

# Tidewater Turfgrasses: No Easy Choices

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## Variety Evaluation Trials

**National Turfgrass Evaluation Program (NTEP)  
Trials Conducted at Blacksburg, Hampton Roads  
AREC, and College Park, MD**

**These replicated trials are conducted for periods of  
up to 6 years.**

**Data gathered on overall quality, color, spring  
greening, pest pressure, etc.**

**HRAREC is expanding its research area to include  
specific trials to evaluate centipedegrass, St.  
Augustinegrass, and hybrid bluegrass.**

## 2008-2009 Virginia Turfgrass Variety Recommendations

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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. Virginia and Maryland variety recommendations are essentially identical except for specialized grasses and research situations that differ 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 turfgrass blends or 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. Kentucky bluegrasses listed as "Promising" (Category III below) can account for no more than 35% of the blend by weight.

### **Category I – Recommended Kentucky Bluegrass Varieties (65–100% of blend by weight).**

Apollo<sup>(3)</sup>, Award, Awesome, Beyond, Bordeaux, Brilliant<sup>(3)</sup>, Cabernet, Champlain<sup>(3)</sup>, Courtyard, Dynamo<sup>(3)</sup>, Everest<sup>(3)</sup>, Everglade, Excursion, Glenmont, Impact, Liberator, Limousine<sup>(3)</sup>, Midnight, Moonlight, NuDestiny, NuGlade, Perfection<sup>(3)</sup>, Princeton 105, Quantum Leap, Rambo<sup>(3)</sup>, Raven, Skye, Total Eclipse, and Tsunami<sup>(3)</sup>.

**Category II – Promising Kentucky Bluegrasses (10–35% on a weight basis)** – These grasses have performed in the top statistical quality category for a minimum of 2 consecutive years in Virginia and Maryland trials. Seed may be difficult to locate for some cultivars. Note: Durablue, ThermalBlue, and ThermalBlue Blaze are commonly referred to as Hybrid Bluegrasses, but they are classified by USDA as Kentucky bluegrasses. To date they have had better performance in traditionally warmer areas of Virginia.

Alexa II, Aura, Barrister, Belissimo, Bewitched, Bluestone, Diva, Durablue, Emblem, Everglade, Granite, Juliet, Mystere, NuChicago, NuDestiny, Rhapsody, Rhythm, Solar Eclipse, Sudden Impact, ThermalBlue, ThermalBlue Blaze, Touche, Wild Horse, Yankee, Zinfandel

<http://www.ext.vt.edu/pubs/np/2805-1003.pdf>

# Turfgrass Possibilities in the Tidewater

## Cool season

***Best adapted:*** Tall fescue, both in full sun and in partial shade

Very limited adaptation for Ky BG

***Increasing in use?***

- Hybrid bluegrasses (crosses between Ky BG and Texas BG)
- Rhizomatous tall fescues

## Warm season

***Best adapted for sunny lawns:*** bermudagrass, zoysiagrass, St. Augustinegrass, centipedegrass

***Best adapted for shaded lawns:*** St. Augustinegrass

***Adapted to part sun/part shade lawns:*** St. Augustinegrass, zoysiagrass, centipedegrass

Watching for new centipedegrasses, St. Augustinegrasses, and seashore paspalum



# Tall fescue: the best adapted cool-season turfgrass across the state of Virginia.

## Characteristics:

Managed as a bunch grass, but expect to find very short (determinate) rhizomes with all cultivars.

**Very deep root system... avoids drought.**

Medium to coarse leaf texture.

Adapted to a wide range of soils

Excellent color and turf quality potential in fall through spring period

**Requires a very sharp mower blade** →



# Tall fescue selections

## Cultivar choices available:

- Approx. 70 cultivars on “Va/Md Recommended List”
- Approx. 40 cultivars on “Promising List”
- So many choices, so why don’t Virginians regularly plant one of these “best” cultivars?
  - **Availability.**



K-31

Turf-type TF

**Recent arrivals to the marketplace for cool-season turfgrasses... are they worthy of all the attention?**



Hybrid bluegrass



Rhizomatous tall fescue



Rhizomatous tall fescues



# Performance of 'Grande' Rhizomatous Tall Fescue

*Variety, Mean Quality  
Rating 1-9; 9=Highest*

*Variety, Brown Patch Rating  
Brown Patch Rating 1-9; 9=Least*

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Rebel Jr. 6.9

Rembrandt 5.8

**Grande 6.8**

**Grande 5.7**

SR 8600 6.8

Houndog 5 5.4

Mustang 3 6.7

Rebel Jr. 5.4

Rembrandt 6.7

Barlexas 5.2

Barlexas 6.5

Mustang 3 5.1

Millennium 6.6

Rendition (SRX8V9) 4.9

Rendition (SRX8V9) 6.6

*LSD Value, 0.3*

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*LSD Value, 0.9*

*Data from Blacksburg, VA  
trials*



**Grande II RTF at 7 mo after planting**

**Longhorn Hybrid Bluegrass at 7 mo after planting**

**Greatest rhizome numbers by Nov. 2006 harvest at Chantilly were recorded for Longhorn HBG followed by LESCO BG Supreme Blend.**

**Rhizome development in Grande II RTF was not significantly different from LESCO TF Blend by Nov. 2006.**

**Rhizome development did not significantly affect sod strength values in either netted or non-netted sod.**

# Hybrid bluegrasses?

- Crosses between Kentucky bluegrass (*Poa pratensis*) and Texas bluegrass (*Poa arachnifera*).
- Officially labeled by USDA as “Kentucky bluegrasses”
- Touted for improved heat and drought tolerance.

## Research results to date:

- Comparable establishment rates to Kentucky bluegrass?
- require aggressive N fertilization like KBG to reduce disease incidence
- Promise as a seed mix component with turf-type tall fescue
- prospects for success are good for Piedmont and Coastal Plain regions of VA.



**October 16, 2002: 14 days after seeding**

**DuraBlue: 5%**

**Dynasty TF: 60%**

**Ky-31 TF: 75%**

**Thermal Blue: 25%**

**PR borders**

**DuraBlue: 5%**

**Apollo KBG: 60%**



What about hybrid bluegrasses? To date they have proven to be every bit as needy of N fertilization as our best Kentucky bluegrasses in order to minimize disease pressure.

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**KY-31 TF**

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**Dynasty turf-type TF**

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**Apollo KBG**

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**HB 329-1**

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**Thermal  
Blue HBG**

**JUN 16 2004**



**Comparisons of turf quality of tall fescues, Ky bluegrass, and hybrid bluegrasses on Sept. 28, 2005 during extended drought in Blacksburg, VA (0.21 inches of rain for the month)**

**KY-31 TF**

**Dynasty Turf-type TF**

**Apollo KBG**

**HB 329-1**

**Thermal Blue  
HBG**

# Thoughts to date on HBG/RTF's

- 1) Hybrid blue/tall fescue combinations seem reasonable based on expectations in turf quality. Most hybrid bluegrasses currently on the market have a slightly wider leaf blade than Kentucky bluegrass and are very similar in appearance to the turf-type tall fescues. With 'Thermal Blue', the addition of a turf-type tall fescues will result in a darker green turf appearance. The clumping problems associated with mixtures of Kentucky bluegrass and older, forage-variety tall fescues in years past are not likely an issue with this new combination.
- 2) Hybrid bluegrasses possess a strong creeping growth habit due to rhizomes (underground stems). This creeping growth potential is something that most tall fescues do not possess. This should further improve turf density and provide for recuperative potential if a turf stand is damaged.

# Thoughts to date (continued)...

3) The brown patch tolerance will likely improve turf quality during periods when disease pressure is high, possibly reducing the need for fungicide applications. However, HBGs are heavy N feeders and insufficient N can lead to higher incidence of rust, dollar spot, leaf spot, etc. BALANCED nutrition is still critical.

4) The tall fescue component in the mix will enhance spring greening and regrowth. Rhizomatous tall fescues will not express significant rhizome growth until 2<sup>nd</sup> and 3<sup>rd</sup> season of establishment.



## **The most important cool-season tips**

- **Emphasize FALL FERTILIZATION– SON strategy.  $\frac{3}{4}$  seasonal N in fall,  $\frac{1}{4}$  in spring.**
- **Mow high (3-4 inches) in summer and/or don't mow at all.**
- **Either irrigate thoroughly and regularly through the summer as needed to maintain active growth OR not at all (let it go dormant).**
- **Always be prepared for fall renovations following difficult summers.**

Green is certainly what we desire for a lawn and there are definitely color concerns for warm-season turfgrasses.





# Bermudagrass: *Cynodon* spp.

Two species of major importance:

“Common types” (*C. dactylon*) -- establishment from seed is likely, but most cultivars have traditionally been considered inferior in turf quality as compared to vegetative varieties. However, times are changing.

“Hybrid bermudagrasses” (*C. dactylon* x *transvaalensis*) -- sterile grasses that can only be established vegetatively. These grasses have typically provided superior turf density and finer leaf textures.



# Biggest changes in bermudagrasses

- **Introduction of high quality, seeded varieties.**
  - **Many already available, more arriving this year and in 2008.**

**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.

**Category I** – Recommended vegetatively propagated bermudagrass varieties: Aussie Green<sup>#</sup>, Celebration<sup>#</sup>, GN-1<sup>#</sup>, Midfield, Midiron, Midlawn, MS-Choice<sup>#</sup>, 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: Premier

**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.



Celebration

Riviera

04/03/2006

(photo courtesy of Dean Whitehead, Hampden-Sydney College, Farmville, VA).

# Pros and Cons of Bermudagrass

- **Negatives:**
  - Dormancy period (i.e. no color) for approximately 4 months.
  - High mowing requirement during summer.
  - Poor shade tolerance.
  - Extreme winters a possible concern.
  - Aggressive lateral growth makes it a problem weed.
- **Positives:**
  - Very little pest pressure.
  - Outstanding water use efficiency.
  - Dormancy period (i.e. no mowing) for approximately 4 months.
  - Seeded cultivars making it cheaper to establish.
  - Aggressive lateral growth makes it a great turfgrass.

# Some current research on "dormant seeding" of bermudagrass

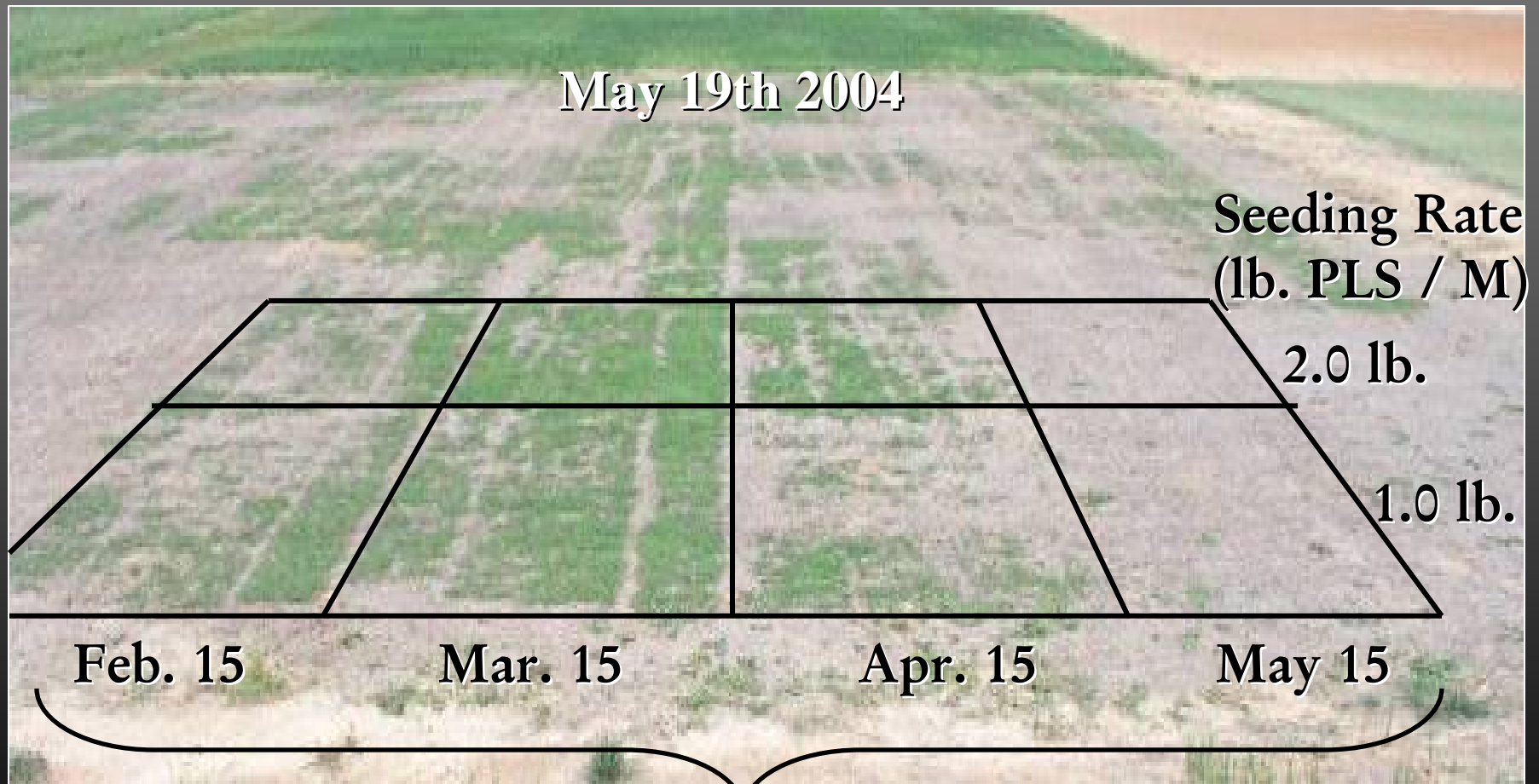


Photo courtesy of Mike Richardson, Univ. of Arkansas



## Zoysiagrass: *Zoysia japonica*



Warm-season grass native to hot, humid regions of SE Asia including China and Japan

Excellent choice for part sun/part shade lawns where a warm-season grass meets user requirements in VA.

Both vegetative and seeded zoysiagrasses are available.





**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), Companion (S) 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).

# Pros and Cons of Zoysiagrass

- **Negatives:**
  - Dormancy period (i.e. no color) for approximately 4 months.
  - Slow lateral growth rate... expensive (and slow) to establish either from plugs, sprigs or seed
  - Very difficult to mow; requires a sharp mower blade
  - Not recommended for overseeding purposes
- **Positives:**
  - Very little pest pressure, particularly weeds.
  - Good water use efficiency.
  - Dormancy period (i.e. no mowing) for approximately 4 months.
  - Slow lateral growth rate... requires less mowing.
  - Better shade tolerance than bermudagrass.
  - Seeded cultivars making it cheaper to establish.



# St. Augustinegrass

## *Stenotaphrum secundatum*

### Primary uses:

- homelawns and general purpose turf in warm/humid zones; it is the number one acreage lawn turf in gulf south states

- 2-3 inch mowing requirement

# Pros and Cons of St. Augustinegrass

- **Negatives:**

- Dormancy period (i.e. no color) for approximately 4 months.
- Aggressive lateral growth rate (but only from stolons... no rhizomes)
- Winter hardiness can be a concern
- Typically more pest pressure than other warm-season grasses
- Not recommended to overseed
- Limited POST herbicides (but that is changing)

- **Positives:**

- Best shade tolerance of warm-season species
- Good water use efficiency.
- Dormancy period (i.e. no mowing) for approximately 4 months.

# Centipedegrass

*Eremochloa ophiuroides*



## Primary Uses:

-low maintenance lawns and general purpose turfs.

-new research trials now underway at Hampton Roads AREC by Dr. Jeff Derr and Dr. Brandon Horvath

# Pros and Cons of Centipedegrass

- **Negatives:**

- Dormancy period (i.e. no color) for approximately 4 months.
- Slow to establish and slow to grow
- Winter hardiness can be a concern
- Poor traffic tolerance
- Not recommended to overseed
- Limited POST herbicides (but that is changing)

- **Positives:**

- Good shade tolerance
- Good water use efficiency.
- Dormancy period (i.e. no mowing) for approximately 4 months.
- Highest quality, lowest maintenance warm-season turf (low mowing requirement, low fertility requirement)
- Seed is available
- Adapted to low soil pH's



# Grass for the future???

- Seashore paspalum (*Paspalum vaginatum*)
  - Fine-textured leaf blades
  - Stoloniferous
  - Bermudagrass-type density, moderately aggressive
  - INCREDIBLY salt tolerant
  - Major concern for this area is its cold tolerance



## What about winter overseeding for color?

- is done regularly on bermudagrass.
- is strongly discouraged on zoysiagrass, St. Augustine, or centipedegrass.
- is highly detrimental to any warm-season grass.
- 4-8 lbs/1000 sq ft typical.

Dormant zoysiagrass

Overseeded bermuda



**Overseeding: beautiful in the beginning, ugly at the end. Transition is rarely easy.**



# Another alternative for “green” grass?

- Painting lawns...
  - Big business in the Atlanta, GA market in drought of 2007.
  - Water soluble paints actually provide an aesthetically pleasing “green grass” look.
  - **Comment from their website:**  
*Grass painting...  
Lol... Seriously, lawns are a waste of time, money, and resources. In the picture above, if they had just planted trees in that massive front yard they wouldn't have to worry about painting or watering. How long until the apocalypse?*



[www.Treehugger.com](http://www.Treehugger.com)

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Posted: Saturday, June 21, 2008

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This podcast describes best management practices in optimizing the growth and health of cool-season lawns during periods of extended heat and drought.



**Related Extension Publications**

- Summer Lawn Management: Watering the Lawn

Download MP3 | 2.44 MB | Duration: | Transcript |

Posted by  
**Mike Goatley, Extension Turf Specialist/Associate Professor  
Crop & Soil Environmental Sciences**  
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