

SORGHUM

ALBUM

sorghum album

Sorghum album is a tall, upright sorghum with large, lanceolate leaves and a branched panicle. It is similar to sorghum but has larger leaves and a branched panicle. It is similar to sorghum but has larger leaves and a branched panicle.



SORGHUM ALMUM

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SORGHUM ALMUM is a tall grass that will grow in most Texas areas. Grazing is the most practical use of the plant, although few plantings were grazed before 1958 because of the demand for seed.

DESCRIPTION

Sorghum alnum is a short-lived perennial, similar in appearance to Johnsongrass. It has wider leaves, larger stems, longer and more spreading heads and the first-year growth is taller than Johnsongrass and Sudangrass. The rhizomes are short, thick and turn up close to the crown. The plants tiller well following grazing or cutting, with regrowth coming mainly from buds at nodes or joints just above the soil surface. New growth in the spring comes from both the rhizomes and nodes. Sorghum alnum is often variable as to plant type. Plants in the same field may vary in stalk size and height, leafiness and degree of tillering. Stalks of the plants generally are pithy and nonsweet, although an occasional plant with a juicy stalk is found. The grass is sometimes attacked by leaf disease, usually in late summer and fall when humidity is relatively high.

The seed shatter readily when mature. Generally, they are larger than those of Johnsongrass, although the sizes overlap, and the seed covering of both grasses is the same color and shape. Sorghum alnum does not appear to cross readily with Sudangrass and other cultivated sorghums, but it apparently crosses freely with Johnsongrass.

Sorghum alnum was introduced to the United States from Argentina, South Africa, Australia, Nigeria and Algeria. It is known as *Sorgo negro*, *Sudan negro* and *Sorghum alnum* in Argentina and as *Columbusgrass* in South Africa. The grass

originated in Argentina, and according to available evidence, is a hybrid between Johnsongrass and a sorghum.

ADAPTATION

The primary use of Sorghum alnum is as a grazing crop. The larger stems make it more difficult to cure for hay than Johnsongrass. The higher yielding forage sorghums are preferable for silage, although any Sorghum alnum not needed for grazing could be used as silage. Sorghum alnum has one distinct advantage over Sudangrass as a temporary summer pasture crop - it makes better regrowth and produces more grazing in late summer and fall. It appears to be more drouth tolerant than Sudan or Johnsongrass, particularly on sandy soils.

Although Sorghum Alnum is a perennial-type plant, survival the second and third growing seasons has been erratic. Some plantings on deep, fertile soils that have been grazed moderately have come back to a good stand from the crowns and rhizomes the following spring. Others on poorer soils that have been neither cut nor grazed have had less than a 25 percent stand the spring following the first growing season. Soil fertility, grazing pressure and whether the plants were allowed to set a seed crop in the fall seem to be the major physical factors in determining whether the stand lasts more than one season. Winter-killing can be expected during severe winters on the High Plains and in other higher areas of the State. Stand survival from one year to the next has been better in the southern half of the State than in the northern half. Generally, even where stands survived two winters, production declined from the first to the second and from the second to the third growing seasons. A few plantings have maintained good plant vigor for three or more growing seasons. In view of past experience, Sorghum alnum probably will have to be considered an annual grazing crop, or at least a weak perennial for use as temporary pasture.

Table 1. 1957 Yields of Sorghum alnum and Sudan at five locations

Grass	Brazos River Valley Laboratory	Prairie View	Nacogdoches (cut twice in silage stage)	Tyler	Chillicothe
Sorghum alnum	5520	6400	8230	2780	2920
Perennial Sweet Sorgrass	5510	7630	9160	2860	1900
Common Sudan	5300	3680	5940	2340	1760
Sweet Sudan	5090	3670	6160	3410	3000
Greenleaf Sudan	5830	7070			2680
Piper Sudan	7850	6790			2340

County agricultural agents conducted more than 100 demonstrations in 1957 with Sorghum alnum, Perennial Sweet Sorgrass and Sweet and Common Sudangrass. The plants were rated as to seedling vigor, regrowth after clipping, stalk size, leaf disease, forage production and palatability. Sorghum alnum and Common Sudan ranked first in seedling vigor. Sorghum alnum ranked first in regrowth after clipping, followed closely by Perennial Sweet Sorgrass. Sweet and Common Sudan had the smallest stalks, Perennial Sweet Sorgrass was third and Sorghum alnum had the largest stalks. Sorghum alnum and Perennial Sweet Sorgrass had the least damage from leaf disease, Sweet Sudangrass was intermediate and Common Sudangrass was affected the most. Sorghum alnum ranked first on forage production on the basis of visual estimates, followed by Perennial Sweet Sorgrass and Sweet Sudan, while Common Sudan ranked last. Sweet Sudangrass was the most palatable, Perennial Sweet Sorgrass was next, followed by Common Sudangrass. Sorghum alnum rated the least palatable.

Dairy cows on the Tyler Experiment Station showed a preference for Sweet Sudangrass over Perennial Sweet Sorgrass and Sorghum alnum. Sorghum alnum should have about the same nutritive value as Sudangrass or Johnsongrass.

ESTABLISHMENT

Sorghum alnum should be planted in 36 to 42-inch rows on a seedbed prepared as for Sudangrass or grain sorghum. Planting it in rows allows cultivation for weed control, which is important in maintaining plant vigor. The grass should be planted at the rate of 3 to 5 pounds of seed per acre to insure good stands and obtain small stalks. In an Experiment Station seeding rate test in the Brazos River Bottom near College Station, Sorghum alnum planted at the rate of 3 pounds per acre in 40-inch rows produced 7,020 pounds of hay per acre, compared to 5,410 pounds from the 1 pound per acre planting rate. Increasing the seeding rate to 5 and 7 pounds gave no increase in yield over the 3-pound rate. The seed should be covered 1 to 2 inches.

Plant Sorghum alnum in the spring after the soil is warm. Fertilizer should be put down before or at the time of planting where needed. A soil test is the best means of determining the grade and amount needed for good production.

MANAGEMENT

Sorghum alnum should be 24 inches high before it is grazed. Grazing in a younger stage

increases the danger of prussic acid poisoning. Cattle losses on the grass due to prussic acid have occurred, mainly following regrowth after a dry period. When growth conditions favorable for prussic acid formation exist, livestock operators should be cautious in grazing Sorghum alnum, the same as with Johnsongrass and the sorghums.

Controlled grazing is necessary to utilize the forage produced by a good stand of Sorghum alnum with good growing conditions. Dividing plantings into blocks for rotation grazing allows use of the forage produced, rest for the plants to allow regrowth after grazing and use of that growth not needed for grazing as silage. Continuous heavy grazing weakens plants and results in loss of stand. Allowing the plants to set a seed crop in the fall gives the best chance for good stand survival the following spring.

A dense stand of volunteer plants may be obtained the following spring by allowing a seed crop to mature and fall or when considerable seed fall to the ground during seed harvest. The volunteer plants will fill in gaps in the stand due to loss of old plants. The plants should be maintained in rows by destroying seedlings in the middles with cultivation. Allowing the volunteer seedlings to grow in the middles usually results in all of the plants being small and weak.

When moisture conditions are good and more grazing is needed, it often may be profitable to sidedress good stands with 30 to 50 pounds of actual nitrogen per acre after the crop is grazed down.

Because Sorghum alnum's seed shatter when mature, harvesting the seed by direct combining results in excessive loss of seed. Seed yields vary from 300 to 1,500 pounds or more per acre, depending on the method of harvest and growing conditions. To save the most seed, cut the plants with a binder when the first seed are ready to shatter, shock the bundles, allow then

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