



**Sudangrass**

**FOR  
DEPENDABLE  
GRAZING**

**TEXAS AGRICULTURAL EXTENSION SERVICE**  
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# Sudangrass . . .

## *for Dependable Grazing*

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**S**UDANGRASS is the most dependable plant for summer temporary pastures in Texas. It was introduced into the United States from the African Sudan in 1909 and was grown first at the Chilled Experiment Station.

One to 2 acres of Sudangrass per cow provides good-quality grazing and permits resting permanent pastures. The volume and quality of grazing from Sudan generally is better than grazing from permanent pasture. At the Beeville Experiment Station during the 3-year period, 1949-51, early March plantings of Sudan furnished an average of 111 days grazing with an average daily gain on yearling steers of 1.5 pounds. The 6-year average steer gain at Temple on the Blackland Experiment Station is 309 pounds per acre, with an average daily gain per head per day of 1.9 pounds. At that station Sweet Sudan produced 404 pounds of steer gain per acre in a 96-day grazing period, with 1.97 pounds per head per day average daily gain on yearling steers and 205 grazing days per acre.



*Row plantings (on left) versus broadcast planting (on right).*

## *Varieties*

Common and Sweet are the two varieties presently recommended for use in Texas. Adapted varieties appear to differ little in the amount of beef gain produced per acre. At the Beeville Station during a 3-year period, yearling steers gained 1.54 pounds per head per day on Common Sudan, 1.56 pounds per head per day on Sweet Sudan and 1.45 pounds per head per day on Tift Sudan.

Common Sudan is the earliest variety normally grown in Texas. It has pithy, nonsweet stalks and mostly straw-colored seed. This variety is susceptible to various leaf diseases that attack Sudan under humid conditions.

Sweet Sudan, developed by R. E. Karper and J. R. Quinby of the Texas Agricultural Experiment Station, is a cross between Common Sudan and Leoti, a sweet sorghum. Sweet Sudan has a juicy, sweet stalk and reddish-brown glumes or seed covers. The variety has some resistance to the leaf diseases, but sometimes it is damaged during humid seasons.

Tift Sudan was developed by the Georgia Coastal Plain Experiment Station. It is also the product of Common Sudan-Leoti crosses, but it has pithy, nonsweet stalks. The glumes are chocolate to straw colored. Tift Sudan is more disease resistant than Common or Sweet Sudan, and it often produces later grazing than Common.

The Piper variety was developed by the Wisconsin Agricultural Experiment Station. It is used in that State primarily because of its low potential hydrocyanic or prussic acid content. Piper also carries some leaf disease resistance.

Lahoma is a variety selected by the Oklahoma Agricultural Experiment Station from Sweet Sudangrass. This variety has a sweet, juicy stalk, some disease resistance and is late maturing. The seed are yellow to reddish-brown, and the leaves are yellowish-green.

Greenleaf Sudan was released by the Kansas Agricultural Experiment Station and originated from Common Sudan-Leoti crosses made by J. R.



*Plant 1 to 2 acres of Sudangrass per cow for high-producing, good-quality summer pasture.*

Quinby at Chillicothe. It has juicy stalks and brownish-red seed; it has some leaf disease resistance and is late maturing. Greenleaf appears to be affected more by drouth than Common and Sweet.

A 5-year average hay yield at the Beeville Station was 4,540 pounds per acre from Common, 3,180 pounds from Sweet and 4,240 from Tift. At Temple, a 3-year average was 6,950 pounds from Tift, 6,000 from Piper, 5,240 from Sweet and 5,120 from Common. With supplemental irrigation in the Brazos bottom near College Station, Common produced 8,010 pounds of hay per acre, Piper 7,390 pounds, Tift 6,990, Lahoma 6,840 and Sweet 6,210.

## *Establishment*

*Method of planting* is important because it affects the length of the grazing season. Plantings should be made in 36 to 42-inch rows in pure stands. Broadcast or close-drilled plantings usually produce about the same amount of forage per acre as row plantings, but production is distributed better through the growing season in row plantings. At College Station on Lufkin fine sandy loam, broadcast and close-drilled plantings produced three times as much hay at the first cutting as did plantings in 40-inch rows. However, the row plantings produced twice as much at each of the three successive cuttings. Total seasonal yield was a little

higher from the row plantings. Grazing animals trample down less forage in row plantings because they walk mostly in the middles between the rows. Also, cultivation for weed control is possible with row plantings and irrigation and sidedressing with fertilizer can be handled more easily.

The practice of planting cowpeas with Sudan-grass is not recommended. In tests at College Station on both upland and bottom land, planting cowpeas with Sudan did not increase the yield or quality enough to justify the cost of the pea seed.

*TIME OF PLANTING* Ranges from March 1 to June 1. Plantings may be made during the summer when enough moisture is available for germination and good growth. Sudan should not be seeded until danger of frost is over. When moisture is likely to be available for growth, plantings at 3 to 4-week intervals may be staggered from spring into summer to extend the grazing season. Each planting should be fenced and grazed separately. Late plantings sometimes are damaged severely by leaf diseases in humid areas.

*SEEDBEDS* for Sudangrass should be clean, firm and moist. The soil should be as well prepared as for plantings of cotton or corn.

*FERTILIZATION* is necessary in many areas for satisfactory production. Fertilizer should be applied according to the results of a soil test, which is the best means of determining the type and amount needed. Many plantings on soils of medium to low fertility have been unprofitable because they were not fertilized properly. Fertilizer should be put down in the drill below the seed in row plantings to get efficient use of the plant food and to avoid weed growth between the rows.

*RATE-OF-PLANTING* tests at College Station show that Sudan planted in 38 to 42-inch rows should be seeded at the rate of 7 to 10 pounds per acre and closedrilled or broadcast seeded at the rate of 20 to 25 pounds per acre. In these tests, 7 pounds of seed per acre in 40-inch rows produced about as much as 14 pounds per acre and slightly more than the 21 and 28-pound-per-acre seeding rates. Also, 20 pounds of seed drilled produced about as much as 30 and 40-pound rates using the same seeding method. Heavier seeding rates may be

profitable with high levels of moisture and fertility.

*DEPTH OF PLANTING* varies according to moisture conditions at the time of planting and the type of soil in which the plantings are made. Seed should be covered 1 inch deep; never more than 2 inches.

## *Management*

*CULTIVATION* should be as needed to control weeds. Weeds also may be controlled by spraying with 2/3 pound per acre of 2,4-D or MCP in water, at times when these herbicides won't damage susceptible broad-leaved crops.

*GRAZING* should begin when Sudangrass is about 18 inches high. When growth begins to get ahead of the grazing livestock, part of the planting may be mowed. After a field has been grazed down, the stock should be removed and the old stalks mowed so new growth will come from the base of the plants. Following mowing, the plants should be allowed to make 15 to 18 inches of regrowth before grazing is resumed.

Rotation grazing is necessary for the most efficient utilization of fast-growing pasture plants such as Sudangrass. Sudan fields should be divided into a minimum of four blocks to allow rotation grazing. Livestock should be concentrated on one block and the growth grazed down rapidly, after which the livestock should be moved to another block to allow regrowth of the plants. When plants are kept grazed closely, they have weak, shallow root systems that are unable to utilize moisture and plant food deep in the soil. Rotation grazing permits:

1. Use of a high percentage of the forage produced by allowing concentration of animals on a small area; they are forced to eat the forage available in a short time and less is lost by trampling and refusal.

2. Rest for the plants between grazings, allowing them to make regrowth and rebuild their root systems and vigor.

3. Use of the plants when they are in a palatable and nutritious stage. As plants approach maturity, they become less palatable and are lower in protein, minerals and vitamins.

4. Use of excess forage for hay or silage. Blocks not needed for grazing may be utilized to furnish reserve feed.

5. Better livestock management.

6. Setting up a fertilization and irrigation schedule. Blocks may be watered and fertilized as needed while other blocks are being grazed.

*HAY* may be made from Sudan although it is sometimes difficult to cure. Sudangrass should be cut for hay when the first heads begin to show. The hay usually remains in the swath until it is almost dry enough to bale. It is ready to bale when the stems are slightly brittle but do not break when twisted.

*SILAGE* from Sudangrass is as desirable as that from other sorghums, but it does not produce large enough yields to justify planting it for silage alone. Sudan not needed for grazing should be utilized as hay or silage. Cut Sudan for silage when the first heads begin to show. Water must be added to the silage if the plants are dry when cut or if the material is allowed to wilt following cutting. The silage should be packed as well as possible to prevent loss from spoilage.

*FERTILIZATION* of Sudan should be primarily before planting, except for applications of nitrogen to stimulate regrowth. During the growing season when the soil is moist, Sudan should be sidedressed with 20 to 40 pounds of actual nitrogen per acre each time it is grazed or cut.

## *Points for Profitable Grazing*

1. Plant in a well-prepared, clean, firm seed-bed.

2. Plant when the soil is warm and moisture is available for germination and good growth.

Pastures Are a Cash Crop—Treat Them as Such



*Plant 7 to 10 pounds of Sudangrass seed per acre in 36 to 42-inch rows for grazing. Row plantings give grazing over a longer period than broadcast plantings.*

3. Put down fertilizer before planting as indicated by a soil test.

4. When moisture conditions are good, more than one planting may be made to extend the grazing season.

5. Use Common Sudan in drier areas and Sweet Sudan in humid areas.

6. Plant 7 to 10 pounds of seed per acre in 38 to 42-inch rows for grazing. Plant 20 to 25 pounds of seed per acre drilled or broadcast for hay.

7. Begin grazing when plants are about 18 inches high.

8. Divide the Sudan planting into four or more blocks so that grazing may be rotated from block to block.

9. Sudan not needed for grazing should be put up as hay or silage.

10. Mow as needed after grazing to remove old stalks and to stimulate tender new growth.

11. Sidedress Sudan with 20 to 40 pounds of actual nitrogen per acre each time it is grazed down, if the soil is moist and the grazing is needed.