



United States Department of Agriculture
Natural Resources Conservation Service
Plant Materials Program

'Pierre'

Sideoats Grama

Bouteloua curtipendula

A Conservation Plant Release by USDA NRCS Plant Materials Center, Bismarck, North Dakota



The USDA Natural Resources Conservation Service (NRCS) and the South Dakota State Agricultural Experiment Station cooperated in the informal release of 'Pierre' (PM-SD-251) sideoats grama in the mid 1960's. It is recommended for use in pasture and range seedings in the Northern Great Plains.

Sideoats grama (*Bouteloua curtipendula* [Michx.] Torr) is a native, perennial, warm-season grass found throughout most of the United States. It is a major component of rangeland of the central and southern Great Plains, and commonly grows in association with big and little bluestem. Sideoats grama in the Northern Great Plains is found in many upland plant communities, but is most common on weakly developed soils of steeper slopes.

Description

Sideoats grama is weakly rhizomatous and will eventually form a sod with its short, scaly rhizomes. Flower culms are up to 32 inches in height and are subtended by abundant basal leaves. Leaves are normally flat, with stiff hairs along the margins of the leaf blades. Sideoats grama's name comes from the oat-like appearance of the spikes, which appear to hang from one side of the seed stalk. Basal leaves curl and turn white. The entire plant may take on a light reddish appearance later in the summer and fall.

Source

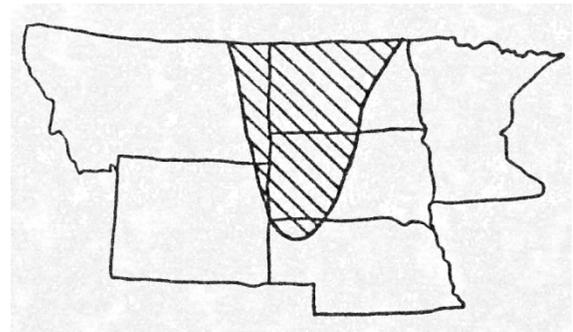
Pierre was selected at the NRCS Plant Materials Center, Bismarck, ND, based on performance in comparison with many other field collections and the variety 'Butte'. Seed was collected in 1954 on a shale range site in Stanley County, west of the city of Pierre, South Dakota.

Conservation Uses

Sideoats grama produces high quality, nutritious forage that is relished by all classes of livestock throughout the summer and fall, and it remains moderately palatable into winter. Pierre is used in range and pasture seedings and for stabilization on critically eroding areas.

Area of Adaptation and Use

Pierre grows on well-drained uplands, shallow ridges, and rocky areas and may be planted on soils ranging from deep to shallow. It was selected for its overall vigor, leafiness, and freedom from disease in a cold, semiarid environment. It has excellent seedling vigor and will persist and provide erosion cover in areas with annual precipitation of 14 to 16 inches. Primary area of adaptation is within the area shown on the adaptation map.



Establishment

A well-packed, weed-free seedbed will enhance establishment. For optimum establishment, seed in early summer (late May through June) with a grass drill equipped with seedbox agitators, oversized seed tubes, depth bands, and packer wheels. Seed shallow ($\frac{1}{4}$ to $\frac{1}{2}$ inch) at a seeding rate of 25 to 30 pure live seeds (PLS) per square foot (5.5 to 7 PLS lb/ac for a single species planting). Early weed control by mechanical or chemical means will hasten stand establishment.

Management

Sideoats seedlings are vigorous and stands tend to establish quickly and often can be utilized the second year. Sideoats grama included in range mixes should be managed as native rangeland or pasture. Management would include proper stocking rates and season of use. Sideoats can tolerate moderate grazing pressure.



USDA-NRCS PLANTS Database / Hitchcock, A.S. (rev. A. Chase). 1950. *Manual of the grasses of the United States*. USDA Miscellaneous Publication No. 200. Washington, DC.

Performance

Annual biomass production of Pierre sideoats grama was collected over several years at field evaluation plantings in the Northern Great Plains. The annual average production of Pierre was highest at Upham, ND (3,468 lb/ac) and lowest at Fergus Falls, MN (1,036 lb/ac) in five years of comparison trials at various locations. Summary data indicate that Pierre is better adapted to lower rainfall areas and northern latitudes in the Great Plains region.

Seed Production

Seed can be harvested using a grass seed stripper or by straight combining. Seed shatter is not a major problem, but can reduce yields under dry, windy conditions. Pierre has been harvested from August 10 to September 10 at Bismarck, ND, depending on environmental conditions during the harvest year. Seed production has been variable, but has averaged 280 lb/ac under irrigation and with annual fertilizer application. Prescribed burning in early spring on an annual basis can improve seed production. Sideoats grama varieties differ with respect to seed maturity depending on location of origin. Pierre will mature seed 25 to 35 days earlier than varieties with a more southern origin (Butte and 'Trailway'). Some

southern selected varieties will not consistently produce mature seed at northern locations.

Availability

For conservation use: For more information on availability and use of Pierre sideoats grama, contact your local NRCS field office or Bismarck Plant Materials Center.

For seed or plant increase: Foundation seed is maintained by the USDA NRCS Plant Materials Center, Bismarck, North Dakota.



For more information, contact:
 USDA-NRCS Plant Materials Center
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 Bismarck, ND 58504
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 Fax: (701) 250-4334
<http://Plant-Materials.nrcs.usda.gov>

Citation

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For additional information about this and other plants, please contact your local USDA Service Center, NRCS field office, or Conservation District <<http://www.nrcs.usda.gov/>>, and visit the PLANTS Web site <<http://plants.usda.gov/>> or the Plant Materials Program Web site <<http://www.plant-materials.nrcs.usda.gov/>>

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