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Help Me Out Here

- What is our goal today
- How can I help you in a “short n sweet “ way

Improved Cool Season Grass Species

- **Tall Fescue**
- **Annual Ryegrass**
- **Perennial Ryegrass**
- **Orchard Grass**
- **Timothy**
- **Native Grass**

Improved vs. VNS - Common

- Improved genetics will be selected for a “trait”
- Seed quality is usually better – PLS
- VNS maybe blends
- VNS can be Inconsistence in performance
- Improved may be more \$\$\$\$ pound. But compare apples to apples.

Two Breeding lines of CSG

Forage

- Yield
- Forage quality
- Disease Res.
- Late maturity

Turf

- Persistence
- Slow growth
- Disease Res
- Sward density
- Drought tol.

Warm Season Perennial Grass “Native Grass”

- Big Blue Stem
- Little Blue Stem
- Indian Grass
- Buffalo Grass
- Switch Grass

Hard to manage, slow to establish

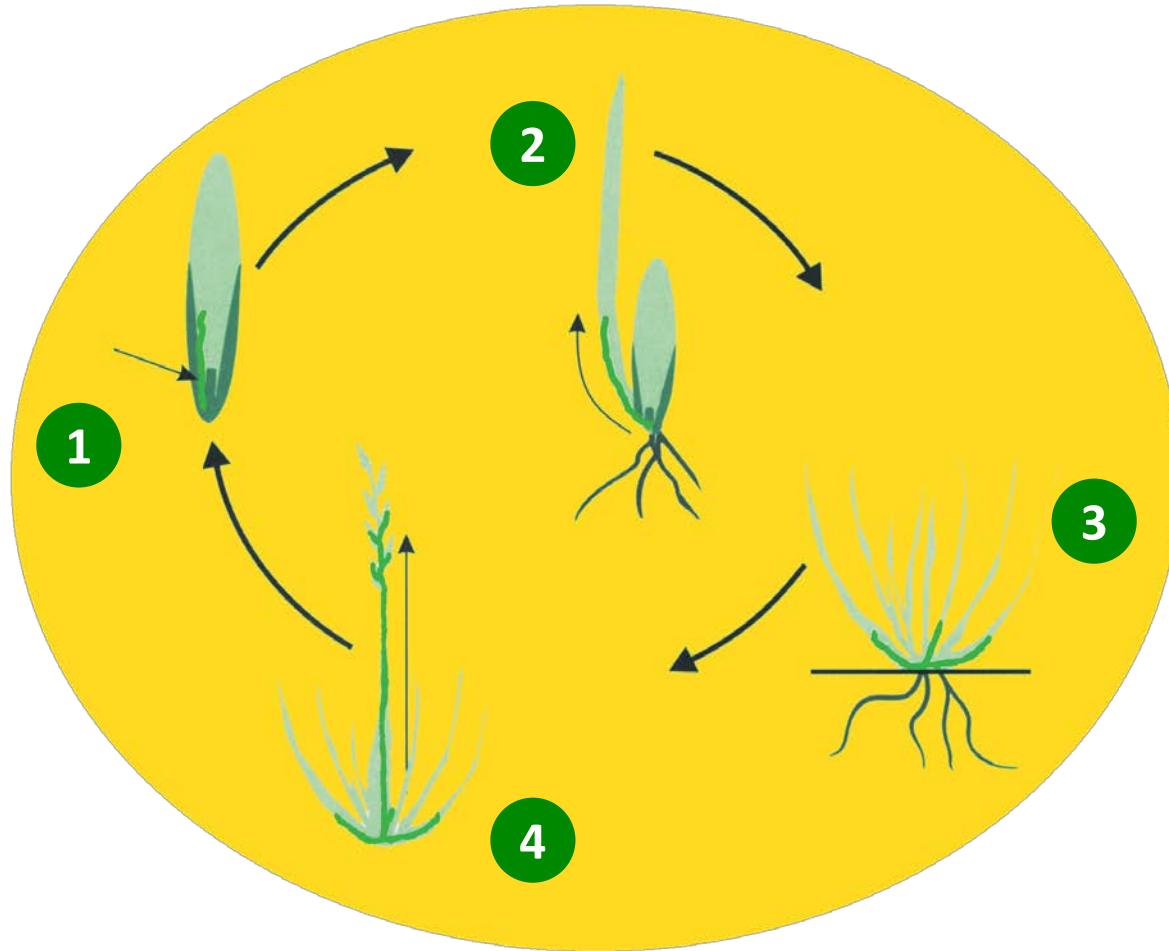
Tall Fescue

- Deep rooted, sod-forming bunchgrass with good drought tolerance.
- Highly adaptable species that grows well in wet or dry conditions
- Tolerant of low fertility soils **and acidic soils**
- Grows well on light and heavy soils
- Generally not affected by insects and disease
- High dry matter production within one year of establishment and has a long growing season
- Responds well to optimum fertility levels.
- The most wear resistant cool season grass and will persist for years!

Tall Fescue (disadvantages)

- Common varieties e.g. Kentucky 31, have a toxic endophyte that is toxic to animals!
- Endophyte infected plants hinder animal performance
- Typically rough leaved making it highly unpalatable
- Animals are reluctant to graze
- Commons have higher lignin content in leaves which make it much less digestible.

Endophyte Life Cycle



Soft-leaved “Endophyte Free” Tall Fescue

- Have similar staying power and versatility of the fescue species but are much more readily eaten by livestock - wildlife.
- Bred for softer and narrower leaves,
- Higher palatability, lower lignin content = “higher intake”
- “Lower lignin” content in the leaves improves digestibility
- Drought resistant, but still not as drought resistant as endophyte infected tall fescues.
- Improved varieties do establish very “much higher stand densities”.

Tall Fescue Management

- A great choice for growers who want grass that is persistent and will yield (stay green) even in drought conditions.
- VERY IMPORTANT TO USE “IMPROVED FESCUES”-for just about any application involving feeding livestock – wildlife (palatability issues as well as toxicity issues”.
- Leave at least 3-4 inches of stubble to protect stem bases where carbohydrates are stored.

Soft Leaf

Rigid Leaf



Ryegrass-General

- Three types Perennial , Italian, Annual
- Most widely grown cool season grass in the world.
- Fast to establish
- *Needs good fertility and moisture to persist thru summer, winter*
- In the past, use in North America was limited because existing varieties were only adapted to regions with milder climates.
- Breeders have made great improvements on this and introduced much more persistent varieties for the more intense climates.

Annual Ryegrass

- Annual ryegrass is established rapidly
- In a lot of contractor mix at high %
- Low cost per pound
- True Annuals- produce large amounts seed the first year and then die.
- If a mix is used ,watch seed tags and limit ARG to less than 20% of mix

Orchardgrass

- Reliable standby-most of US.
- Good species for light and shallow soils
- Orchard grass has good heat and drought tolerance, (does like moisture).
- It is also very winter hardy and persistent
- Improved varieties are later heading and offer much higher forage quality.
- Improved varieties are also much higher yielding and much more palatable to livestock as you get into the summer months.
- Improved varieties have a much higher “leaf to stem” ratio.

Orchard Grass (disadvantages)

- Stands get clumpy with age and shorten stand life (OG tillers a lot but the tillers are larger, pushes out other species.
- Not tolerant to close grazing or close cutting because of location of energy reserves
- Susceptible to leaf diseases
- Generally, not adapted to wet areas

Orchardgrass Management Issues

- Orchard grass is one of the earliest maturing grasses
- Requires higher management and frequent cutting
- Orchard grass is susceptible to close grazing and mowing, leave stubble 3-4" or it will not persist more than a few years
- It prefers "well drained soils" . Does not like excessive wetness.
- Cannot be managed as hard and often as fescues (energy reserves)

Timothy

- Latest heading of cool season grasses.
- Works well on wet, cool, peaty , heavy textured soils.
- Excellent winter hardiness but poor drought and heat tolerance
- Stand production and persistence will decline severely under severe heat and drought stress

Timothy-Management Issues

- Timothy is latest heading of all cool seasoned grasses and is excellent for hay production.
- Timothy is not competitive against other grasses in mixes.
- When cutting or grazing, leave at least 4 inches of stubble to keep from removing young tillers or corms.
- Good match for using with clover because the clover flowers later than alfalfa.

Bromegrass

- The Brome genus is a large family of varied grasses.
- Bromegrass in general requires high fertility levels and well drained soils.
- “Great hay for the horse industry.”
- Species in general are only fair in winter hardiness. although selected varieties are extremely winter hardy and persistent.
- Tend to be very palatable.
- Bromegrass in general do not do well when planted in companion with other grasses.
- Drought resistant and heat tolerant.

Bluegrass

- Long lived cool season
- Short to medium height
- Grows best in cool moist weather on fertile soils
- Likes frequent, close mowing
- Forms a dense sod
- Excellent “hole filler”
- Reproduces by seed and rhizomes

Summary

Perennial Grass Selection

- Orchard grass: Shallow and poor soils with no water logging problems
- Tall Fescue: Deep soils and the ones prone to water logging
- Timothy: wetter heavy soils, low persistence
- Brome grass: best in light soils, slow to establish
- Annual ryegrass: fast establishment , not persistent
- Bluegrass: sod forming, easy to manage

Legumes

- Red Clover – 2-4 year production
- Ladino Clover – (white clover) 5+ yr production
- Alsike clover – wet areas
- Sweet clover – good soil builder
- Birdsfoot trefoil – slow to establish , long lived
- Hairy Vetch – highest N producer , hard seed

Legume Management

- Soil PH has to be 6.5
- Available soil calcium has to be 65%
- Will provide N for grass
- Should not be more than 30% of mix

Wildlife Management

- A mixture of grass , legume ,forbs, (Kitchen Sink)
- Endophyte free (friendly) fescues
- Pollinators areas ?

Cost Share ?

NRCS

Follow “Their Guidelins”

Questions!!!!

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