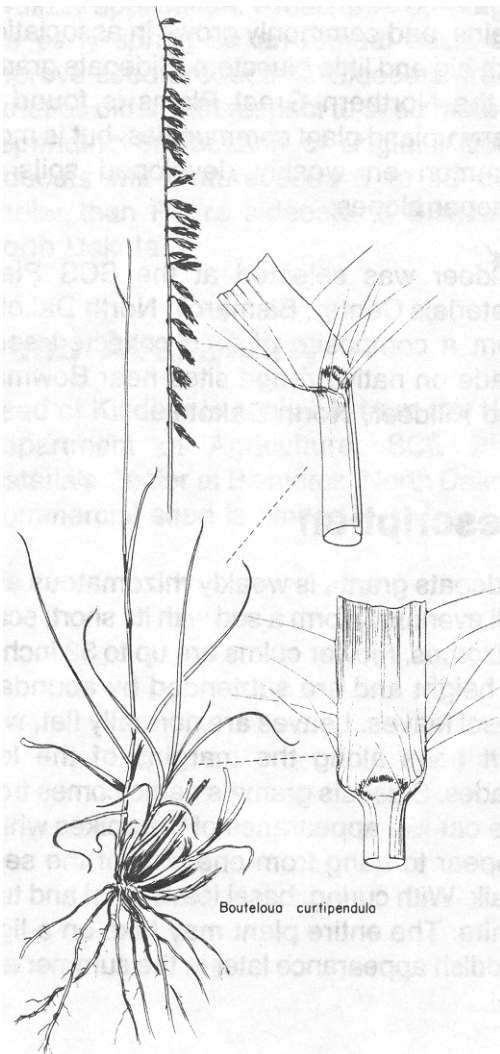




United States Department of Agriculture
Soil Conservation Service
Bismarck, North Dakota



'Killdeer' sideoats grama



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The USDA Soil Conservation Service informally released 'Killdeer' (PM-ND-143 and PM-ND-89) sideoats grama in the late 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.

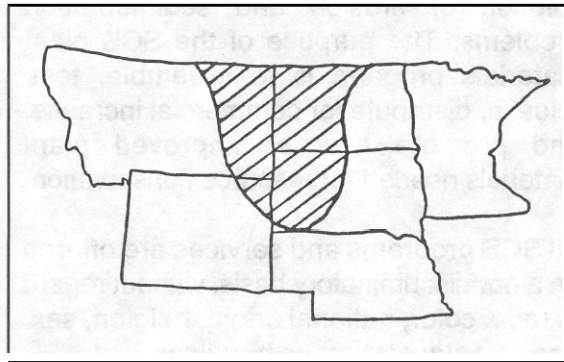
Killdeer was selected at the SCS Plant Materials Center, Bismarck, North Dakota, from a composite of field collected seed made on native range sites near Bowman and Killdeer, North Dakota.

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

Killdeer 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 outstanding vigor, leafiness, fair seed production, and freedom from disease in a cold, semiarid environment. Killdeer is the product of materials collected from two outstanding field collections in areas of North Dakota with an average annual precipitation of 15 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. Killdeer is recommended in grass mixtures for range and pasture seeding, for earth fill and bank stabilization, for other critical area and recreational plantings.

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 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, forage harvests were conducted in the fall and represent total annual biomass production. Locations with five years of annual forage harvest data indicated that Killdeer's production was highest at Upham, North Dakota (3826 lbs/ac) and lowest at Fergus Falls, Minnesota (827 lbs/ac). Summary data indicate that Killdeer is better adapted to lower rainfall areas of 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. Killdeer has been harvested from August 5 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. Killdeer sideoats will mature seed 5 to 10 days earlier than Pierre sideoats at Bismarck, North Dakota.

Seed Availability

Seed of Killdeer is available from the U.S. Department of Agriculture, SCS Plant Materials Center at Bismarck, North Dakota. Commercial seed is limited.

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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