Welcome to our Zoom Webinar Series
Watering Wisdom: Growing a Healthy Lawn with Less Water

Part 3: Turfgrass Species for Low-Input Minnesota Lawns
The webinar will begin shortly
Future Webinars

• Lawn Care Best Management Practices
  Tuesday, September 8, 2020 at 2:00 p.m.

• Winterizing Your Lawn
  September 29, 2020 at 2:00 p.m.
Using Zoom

• Use Q&A to ask questions
  • Mouse over bottom of Zoom window to access Q&A
• Chat is disabled
• Live transcript can be turned off depending on device
Watering Wisdom: Growing a Healthy Lawn with Less Water

Turfgrass Species for Low-Input Minnesota Lawns

Presenter: Eric Watkins
What is a low-input lawn?

- Water
- Fertilizer
- Pesticides
- Mowing
Turfgrasses for Minnesota lawns

- Kentucky bluegrass
- Perennial rye grass
- Tall fescue
- Fine fescues
  - Strong creeping red fescue
  - Slender creeping red fescue
  - Chewings fescue
  - Hard fescue
  - Sheep fescue
Kentucky bluegrass

Most popular turfgrass in northern U.S.

Lawns, golf courses, parks, and athletic fields

Positives
- Aesthetics
- Recuperative ability
- Winter hardiness
- Mowing quality
- Seed or sod
Kentucky bluegrass

Negatives
- Dormancy during drought
- Heat stress intolerance
- Shade performance is generally poor
- Disease susceptibility
Perennial ryegrass

Used on home lawns, parks, and golf fairways

Positives

- Quick germination and establishment
- Endophyte infection

Negatives

- Winter hardiness
- Summer stress tolerance
Tall fescue

Introduced in United States as a forage grass

First used as turf in 1940s and 1950s

Uses

Home lawns
Athletic fields
Golf course roughs
Parks
Tall fescue

Positives
  - Drought avoidance
  - Wear tolerance
  - Disease resistance

Negatives
  - Ice cover damage
  - Leaf texture
  - Slow green-up
  - Perceptions
Fine fescues

Shade or sun

Greater drought tolerance

Slow vertical growth rate

Main types
  Bunch type
  Rhizomatous
<table>
<thead>
<tr>
<th>Species</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Festuca rubra</em> ssp. <em>rubra</em></td>
<td>strong creeping red</td>
</tr>
<tr>
<td><em>Festuca rubra</em> ssp. <em>littoralis</em></td>
<td>slender creeping red</td>
</tr>
<tr>
<td><em>Festuca rubra</em> ssp. <em>commutata</em></td>
<td>Chewings fescue</td>
</tr>
<tr>
<td><em>Festuca brevipila</em></td>
<td>hard fescue</td>
</tr>
<tr>
<td><em>Festuca ovina</em></td>
<td>sheep fescue</td>
</tr>
</tbody>
</table>
Fine fescues-bunch type

Hard fescue (*Festuca brevipila*)
- High turf quality, drought tolerant, dark green color

Chewings fescue (*Festuca rubra* ssp. *commutata*)
- Excellent density, aggressive, tolerant of short mowing heights, shade tolerance

Sheep fescue (*Festuca ovina*)
- Lowest maintenance, bluish-green color
Fine fescues-rhizomatous

Strong creeping red fescue (*Festuca rubra* ssp. *rubra*)
   Most common, good mixed with bluegrass, less aggressive, shade tolerance

Slender creeping red fescue (*Festuca* ssp. *littoralis*)
   Compact growth, tolerant of short mowing heights, good salt tolerance, shade tolerance
Wear resistance

High

Tall fescue
Perennial ryegrass
Kentucky bluegrass
Fine fescue

Low

Turgeon, 2005
Establishment

Fast

Perennial ryegrass
Tall fescue
Fine fescue

Slow

Kentucky bluegrass

Turgeon, 2005
Shade tolerance

High

Fine fescue
Tall fescue
Kentucky bluegrass
Perennial ryegrass

Low
Disease resistance

High

Tall fescue
Fine fescue
Kentucky bluegrass
Perennial ryegrass

Low

based on Turgeon, 2005
Winter hardiness

High

Kentucky bluegrass
Fine fescue
Tall fescue
Perennial ryegrass

Low

Turgeon, 2005
Winter damage

Perennial ryegrass

Fine Fescue
Drought tolerance

Good

Tall fescue

Fine fescue

Kentucky bluegrass

Perennial ryegrass

Poor
Testing grasses for drought tolerance

1. No irrigation
2. Prevent rainfall from reaching plots
3. Deficit irrigation
National Turfgrass Evaluation Program drought tolerance trial

Five locations in U.S.

Kentucky bluegrass and tall fescue

Three levels of irrigation
  0% Evapotranspiration
  25% Evapotranspiration
  75% Evapotranspiration
Next steps

• Purchase seed
  • Use data whenever possible
    • turf.umn.edu
    • ntep.org

• Seeding
  • August or early September is ideal
  • Dormant seeding in November works well in Minnesota
  • Spring seeding may require herbicide application

• Follow best practices for turfgrass establishment
  • https://extension.umn.edu/lawns-and-landscapes/lawn-care
Mixing and blending seed

*Mix*: 2 or more species

*Blend*: 2 or more cultivars of the same species

Provide a more resilient turf stand
   - Complementary tolerances to common stressors
   - Genetic diversity

Difficult to find good data on mixtures
Fine fescue mixtures

More sun than shade
- Hard (60%)
- Chewings (20%)
- Strong creeping red (20%)

More shade than sun
- Chewings (60%)
- Strong creeping red (20%)
- Hard (20%)
Summary

Several cool-season turfgrasses can be utilized in Minnesota for low-input lawns.

Use of low-input turfgrasses such as tall fescue and fine fescues can save water.

Mixing turfgrass species can help provide a more resilient lawn.
Questions?

Please use the Q & A feature in Zoom to ask any questions you have.

Please join us for our future webinars
sevans@umn.edu
Twitter - @WaterWiseShane