

Warm-Season Grasses for the Northern Great Plains - Results of a Fourteen Year Study.
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Six field evaluation plantings were established in 1982-1986 to determine the adaptation and performance of varieties and experimental lines of selected warm-season grass species in the northern Great Plains. Plant performance is reported on plantings established near Fergus Falls (1982) and Rochester, Minnesota (1984); and Lake Andes (1983) and Ft. Pierre, South Dakota (1986). Thirty-seven varieties/accessions of nine species were evaluated in randomized complete block design replicated three times. All sites were burned annually for five years after establishment and periodically thereafter. The plots were not hayed or grazed, and no fertilizer was applied. The plantings were evaluated each year for six years. Four of the six sites were burned and re-evaluated in 1996. The effect of seed origin on performance and persistence continues to be a key factor. Persistence of northern origin entries was good at all sites and forage production reduced at the most southern sites. Weak stands of all species noted in the initial study continued to decline and were quickly populated by the more aggressive species such as switchgrass, big bluestem, little bluestem and sideoats. Current stands of northern and southern origin varieties are about equal, the exception being the most southern origins which are very poor to non-existent. It is expected that any stress from haying or grazing would further reduce the stands of the southern origin varieties. Forage production was variable and closely correlated to rainfall patterns.

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