

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.

Turfgrass plots are included in the annual horticulture tour held during the DREC summer field day. Plots have also been used for some special group tours, golf course representatives, park districts and area homeowners.

Materials & Methods

All turf plots were hand-planted and replicated studies. Weeds were controlled through mowing and herbicide applications of Trimec and Confront. Major weed problems were common mallow, common purslane, common lambsquarters and redroot pigweed. 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 1993 included:

- 'Reliant' Hard Fescue
- 'Valda' Hard Fescue
- 'VNS' Red Top
- 'Cindy' Creeping Red Fescue
- 'VNS' Sheep Fescue
- 'SD Common' Kentucky Bluegrass
- 'Supranova' Bluegrass
- Buffalograss
- '9032' Hard Fescue
- 'Bancuda' Red Top
- 'KY 31' Tall Fescue
- 'Triple A' Tall Fescue
- 'Amigo' Tall Fescue
- 'Ariba' Tall Fescue
- '9061' Colonial Bentgrass
- 'Exeter' Colonial Bentgrass

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
- 'Limosine' Kentucky Bluegrass
- 'Fly King' Kentucky Bluegrass
- 'Salty' Alkaligrass

The first year, turf plots were watered with a traveling tractor sprinkler, however an underground irrigation system was put in place in the fall of 1994.

The 1993 turf planting was sprayed with Roundup this fall with plans to establish an evaluation of recommended grass mixtures or a new turf variety plot.

Results & 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. Due to a shortage of labor, these plots were established under marginal conditions resulting in the opportunity for us to evaluate plots as far as drought tolerance, heat and moisture-stress. Standout varieties included South Dakota Common Kentucky Bluegrass, Ariba and Triple A Tall Fescues, Valda and Reliant Hard Fescues.

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.

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

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

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.

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