendations may differ somewhat due to adaptation and state regulation. To qualify for this recommended list turfgrass varieties; 1) must be available as certified seed or, in the case of vegetative varieties, as certified sprigs or sod; 2) must be tested at sites in both Virginia and Maryland; 3) must perform well, relative to other varieties, for a minimum of two years to make the list as a "promising" variety and for three years to make the recommended category. All test locations in Virginia and Maryland are considered in making these recommendations. The Virginia Crop Improvement Association (VCIA) will accept the 2004-2005 turfgrass mixtures listed below in the VCIA Sod Certification Program. All seed or vegetative material must be certified and meet minimum quality standards prescribed by the VCIA. Many seeding specifications (for municipalities, counties, state and governmental agencies, landscape architects, and professional organizations) state that varieties used for turfgrass establishment must come from this list and that blends or mixtures follow the guidelines for certified sod production. Specifications for state highway seeding are developed separately and may require some species and/or varieties not normally recommended for uses other than roadside seeding. Seed availability may vary between turf seed suppliers. Some species and varieties may have limited adaptation.

**Kentucky Bluegrass** – Individual varieties selected must make up not less than 10%, nor more than 35% of the total mixture on a weight basis. All varieties must be certified. Selections can be made from Category I alone or various combinations of Categories I, II, and III as noted.

## **Category I – Recommended Kentucky Bluegrass Varieties (65–100% on a weight basis)**

Absolute<sup>(4)</sup>, Apollo, Arcadia, Award, Awesome, Barone<sup>(1)</sup>, Beyond, Blacksburg<sup>(4)</sup>, Blackstone<sup>(1)</sup>, Bluechip<sup>(4)</sup>, Bordeaux, Brilliant, Caliber<sup>(4)</sup>, Challenger<sup>(4)</sup>, Champagne<sup>(1)</sup>, Champlain, Chateau<sup>(1)</sup>, Chicago II, Courtyard, Coventry<sup>(1)</sup>, Envicta<sup>(1)</sup>, Everest, Everglade, Excursion, Fairfax<sup>(1)</sup>, Goldrush<sup>(1)</sup>, Impact, Jefferson<sup>(1)</sup>, Liberator, Limousine, Livingston<sup>(4)</sup>, Marquis<sup>(1)</sup>, Midnight<sup>(1)</sup>, Moonlight, North Star<sup>(1)</sup>, NuGlade, Perfection, Princeton 105, Quantum Leap, Rambo, Raven, Rugby II, Serene<sup>(1)</sup>, Shamrock<sup>(1)</sup>, Total Eclipse, and Washington<sup>(1)</sup>.

**Category II – Special use varieties (10–35% on a weight basis)** – If used, must contain at least 65% Category I varieties.

**Shade Tolerant:** Ascot, Brilliant, Champagne, Chateau, Coventry, Liberator, Moonlight, NuGlade, Princeton 105, Quantum Leap, Showcase.

**Low Maintenance Tolerant:** Bariris, Baron, Caliber, Livingston<sup>(4)</sup>, Midnight, and Washington.

**To Enhance Tall Fescue Sod Strength:** Baron, Nottingham<sup>(1,4)</sup>, Wildwood.

**Category III – Promising Kentucky Bluegrasses (10–35% on a weight basis)** – Limited performance data or seed availability. (H) refers to promising performance for medium to high maintenance; (L) refers to promising performance for low maintenance; and (S) refers to promising performance in shade.

Alexa, Arrow, Barrister, Bedazzled, Bluemax, Bluestone, Bluetastic, Blue Velvet, Cabernet, Casablanca, Chelsea, Diva, Dynamo, Freedom III, Ginney, Goldstar, Julius, Mallard, Midnight II, NuDestiny, Royce, Showcase (H,S), Skye, SR 2284, Tsunami, and Voyager II.

**Tall Fescue** – Recommended or promising varieties can be used in the VCIA Sod Certification Program.

## **Category I – Recommended Tall Fescue Varieties (90–100% on a weight basis)**

Arid 3<sup>(4)</sup>, Barerra<sup>(1)</sup>, Barlexus<sup>(1)</sup>, Biltmore, Bingo, Bonsai 2000<sup>(4)</sup>, Bravo<sup>(1)</sup>, Chapel Hill<sup>(4)</sup>, Cochise III, Constitution, Coyote<sup>(1)</sup>, Coyote II, Crewcut II<sup>(1)</sup>, Crossfire II, Dominion<sup>(1)</sup>, Durana<sup>(4)</sup>, Duster<sup>(1)</sup>, Dynasty<sup>(1)</sup>, Empress<sup>(4)</sup>, Endeavor, Falcon II<sup>(1)</sup>, Fidelity, Finelawn Petite<sup>(4)</sup>, Genesis<sup>(4)</sup>, Good-en, Grande, Greenkeeper WAF, Houndog 5, Inferno, Jaguar 3<sup>(1)</sup>, Kalahari, Laramie<sup>(1)</sup>, Lion<sup>(4)</sup>, Magellan, Masterpiece, Millennium<sup>(1)</sup>, Mustang 3<sup>(1,3)</sup>, Olympic Gold<sup>(3)</sup>, Onyx, Padre, Picasso, Penn 1901, Quest, Raptor, Rebel Exeda, Rebel 2000<sup>(4)</sup>, Rebel Sentry<sup>(1)</sup>, Red Coat<sup>(4)</sup>, Rembrandt, Rendition, Renegade<sup>(4)</sup>, Reserve<sup>(4)</sup>, Shenandoah<sup>(4)</sup>,

Shenandoah II<sup>(4)</sup>, Southern Choice<sup>(3,4)</sup>, SR 8250, SR 8300, Stetson<sup>(1)</sup>, Tarheel, Titan 2<sup>(4)</sup>, Titanium, Tulsa<sup>(4)</sup>, TF 66<sup>(1,3)</sup>, Virtue<sup>(1)</sup>, Watchdog, Wolfpack, WPEZE, and Wyatt<sup>(1)</sup>.

**Category II – Promising tall fescue varieties (may be 90–100% of the mixture on a weight basis)**

2<sup>nd</sup> Millennium, Apache III, Avenger, Blackwatch, Blade Runner, Cayenne, Covenant, Davinci, Daytona, Dynamic, Escalade, Expedition, Falcon IV, Finelawn Elite, Firebird Five-Point, Forte, Grande II, Gremlin, Guardian 21, Hunter, Innovator, Justice, Lexington, Matador, Matador GT, Ninja 2, Proceeds 5301, Regiment II, Riverside, Scorpion, Serengeti, Silverado II, Silverstar, Southern Choice II, SR 8550, SR 8600, Tahoe, Tarheel II, Tempest, Titan LTD, Turbo, Ultimate.

**Category III – Kentucky bluegrass varieties that may be mixed with tall fescue (May be 0–10% of the seed mixture):** Abbey, Baron, Merit<sup>(4)</sup>, Nassau<sup>(3,4)</sup>, Nottingham<sup>(4)</sup>, Wildwood and all cultivars from Kentucky bluegrass Categories I, II and III

**Bermudagrass** – Varietal differences in texture and winter hardiness are important considerations. If no notation follows the variety name this indicates it has performed in the top statistical category at both Virginia Tech and Hampton Roads research stations. Varieties with the notation # are only recommended in Southeastern Virginia. Varieties with the \* notation performed in the top statistical category at research trials at Virginia Tech but not at Hampton Roads. Use certified seed of seeded varieties.

**Category I – Recommended vegetatively propagated bermudagrass varieties:** Midfield, Midiron, Midlawn, Patriot, Quickstand, Shanghai<sup>#</sup>, Tifgreen<sup>#</sup>, TifSport<sup>#</sup>, Tifway<sup>#</sup>, Tifway II<sup>#</sup>, Tufcote and Vamont.

**Promising vegetatively propagated bermudagrass varieties:** Aussie Green, Premier, Celebration<sup>#</sup>, GN-1<sup>#</sup>, MS-Choice<sup>#</sup>.

**Category II - Recommended seeded bermudagrass varieties:** Blackjack<sup>#</sup>, Continental<sup>#</sup>, Mohawk<sup>#1</sup>, Princess-77<sup>#</sup>, Riviera, Savannah<sup>#</sup>, Southern Star<sup>#1</sup>, Sundevil II<sup>#1</sup>, Transcontinental<sup>#1</sup>, and Yukon.

**Zoysiagrass** – (Varietal differences in texture and winter hardiness are important considerations)

**Category I – Recommended vegetatively propagated zoysiagrass varieties:** Meyer.

**Category I – Recommended seeded zoysiagrass varieties:** Zenith.

**Category II – Promising vegetatively propagated (V) and seeded (S) zoysiagrass varieties:** Cavalier (V), J-14 (S), J-36 (S), J-37 (S), Marquis (V), Sunburst (V), ZEN-400 (S), and ZEN-500 (S). **Promising for Eastern VA only:** DeAnza (V), El Toro (V), Emerald (V), Jamur (V), Miyako (V), Victoria (V), and Zeon (V).

**Perennial Ryegrass** – (not for use in sod production) Use certified seed.

**Category I – Recommended perennial ryegrass varieties:**

Affirmed, Applaud, Blazer IV, Brightstar II, Calypso II<sup>(3)</sup>, Catalina II, Charismatic, Churchill, Divine, Exacta, Extreme<sup>(3)</sup>, Fiesta 3, Gallery, Gator 3, Grand Slam, Inspire, Jet, Mach I<sup>(3)</sup>, Majesty, Manhattan 4, Monterey II<sup>(3)</sup>, Nexus<sup>(3)</sup>, Pizzazz, Prowler<sup>(3)</sup>, Racer II, Stellar,

**Category II – Promising perennial ryegrass varieties (limited data/availability):**

Barlennium, Brightstar SLT, Citation Fore, Pentium, Pinnacle II, Pleasure XL,

**Fine Fescues** – For use in low maintenance areas or in partial to full shade. Promising varieties have limited performance data or availability as certified seed. Neither blending varieties nor mixing species have been studied extensively in MD or VA. 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). Use only certified seed.

**Creeping red fescue – Recommended or promising varieties:** Promising: Jasper II

**Chewings fescue – Recommended:** Longfellow II, Treasure<sup>(3)</sup>. **Promising:** Ambassador.

**Hard fescue – Recommended:** Berkshire, Chariot, Defiant<sup>(3)</sup>, Discovery, Nordic, Osprey, and Reliant II<sup>(3)</sup>, .  
**Promising:** Heron and Oxford.

**Sheep fescue – Recommended:** No varieties recommended at this time.

**Varieties marked with superscript notations denote the following:**

<sup>(1)</sup> to be considered for removal in 2006 due to declining performance relative to other varieties.

<sup>(2)</sup> to be considered for removal in 2006 due to declining seed quality.

<sup>(3)</sup> to be considered for removal in 2006 due to the absence of recent testing of certified seed lots in MD and VA.

<sup>(4)</sup> to be considered for removal in 2006 due to lack of recent testing in MD and VA.

King George Office  
10069 Kings Highway  
P. O. Box 410  
King George, Virginia 22485-0410  
Telephone 540/775-3062 FAX 540/775-5645  
email - rprunty@vt.edu

## **Turf Tips: How Can I Plant a Lawn?**

**Frank Reilly<sup>1</sup> and Regina Prunty<sup>2</sup>**

---

### **Should I overseed my lawn or start all over again?**

You are the best judge of that, but use these guidelines to make your decision. If you look at a section of your lawn, and you are satisfied with its appearance, than consider overseeding at the proper time (see the table) to help maintain your lawn in its current good condition.

However if you look at the turf in your lawn and it seems to be 30%-50% weeds and/or bare spots you might consider totally renovating that section of lawn. Remember that good turf coverage is not only pretty but it enhances the value of your home, helps to prevent certain insect infestations (such as fire ants and ground bees), and helps prevent erosion from sending your soil to sediment in surface waters.

### **I decided to overseed. What should I do?**

Many of the directions for overseeding are identical to those for starting a lawn from scratch, so read the rest of this sheet for more information. Overseeding requires less seed and much less soil preparation. Select seed that matches the turf you already have, and measure the area to be overseeded. When it is time to overseed (see the table), mow your lawn very short so the seed can make contact with the soil when you spread it. Consider either core aerating or using a slit seeder from an equipment rental company to rough up the soil to receive the seed. Then spread the seed according to the seeding rates found in the table. After seeding, you must keep the seed moist until the grass plants are well established.

This may take two weeks or more depending on the seed and the air temperature. You can mulch the area with one to two bales of salt hay, or clean straw per thousand square feet to help with moisture retention, but you will still have to water the area briefly 1-3 times per day.

### **I need to start my lawn from scratch.**

#### **Where do I begin?**

The most important part of starting a new or renovated turf area is soil preparation. Ask your Virginia Cooperative Extension Agent to help you get a soil test. The test is inexpensive (\$7.00 at the time of this writing) and will give you important recommendations for addition of lime and soil nutrients. While you wait for the soil test results, you can begin to remove other grass or plants from the area to be planted. You can till the area, and then re-till it to kill germinating weed seeds, or you could get an herbicide recommendation from your Extension Agent. Be careful not to use a pre-emergent herbicide, or one with long-lasting effects so it won't interfere with your planting later.

#### **What type of grass should I grow?**

This is a matter of personal preference, but we can offer some guidance. In Virginia, both warm and cool-season grasses can be successfully planted. Warm season grasses such as Bermudagrass, Centipedegrass, Zoysiagrass, and others grow best during the warmer months, go dormant and turn a khaki color during winter, but may remain green

---

<sup>1</sup> Extension Associate – Urban Nutrient Management.

<sup>2</sup> Extension Agent – King George County

during the warm, summer, droughty, months. Not all warm season grasses are able to survive winter cold, so be sure that the variety you select can survive in your area. Cool season grasses such as Bentgrass, Tall Fescue, perennial Ryegrass, and Bluegrass, grow best during the cooler seasons of the year, and are very cold hardy, but may go dormant during the hottest part of the summer. If you live in the western parts of Virginia, you may find that warm-season grasses won't survive the harsh winters. If you live in the Tidewater area, you may find that the warm-season grasses are the most desirable.

Different grasses have different colors, textures, and growth requirements. It is best if you can see some different types of grass turf. Call you Extension Agent, and ask if there any turf plots near you that you could see to help you select a turf type AND ask for help in selecting a suitable grass for your turf. VA Tech has a web page<sup>3</sup> that gives the best varieties of each type of grass grown in Virginia. You can go to this site or ask your Extension Agent for help in selecting a cultivar of the grass you select for your turf. You might have trouble selecting a cultivar from the list and setting out to buy it. Instead decide what kind of grass to buy, and shop with the list of approved cultivars by your side. That way you can select cultivars that are likely to succeed in Virginia.

### **How can I prepare the soil?**

When you get the results of your soil test, you can add the recommended amounts of lime and fertilizer and till these into your soil. Remove large stones and other debris, and level the area to be planted. It is also a good idea to add compost to your soil at this time. To ensure a smooth surface, avoid walking on the prepared area as much as possible until the grass is established.

---

<sup>3</sup> <http://sudan.cses.vt.edu/html/Turf/varietyr.htm>  
or ask your Virginia Cooperative Extension Agent to get you a copy of "VIRGINIA TURFGRASS VARIETY RECOMMENDATIONS."

### **How do I plant the lawn?**

You have several options depending on the type of grass you plan to grow.

**Sodding** - Many grasses are available as sod. Sodding a lawn results in a thick and instant stand of turf, but it can be expensive. The amount of sod you need is determined by the square footage of the area to be planted. You can buy the sod at a garden center if it is a small order, but be sure to ask the garden center when their sod is delivered, and pick it up that day. It doesn't improve with age. Your best bet might be to order your sod from a sod grower. They can probably supply the type of grass you want, and deliver the load to your lawn-to-be.

**Sprigging** - Some types of grasses like Centipedegrass, and Bermudagrass can be planted by "sprigging." Sprigging is incorporating small "sprigs" of grass into the prepared soil. The sprigs are sold by the bushel. Determine the number of bushels that you will need by finding the grass type in the table and calculating from your area to be sown. The sprigs are worked into the prepared soil so that some of the sprig remains above the surface of the soil.

**Plugging** - Zoysiagrass is usually planted by "plugging." Plugs of Zoysiagrass are planted into the soil, and allowed to spread out to cover the area. Plant the plugs on 6-12 inch centers.

**Seeding** - Most grasses are started from seed. Look up the type of grass you want to start in the table below to determine how many pounds of seed you need to seed your lawn. Be sure to purchase certified seed, and examine the label. The percentage of seed for the grass you want to plant should be very high. However, the percentage of weed seed, should be very low – much less than 1%. Imagine how your lawn will look if 1 of every 100 plants that result (1 % weeds) is a dandelion! Also make sure that the seed is fresh. The seed label should have a date on it, and the seed should be less than 12 months past its test date. Finally, make sure that the seed is viable. It should have a high germination rate (higher than 90%). Distribute

the seed over the turf area using a rented seeder, a spreader, or sow the seed by hand. The use of a spreader or seeder will help to ensure a more regular distribution of seed. Tamp the seed into close contact with the soil, and mulch with a bale of salt hay or clean straw per 1000 square feet.

### **Do I have to water?**

Absolutely. No matter which method of planting nor which type of grass; the newly planted grass will require constant moisture for several weeks to become established. You will not need a long deep watering like established lawns, but you will need to moisten the newly planted turf frequently. As often as several times per day if the weather is hot or windy.

### **When should I do this?**

This largely depends upon the type of grass that you choose. Warm-season grasses are most easily established during warm periods of the year. Cool-season grasses are best started during cooler times of the year. Look up the kind of grass you will be starting in the table, and find its best starting time.

### **Then what should I do?**

Allow your new turf a few weeks to become established before you cut it. The new grass will have very shallow roots so make sure that you have a sharp blade on your lawnmower to avoid pulling the new grass plants out of the soil.

### **How can I find out more?**

The best source for information regarding turf establishment and maintenance is your local Virginia Cooperative Extension Agent. There are several publications available from VCE including some articles on the Internet. Internet articles include:

<http://www.ext.vt.edu/pubs/envirohort/426-718/426-718.htm>

<http://www.ext.vt.edu/pubs/envirohort/426-717/426-717.htm>

<http://www.ext.vt.edu/pubs/envirohort/426-719/426-719.htm>

Useful Publications include:

***Establishing Lawns***. Diane Relf, Extension Specialist, Environmental Horticulture, Virginia Tech  
Publication Number 426-718, July 1997

***Maintaining Lawns***. Diane Relf, Extension Specialist, Environmental Horticulture, Virginia Tech  
Publication Number 426-717, July 1997

***Selecting Turfgrass***. Diane Relf, Extension Specialist, Environmental Horticulture, Virginia Tech  
Publication Number 426-719, July 1997

Grass Name	Warm or Cool Season	Planting date Northern Piedmont, areas in and west of the Blue Ridge	Planting date Southern Piedmont and Eastern Virginia	Seeding Rate for Establishment Lbs per 1000 square feet	Seeding rate for overseeding Lbs per 1000 Square feet	Spreading rate for establishment Bushels per 1000 square feet	Planting rate for establishment Plugs per 1000 square feet
Kentucky Blue Grass	Cool	Aug 15 to Sept 15 or March to early April	Sept 1 to Oct 15 or Feb and March	4-6	2-3	Not recommended	Not recommended
Tall Fescue	Cool	Aug 15 to Sept 15 or March to early April	Sept 1 to Oct 15 or Feb and March	6-9	4-6	Not recommended	Not recommended
Perennial Rye	Cool	Aug 15 to Sept 15 or March to early April	Sept 1 to Oct 15 or Feb and March	5-7	3-5	Not recommended	Not recommended
Bent Grass	Cool	Aug 15 to Sept 15 or March to early April	Sept 1 to Oct 15 or Feb and March	0.5 –1	0.5 -1	Not recommended	Not recommended
Bermudagrass <sup>4</sup>	Warm	June 1 to July 15	Late May to Aug 15	1 –1.5	1-1.5	7-10	Not recommended
Zoysiagrass	Warm	June 1 to July 15	Late May to Aug 15	Not available	Not recommended	7-10	1000 - 2000 <sup>5</sup>
Centepede	Warm	June 1 to July 15	Late May to Aug 15	Not available	0.25-0.5	0.75	Not recommended

<sup>4</sup> Bermudagrass is available as pure seed or as unhulled seed. When using unhulled seed, plant 5-10 lbs of seed per 1000 square feet, and plant the seed late in the fall or early in the winter prior to the growing season.

<sup>5</sup> Zoysiagrass Plugs should be planted on 6 to 12 inch centers.