

## RECOMMENDED TURFGRASS CULTIVARS FOR CERTIFIED SOD AND PROFESSIONAL SEED MIXTURES



University of Maryland  
Turfgrass Technical Update  
TT-77 May 2008

Dr. Thomas Turner, Turfgrass Specialist; David Funk, Research Assistant; John Krouse, Research Assistant  
University of Maryland Department of Natural Resource Sciences & Landscape Architecture

During the last decade, numerous new turfgrass cultivars have been developed and released by turfgrass seed breeders. However, while many of these cultivars are adapted to the environmental conditions that prevail in other regions of the country, many are not adapted to the difficult environmental conditions that occur in the transition zone, which includes Maryland and Virginia. Thus, to identify cultivars that will perform well in this region, extensive cultivar trials are evaluated each year at the University of Maryland and Virginia Polytechnic Institute and State University.



The cultivar performance data obtained at various locations in Maryland and Virginia are reviewed annually in a joint meeting of university researchers and representatives of the Departments of Agriculture of both states. The use of recommended cultivars usually results in a turfgrass stand of higher quality and density, greater stress tolerance, lower nutrient requirements, less water usage, fewer pest problems and thus reduced pesticide use.

There has been extensive interest in recent years regarding turfgrass species that have reduced nutrient requirements, especially nitrogen. The two recommended turfgrasses with the lowest nitrogen requirements are the fine fescues and zoysiagrass, while turf-type tall fescue has intermediate requirements. Although Kentucky bluegrass and bermudagrass generally have the highest nitrogen requirements, research has identified several Kentucky bluegrass cultivars that provide fair quality under reduced nitrogen fertility and other maintenance inputs.

The following lists of recommended cultivars represent those that have been performing well in trials in both states over a period of at least 2-3 years. Please bear the following notations in mind as you review the lists:

Cultivars listed in green *italics* are considered promising but have only been tested in Maryland or Virginia for 2 years, or may be difficult to find due to limited seed availability.

Cultivars followed by a numerical notation may be removed from these lists for the following reasons

Cultivar<sup>1</sup> - May be removed from the list due to declining field performance relative to other cultivars

Cultivar<sup>2</sup> - may be removed from the list due to declining seed quality

Cultivar<sup>3</sup> - may be removed from the list due to non-availability of certified seed

Cultivar<sup>4</sup> - may be removed from the list due to the lack of current testing data relative to other cultivars. The cultivar will be removed from the list if it is not included in the next available cultivar trial

### KEY POINTS

Recommended cultivars have been evaluated for performance in Maryland and Virginia.

Maryland Certified Sod must contain only recommended cultivars.

Recommended cultivars provide better quality turf and improve ground cover.

The use of recommended cultivars reduces many pest and management problems.

Recommended cultivars often have lower fertilizer, water, and pesticide needs.

This publication supersedes and replaces the publication 'Agronomy Mimeo 77'.

# CERTIFIED SOD RECOMMENDATIONS

The Maryland certified sod program is administered by the Maryland Department of Agriculture. Rather than naming individual cultivars, many specifications require that certified sod of a particular turfgrass species be used.

Specifying certified sod guarantees that the sod will contain cultivars that are currently recommended by researchers in Maryland and Virginia, will have been seeded in recommended percentages, and will be of high quality (minimal insects, weeds, and diseases). Thus, the need for constantly updated specifications to reflect improvements in cultivars is greatly minimized. Listed below are the recommendations for zoysiagrass, bermudagrass, Kentucky bluegrass, turf-type tall fescue, and fine fescue sod.

## Zoysiagrass Sod

Only eleven cultivars are currently recommended in Maryland for certified sod production due to potential winter hardiness problems of other cultivars. The group listed as vegetative (v) cultivars can only be obtained as sod, plugs, or sprigs. The group listed as seeded may be obtained as seed (s) as well as in vegetative forms.

<i>Cavalier (v)</i>	<i>J-37 (s)</i>	<i>Zen 400(s)</i>
<i>Companion (s)</i>	<i>Marquis (v)</i>	<i>Zen 500 (s)</i>
<i>J-14 (s)</i>	Meyer (v)	Zenith (s)
<i>J-36 (s)</i>	<i>Sunburst (v)</i>	

**Note: See page 1 for explanation of superscripts and italics**

## Bermudagrass Sod

Seven vegetatively (v) reproduced cultivars are currently recommended for use in Maryland for certified sod production due to potential winter hardiness problems of other cultivars. These can only be obtained as sod, plugs, or sprigs. Two cultivars that can also be seeded (s) are recommended as well.

Midfield (v)	<i>Premier (v)</i>	Tufcote (v)
Midiron (v)	Quickstand (v)	Vamont (v)
Midlawn (v)	Riviera (s)	Yukon (s)
Patriot (v)		



Bermudagrass winter hardiness is a major consideration for cultivar recommendation.

# Kentucky Bluegrass Sod

- A minimum of 3 recommended Kentucky bluegrass cultivars must be chosen
- Each cultivar must range from a minimum of 10% to a maximum of 35% of the blend's weight.
- At least 65% of the blend must be from cultivars listed in Category I.
- No more than 35% of the mixture may be comprised of promising cultivars.

Cultivar evaluation trials identify disease-prone cultivars



Leaf spot of Kentucky Bluegrass



Summer Patch of Kentucky Bluegrass

## **Category I: Recommended Kentucky Bluegrass Cultivars (65 - 100% of mixture by weight)**

Apollo	Courtyard	Moonlight
Award	<i>Diva</i>	Nu destiny
Awesome	Dynamo	Nuglade
<i>Barrister</i>	Everest	Perfection
Beyond	Everglade	Princeton 105
Blackstone <sup>1</sup>	Excursion	Quantum leap
<i>Bluestone</i>	Glenmont	Rambo
Bordeaux	Impact	Raven
Brilliant	Liberator	Skye
Cabernet	Limousine	Total eclipse
Champlain	Midnight	Tsunami

## **Category II: Special Use recommended Kentucky bluegrass cultivars (0-35% of mixture by weight)**

### **A. Shade Tolerance**

Ascot	Moonlight	Princeton 105
Brilliant	NuGlade	Quantun Leap
Liberator		

### **B. Low Maintenance Toleran**

Baron	Midnight
-------	----------

## Fine Fescue Sod

- The recommended fine fescue cultivars may be used for the production of certified sod.
- No one cultivar may be more than 40% of the seed mixture by weight.
- Hard fescue must be 40-95% of the mixture by weight.
- Chewings, and creeping red fescue may be 0-40% of the mixture.
- Promising cultivars may not compose more than 40% of the mixture.
- Kentucky bluegrass must 5-40% of the mixture by weight.
- Kentucky bluegrasses must be selected from those eligible for mixing with tall fescue.
- Md. State Highway Administration will not accept sod with creeping red fescue.

## Recommended Fine Fescue Cultivars

The following recommended fine fescue cultivars may be seeded individually or in blends.

Key to table, below:

R) = Creeping red fescue, (C) = Chewings Fescue, (H) = Hard Fescue,

<i>Ambassador ( C )</i>	<i>Fortitude (R)</i>	<i>Predator (H)</i>
Berkshire (H)	<i>Garnet (R)</i>	<i>Reliant IV (H)</i>
<i>Cardinal (R)</i>	<i>Gotham (H)</i>	<i>7 Seas (C)</i>
Chariot (H)	<i>Jamestown 5 (C)</i>	<i>Spartan II (H)</i>
<i>Compass (C)</i>	Longfellow II (C)	<i>SR 3000 (H)</i>
<i>Culumbra II (C)</i>	Nordic <sup>3</sup> (H)	<i>SR5130 (C)</i>
Discovery (H)	Osprey <sup>3</sup> (H)	<i>Wendy Jean (R)</i>
<i>Epic (R)</i>	<i>Oxford (H)</i>	<i>Zodiac (C)</i>
<i>Firefly (H)</i>	<i>Pathfinder (R)</i>	

**Note: See page 1 for explanation of superscripts and italics**

## Turf-Type Tall Fescue Sod

The following recommended turf-type tall fescue cultivars may be seeded individually or in blends:

2nd Millenium	Guardian 21	Rembrandt
Avenger	Houndog 5	Rendition <sup>3</sup>
Biltmore	<i>Hunter</i>	Southern Choice II
Bingo	Inferno	<i>SR 8600</i>
<i>Blackwatch</i>	<i>Justice</i>	SR 8250
Cochise III	Kalahari <sup>3</sup>	<i>SR 8550</i>
Constitution	Magellan	<i>Taos</i>
Crossfire II	Masterpiece	Tarheel II
Davinci	Matador	Tarheel
Daytona	Matador GT	Tempest
Endeavor	Onyx	Titanium
<i>Escalade</i>	Padre	<i>Tombstone</i>
Falcon IV	Penn 1901	Turbo <sup>3</sup>
Fidelity	Picasso	Ultimate
Forte	Quest	Watchdog
Good-En	Raptor	Wolfpack
Grande II	Rebel Exeda	
Greenkeeper WAF	Regiment II	

Note: See page 1 for explanation of superscripts and italics

## Kentucky Bluegrass Cultivars Recommended for Mixing with Tall Fescue or Fine Fescue Sod

The following recommended Kentucky bluegrass cultivars may be mixed with turf-type tall fescue or fine fescue to enhance sod strength during harvesting, up to 10% of the seed mixture by weight:

Baron<sup>1</sup>, Dura Blue, Thermal Blue, Thermal Blue Blaze, and all Category 1 & Category 2 recommended Kentucky bluegrass cultivars on the TT77 lists from 2005 to present.

# PROFESSIONAL SEED MIXTURE RECOMMENDATIONS

Many seeding specifications for municipalities, counties, state and governmental agencies, landscape architects, and professional organizations state that cultivars used for turfgrass establishment must be selected from this publication (TT-77, formerly Agronomy Mimeo 77, or AM-77). Recommended seeding mixtures are shown below, along with cultivars recommended for use with them. State Highway specifications, while employing information included here, are developed separately and may require species and/or cultivars not normally recommended for uses other than roadside seeding.

## Recommended Species for Seeding Blends and Mixtures

### Full Sun High Maintenance Turf

For use in full sun areas that will receive irrigation and intensive management - **Kentucky bluegrass (85-100%) and perennial ryegrass (0-15%)**. A minimum of 3 bluegrass cultivars should be selected, with each ranging from a minimum of 10% to a maximum of 35% of the mixture by weight. No more than 15% of a perennial ryegrass cultivar should be used, as it will predominate if seeded at a higher rate.

### Full Sun Medium to High Maintenance Turf

For use in full sun areas that will tolerate a wider range of management inputs (may not receive irrigation and may receive less intensive management) - **Turf-type tall fescue (95-100%) + 0-5% Kentucky bluegrass**. A single cultivar or a blend of turf-type tall fescue cultivars may be used, and may be mixed with up to 5% of a recommended Kentucky bluegrass.

### Full Sun to Moderate Shade Turf

For seeding locations that have both full sun and shady sites. Two different types of seed mixtures may be selected for these sites. Tall fescue turf will tolerate a wider range of management inputs. Kentucky bluegrass + fine fescue turf will generally require higher maintenance for the survival of the Kentucky bluegrass in the sun, but reduced maintenance inputs are recommended for the maximum survival of the creeping red fescue in the shade.

- 1. Turf-Type Tall Fescue (90-100%) and 0-10% Kentucky Bluegrass** A single recommended cultivar or a blend of recommended turf-type tall fescue cultivars may be used, and may be mixed with up to 5% of a recommended Kentucky bluegrass, or
- 2. Kentucky Bluegrass (80-90%) and Creeping Red Fescue (10-20%)** A minimum of 3 recommended bluegrass cultivars should be selected, ranging from a minimum of 10% per cultivar to a maximum of 35% per cultivar of the seed mixture by weight. One recommended cultivar of creeping red fescue should be selected. More than 20% creeping red fescue may cause a dominance of this species during establishment.

### Low Management and/or Shade Turf

For use on sites that will receive minimal management (no irrigation, low fertility) and/or if the site has partial to full shade.

#### **Fine Fescue (100%)**

One or more recommended fine fescue may be selected. However, neither mixing fine fescue species nor blending cultivars has been studied extensively in MD or VA for compatibility. Limited research doesn't indicate an advantage to either. The fine fescues include creeping red fescue, chewings fescue, and hard fescue, . Creeping red fescue should be considered only for shady sites and not for sunny, low maintenance sites.

## Recommended Cultivars for Seeding Mixtures

The recommended cultivars for species listed in the aforementioned seed blends and mixtures:

**Kentucky Bluegrass:** Same as the cultivars recommended for certified sod production.

**Tall Fescue:** Same as the cultivars recommended for certified sod production.

**Fine Fescue:** Same as the cultivars recommended for certified sod production.

**Perennial Ryegrass:** The recommended cultivars listed below

<i>Accent II</i>	Divine	<i>Palace</i>
Affirmed <sup>3</sup>	Exacta	<i>Palmer IV</i>
<i>All Star 3</i>	<i>Exacta II</i>	Paragon GLR
<i>Amazing GS</i>	Fiesta 3 <sup>3</sup>	Pentium <sup>3</sup>
Applaud	<i>Fiesta 4</i>	<i>Phenom</i>
Apple GL	<i>Fusion</i>	Pizzazz <sup>3</sup>
<i>ASP6004</i>	Gallery <sup>3</sup>	<i>Pleasure Supreme</i>
<i>Attribute</i>	Gator 3	<i>Primary</i>
<i>Barlennium</i>	Grand Slam	<i>Protege GLR</i>
Brightstar II	<i>Grand Slam 2</i>	Racer II <sup>3</sup>
Brightstar SLT	<i>Gray Fox</i>	<i>Regal 5</i>
Buena Vista	<i>Harrier</i>	<i>Repell GLS</i>
<i>Calyпсо 3</i>	<i>Homerun</i>	<i>Revenge GLX</i>
Catalina II	Inspire	<i>Secretariat II GLSR</i>
Charismatic <sup>3</sup>	Jet	<i>Silver Dollar</i>
<i>Charismatic II</i>	<i>Keystone 2</i>	SR 4600
Churchill <sup>3</sup>	<i>Kokomo II</i>	Stellar
<i>Citation Fore</i>	<i>Line Drive GLS</i>	<i>Stellar GL</i>
<i>Dart</i>	Majesty <sup>3</sup>	<i>Transformer</i>
<i>Dasher 3</i>	Manhattan 4 <sup>3</sup>	<i>Uno</i>
<i>Defender</i>	<i>Manhattan 5 GLR</i>	<i>Zoom</i>
<i>Derby Xtreme</i>	<i>1G Squared</i>	

Educating People to Help Themselves Local Governments • U.S. Department of Agriculture Cooperating

The University of Maryland is equal opportunity. The University's policies, programs and activities are in conformance with pertinent Federal and State laws and regulations on nondiscrimination regarding race, color, religion, age, national origin, sex, and disability. Inquiries regarding compliance with Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Educational Amendments; Section 504 of the Rehabilitation Act of 1973; and the Americans With Disabilities Act of 1990; or related legal requirements should be directed to the Director of Personnel/Human Relations, Office of the Dean, College of Agriculture and Natural Resources, Symons Hall, College Park, MD 20742.

