Cool Season Turfgrasses for Equine Uses

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Cool-Season Grasses

- Optimum top growth @ 60-75 ºF (16 to 24 ºC)
- Optimum root growth 40-60 ºF (4 to 16 ºC)
- Little or no winter dormancy
- Continuously active root system
- Vary in heat and drought persistence

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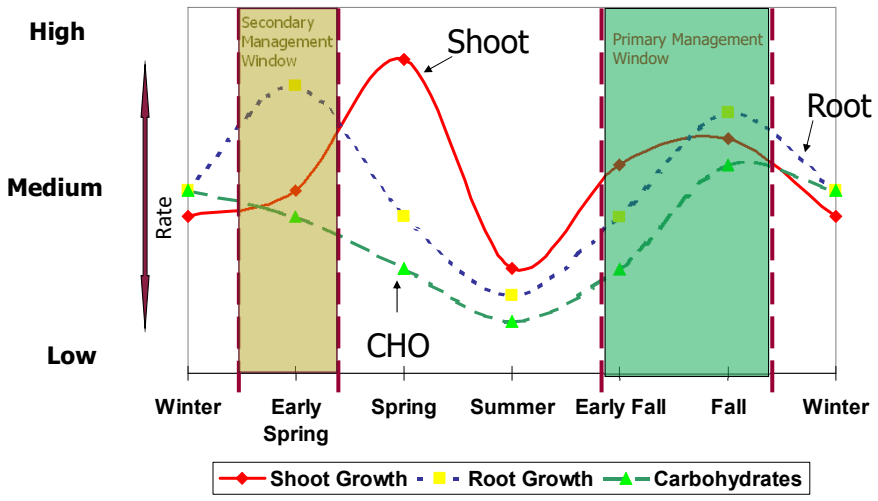
The predominant cool-season grasses to be used for trafficked equine surfaces are:

- Tall fescue
- Kentucky bluegrass
- Perennial ryegrass

Seasonal Growth Patterns in the Northern Hemisphere



Tall Fescue

- **Scientific name:**
  - *Schedonorus arundinaceus* (Robert H. Mohlenbrock); (previously *Festuca arundinacea* Schreb.)

Tall Fescue

- **Description, Adaptation, and Use:**
  - Medium leaf texture with most recent turf-type cultivars matching up well in leaf texture with Ky bluegrasses.
  - Predominantly a bunch-type grass (develops tillers) with breeders continuously striving for improvements in rhizomatous (below-ground stems) growth habit
  - Very stiff bladed, upright growing leaves… requires a sharp mower blade
  - Would have the “highest” recommended mowing height of the cool-season grasses where that applies (not likely a factor for most equine uses)

Tall Fescue

- **Description, Adaptation, and Use:**
  - Adapted to wide range of soil conditions… wet, dry, acid, alkaline
  - Does reasonably well in heat and drought b/c of **drought avoidance**… a very deep root system
  - Moderate to poor cold tolerance
  - Excellent spring greening
  - Many seed sources available; monostands of TF sod are atypical unless it is "netted" and that does not work for equine use; sod marketed as "tall fescue" is commonly mixed with Ky bluegrass at 90/10 or 85/15% by weight mixtures at seeding to gain rhizome knitting of bluegrass

Tall Fescue

- **Cultural intensity:**
  - Low/medium maintenance intensity… but still delivers an aesthetically pleasing canopy
  - 0.5-1 lb N/1000sq ft (or 24-48 kg N/ha)/**active growing month**… Turf-Type tall fescue cultivars respond to higher maintenance levels
  - Particular problems with Brown Patch and Gray Leaf Spot under high maintenance situations (and improperly timed N fertilizer and/or irrigation applications)
  - Little to no thatching tendency

Kentucky bluegrass

- Scientific name: *Poa pratensis* L.

Kentucky bluegrass

- **Description, Adaptation, and Use:**
  - Fine to medium texture; prominently folded vernation
  - Determinate (relatively short) rhizomes, but still an aggressive growth habit… good recuperative potential; will develop thatch over time
  - Exceptional cold hardiness; summer ‘dormancy’ during extreme environmental stress
  - Slower to initiate spring growth than fescue or ryegrass

Kentucky bluegrass

Description, Adaptation, and Use:

- Responds/needs an aggressive management program: 0.5-1 lb N/1000 sq ft(or 24-48 kg N/ha)/growing month, supplemental irrigation, white grub pressure, “summer patch” disease
- Slowest seed germination rates of the cool-season grasses, but the best recuperative potential
- Many seed sources available; blends of KBG sod available in areas of adaptation; often mixed with turf-type tall fescue in warmer climates

Perennial Ryegrass

Scientific name: *Lolium perenne* L.

- **Description, Adaptation, and Use:**
  - Fine/medium texture… mixes well with bluegrasses
  - Bunch-type (produces tillers) with breeders working on creeping cultivars
  - Not noted for tolerance to extremes in heat, cold, or drought (but improvements always being made) and has disease concerns under stressful environments
  - High maintenance requirement comparable to bluegrass… 0.5-1 lb N/1000 sq ft (or 24-48 kg N/ha) per active growing month and supplemental irrigation required
  - Many seed sources available; very limited sod production

Perennial Ryegrass

- **Description, Adaptation, and Use:**
  - The most rapid seed germination of the major grasses
  - Excellent wear tolerance as a mature turfgrass
  - The standard for winter overseeding of bermudagrass
  - Exceptional mowing quality as it is noted for its "striping"

Table 3: Pros and Cons of Cool-Season Turfgrasses for Recreational Areas

Trait	KBG	PRG	TF
Wear Tolerance	G-E*	G-E	E
Recuperative Potential	G	F	F
Quality	E	E	G
Establishment Speed	F	E	G
Drought Resistance	F-G	F	E
Drought Tolerance	G	F	G-E
Insect Tolerance	F-G	F-G	E
Disease Tolerance	G	F	G
Shade Tolerance	F	F	G
Fall and Spring Color	F-G	E	G

*KEY: Excellent (E), Good (G), Fair (F)

https://ohioline.osu.edu/factsheet/str-1

Cool season turfgrasses for sports fields and recreational areas by Sherratt, Street, and Gardner, Ohio State University

Selecting the right grass

- **Climate?**
- **Season(s) of use and intensity of use**
- **Soil**
- **Maintenance budget and equipment**

- **Then refine your selection(s) for the best**
  - **species?**
  - **Blends or Mixtures?**
  - **Review research data from sources such as the USDA's National Turfgrass Evaluation Program (NTEP) and individual university/institute traffic tolerance data**

- **Remember that improvements in plant genetics are always being made.**
- **Management strategies for cool-season grasses will be further detailed by Mike Boekholder in a separate presentation.**

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Questions?

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