

TURFGRASS EVALUATIONS

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INTRODUCTION

Evaluation of different turfgrasses was initiated at the Dickinson Research Extension Center (DREC) in the spring of 1993. This initial planting has been expanded twice and now includes a total of 35 varieties of Kentucky bluegrass, fescues, bentgrasses, alkaligrasses and buffalograss.

The main purpose of establishing these turfgrass trial plots is to evaluate turf development under southwest North Dakota growing conditions. Evaluations are based on turf density, absence of weeds, texture, response to pests and pest control measures.

A lawn renovation evaluation was initiated this year. Several mixtures and individual grass varieties were planted and evaluated for their use in a lawn renovation project.

The turfgrass plots at the DREC have been a very useful educational aid in responding to local homeowner questions on turf varieties for southwestern North Dakota. Homeowners can see first-hand how the grasses are performing.

MATERIALS AND METHODS

Turf plots were established in 1994 and 1996. These individual grasses have been evaluated since their

establishment in southwest North Dakota growing conditions. The lawn renovation project features these varieties that have been under evaluation at the DREC to evaluate performance for specific situations.

Plots are normally fertilized twice each year--spring and fall--with Harmony 14-3-6 and Cenex commercial lawn fertilizer 32-6-6.

Varieties planted in 1994 included:

- 'Rebel II' Tall Fescue
- '1757' Kentucky Bluegrass
- 'Rebel Jr.' Tall Fescue
- 'Touchdown' Kentucky Bluegrass
- 'Palmer II' Perennial Ryegrass
- 'Jamestown II' Chewing Fescue
- 'Covar' Sheep Fescue
- 'Ram I' Kentucky Bluegrass

Varieties planted in 1996 included:

- 'Arid' Tall Fescue
- 'Wrangler II' Tall Fescue
- 'J-100' Idaho Bentgrass
- 'J-101' Idaho Bentgrass
- 'J-102' Idaho Bentgrass
- 'Caliber" Kentucky Bluegrass
- 'Nassau' Kentucky Bluegrass
- 'Amazon' Kentucky Bluegrass
- 'Glade' Kentucky Bluegrass
- 'Nustar' Kentucky Bluegrass
- 'Limousine' Kentucky Bluegrass

- 'Fylking' Kentucky Bluegrass
- 'Salty' Alkaligrass

The lawn renovation project started with a 1997 fall application of Roundup. Three additional treatments of Roundup were made in the spring of 1998. Because of the difficulty in controlling the existing grass, our planting was delayed until June 30. The new plots were sprayed with Trimec and Confront on September 6. All plots were fertilized in the fall.

Based on the observations of the DREC turf plots, we developed turfgrass mixture recommendations to suit different situations in southwest North Dakota. The following recommendations have been made available to homeowners, local nurseries and others through a "Western North Dakota Turfgrass Mixture Recommendations" publication:

***Jerry's "Classic Choice" Blend (high quality turf)**

40% South Dakota Common Kentucky Bluegrass

30% Touchdown, Parade or Ram 1 Kentucky Bluegrass

30% Reliant Hard Fescue

***Jerry's "Desert" Blend (low maintenance turf)**

50% Fairway or Ephraim Crested Wheatgrass

40% Bonanza, Ariba or Amigo Tall Fescue

10% Pennifine Perennial Ryegrass

***Jerry's "Challenger" Mix (problem soils turf)**

40% South Dakota Common Kentucky Bluegrass

20% Reliant Hard Fescue

20% Jamestown II Chewing Fescue or VNS Sheep Fescue

20% Glade or Parade Kentucky Bluegrass

***Jerry's "Low-Sun" Mix (turf for shady areas)**

40% Dawson Fine Fescue

20% Reliant Hard Fescue

20% Touchdown or Glade Kentucky Bluegrass

20% Ram I Kentucky Bluegrass

***Jerry's "Country Special" Blend (farm yard turf)**

40% Fairway or Ephraim Crested Wheatgrass

30% Bonanza, Ariba or Arid Tall Fescue

30% South Dakota Common Kentucky Bluegrass

The late planting date and serious weed pressure certainly impacted the development of these renovation turf plots. Another impact was heavy rain shortly after planting, resulting in some seed washout.

The most serious weeds were Common Purslane, Dwarf Mallow and Redroot Pigweed. Applications of Trimec and Roundup were very effective.

Grass mixture varieties are now available locally thanks to the cooperation and assistance from Buck and Bev Haas at Taylor Nursery.

RESULTS AND DISCUSSION

Since establishment, certain varieties of grass have dominated from the standpoint of establishment, turf density and overall quality. The first year was extremely interesting. Standout varieties included South Dakota Common Kentucky Bluegrass, Ram I Kentucky Bluegrass, Jamestown II Chewing Fescue, Touchdown Kentucky Bluegrass and Reliant Hard Fescue.

The 1994 planting experienced extreme weed pressure and it was thought that we would have to replant the following spring. To our surprise the following year, the weeds disappeared and turf plots filled in quite nicely.

The 1996 plots have been hand watered since establishment, and their performance has been very good with limited watering.

CONCLUSION/IMPLICATIONS OF RESEARCH

The DREC turf plots have proven to be a very effective method of providing local homeowners with turfgrass variety information that relates directly to existing growing conditions. The opportunity to see the different grasses first-hand certainly helps homeowners determine the type of grass to plant.

Evaluations of turfgrasses will continue at the DREC because of the amount of interest in the plots that has been generated by the general public.

Efforts are being made to create additional public awareness of the turf plots and other horticultural plantings. Future considerations of turf studies will be to evaluate grasses that may withstand drought and heat stress, tolerate high Ph soils or heavy clay-textured soils.

1998 Dickinson Research/Extension Center Turfgrass Evaluations

Turf grasses were rated on a 1 to 10 point system based on density, texture, appearance and reactions to diseases, insects and weeds. Ratings are as follows (10 is most desirable):

Variety	Rating	Variety	Rating	Variety	Rating
Ram I Kentucky Bluegrass	10	Caliber Kentucky Bluegrass	7.0	Country Blend	7.0
Touchdown Kentucky B.	9.5	Nassau Kentucky Bluegrass	8.0	Bonanza Tall Fescue	7.0
Palmer II Perennial Ryegrass	0	Amazon Kentucky Bluegrass	8.5	Fairway Crested Wheatgrass	9.0
Rebel J. Tall Fescue	9.0	Glade Kentucky Bluegrass	8.5	Jamestown II Chewing Fescue	6.5
1757 Kentucky Bluegrass	9.0	Nustar Kentucky Bluegrass	8.5	Reliant Hard Fescue	6.5
Rebel II Tall Fescue	7.5	Limousine Kentucky B.	8.5	SD Common Kentucky B.	6.5
Jamestown II Chewing Fescue	9.0	Fylking Kentucky Bluegrass	8.5	Parade Kentucky Bluegrass	7.0
Arid Tall Fescue	7.5	Salty Alkaligrass	4.0	Park Kentucky Bluegrass	8.5
Wrangler II Tall Fescue	8.0	Classic Choice Blend	7.0	Glad Kentucky Bluegrass	4.0
J-100 Idaho Bentgrass	7.5	Desert Blend	7.5		
J-101 Idaho Bentgrass	7.5	Challenger Mix	7.5		

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