

DEVELOPMENT OF NORTHERN ECOTYPES OF FOUR NATIVE WARM-SEASON GRASSES FOR CONSERVATION USES.

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Alternative release procedures have been utilized in the development of selected class natural releases of Bad River blue grama *Bouteloua gracilis*, Bismarck buffalograss *Buchloe dactyloides*, Red River prairie cordgrass *Spartina pectinata*, and Badlands little bluestem *Schizachyrium scoparium* for use in the Northern Great Plains. The prairie cordgrass is a composite of four sources, including two from North Dakota, and one each from South Dakota and Minnesota. These plants were selected for uniform phenology, improved vigor, leafiness and seed production. Rhizome material were planted with a tree planter to establish a 2-acre increase field in the spring of 1994. The little bluestem is a composite of 68 different sources selected from an assembly of 588 accessions from western North Dakota and western and central South Dakota. These 68 sources had similar phenology and were rated above average for vigor, leafiness, seed production and disease resistance. The blue grama originated from a native harvest in west central South Dakota and has shown excellent seedling vigor and forage production. The buffalograss is a composite of two sources from central North Dakota. The population is predominately male, and little or no seed is produced. Propagation is vegetative. Stolons from these plants may grow 12 inches the first year on a good site. These four new selections represent the first time that adapted material has been available for conservation planting of these species in the northern region of the Northern Great Plains. Genetic diversity is one of the goals in native ecotype development.

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