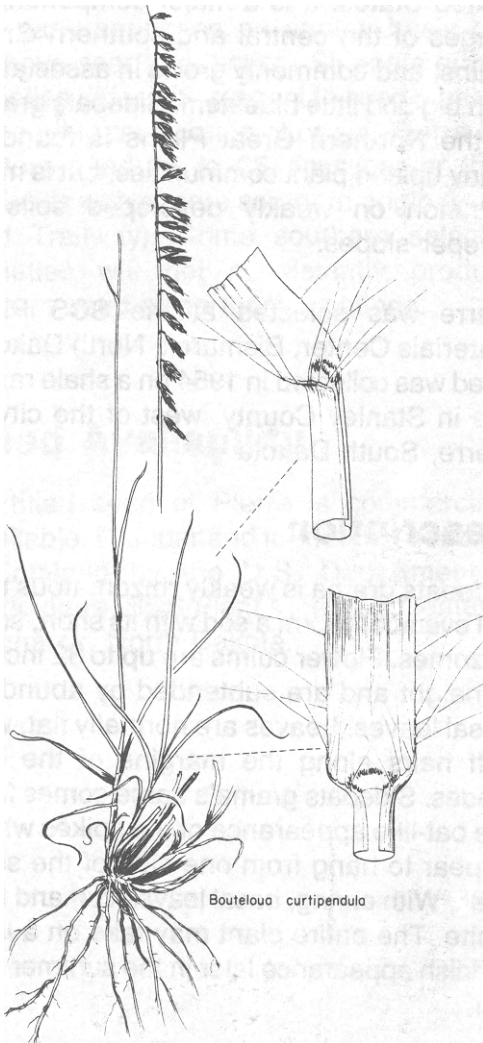




United States Department of Agriculture
Soil Conservation Service
Bismarck, North Dakota



'Pierre' sideoats grama



'Pierre' sideoats grama

The USDA Soil Conservation Service 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 is a native, perennial, warm-season grass found throughout most of the United States. It is a major component of ranges 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.

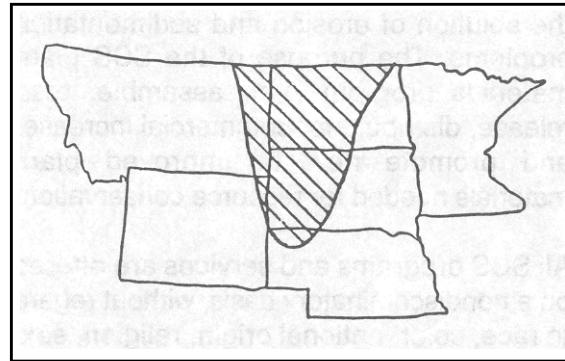
Pierre was selected at the SCS Plant Materials Center, Bismarck, North Dakota. Seed was collected in 1954 on a shale range site in Stanley County, west of the city of Pierre, South Dakota.

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. With curing, basal leaves curl and turn white. The entire plant may take on a light reddish appearance later in the summer and fall.

Adaptation

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.



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.

Establishment

Good stand establishment can be enhanced by beginning with a well-packed, clean, weed-free seedbed. Shallow seeding depth ($\frac{1}{4}$ - $\frac{1}{2}$ inch) is essential. Early weed control by mechanical or chemical means will hasten stand establishment. Early summer seedings (late May through June) utilizing a grassland drill equipped with seedbox agitators, oversized seed tubes, depth bands, and packer wheels have the best chance for good stand establishment. A seeding rate of 15 to 25 pure live seeds (PLS) per square foot (3.5 to 5.5 pounds PLS per acre) is recommended when seeded alone.

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.

Performance

In field evaluation plantings conducted in the Northern Great Plains, sideoats grama forage harvests were conducted in the fall and represent total annual biomass production. Locations with five years of annual forage harvest data indicated that Pierre's production was highest at Upham, North Dakota (3468 lbs/ac) and lowest at Fergus Falls, Minnesota (1036 lbs/ac). Summary data indicates 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, North Dakota, depending on environmental conditions during the harvest year. Seed production has been variable, but has averaged 280 lbs/ac under irrigation and with annual fertilizer application. Prescribed burning in the 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.

Seed Availability

Certified seed of Pierre is commercially available. Breeder and foundation seed are maintained by the **U.S.** Department of Agriculture, SCS Plant Materials Center at Bismarck, North Dakota.

Plant Materials Center

The Plant Materials Center located at Bismarck, North Dakota, is one of the 25 Centers operated by the USDA Soil Conservation Service. The Bismarck Plant Materials Center primarily serves the states of North Dakota, South Dakota, and Minnesota. Special emphasis is placed on selection and improvement of plant materials to meet the resource conservation needs of that three state region.

Plant materials are a significant component of the conservation practices that farmers, ranchers, and others find essential to the solution of erosion and sedimentation problems. The purpose of the SCS plant materials program is to assemble, test, release, distribute for commercial increase, and promote new or improved plant materials needed for resource conservation.

All SCS programs and services are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, age, marital status, or handicap.

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