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### Norghum Sorghum Culture : An Early Combine Grain Sorghum

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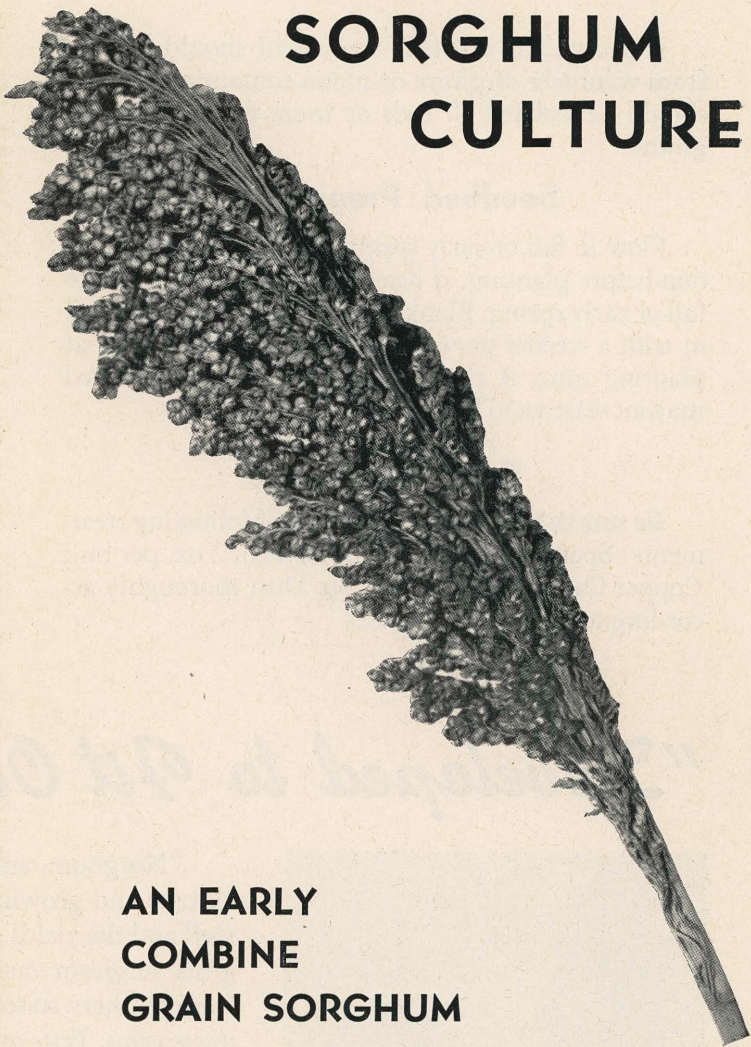
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*Sorghum*

# SORGHUM CULTURE



**AN EARLY  
COMBINE  
GRAIN SORGHUM**

**THIS BOOK DOES  
NOT CIRCULATE**

**AGRICULTURAL EXTENSION SERVICE**

South Dakota State College

U. S. Department of Agriculture Cooperating

Extension Leaflet 127

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# Norghum Culture

U. J. NORGAARD, ELMER E. SANDERSON, RALPH A. CLINE  
Extension Agronomists

If grown for certified seed, field should be free from volunteer sorghum or sudan contamination and should be isolated 40 rods or more from other sorghum.

## Seedbed Preparation

Plow in fall or early spring. Kill weeds by cultivation before planting. If lister is used, blank list in late fall or early spring. Blank listed rows should be pulled in with a weeder previous to nosing out with lister at planting time. A thorough preparation of seed bed may increase yield 50 percent.

## Seed Treatment

Be sure to treat all seed. Use one of following treatments: Spergon, 2 oz. per bu.; Arasan, 2 oz. per bu.; Copper Carbonate, 2 oz. per bu. Dust thoroughly according to package directions.

## Time of Planting

While Norghum can be planted as early as May 15 in some years, experience indicates that if planted too early, late germinating weeds like pigeon grass may become troublesome. Best results have been secured when grower fall plowed or plowed in April, made a couple of light cultivations for moisture conservation and to kill weed seedlings, and then planted the crop late in May or forepart of June. The exact time of planting is, of course, modified by seasonal variations and areas of the state. Growers should aim to have crop planted by June 15.

## Method of Planting

(1) Corn Planter or Lister: Norghum should be planted in rows. A corn planter or lister is the most common seeding equipment. A corn planter with furrow-opener attachment is the ideal method. The furrow-opener assures uniform depth of planting and places the seed in moist soil. Immediate emergence of the seedling is secured. In addition, it kills the weeds, thereby greatly reducing the work of the first cultivation. If a lister is used, list shallower than for corn. (2) Grain drill: In case a corn planter is not available, a

grain drill can be used. The seed is still planted in rows allowing for cultivation. With a 11 to 14 foot drill, four rows can be planted. Bore a hole in a stub 2 x 4, and fasten the stub in drill box above the hole from which the grain is to be seeded. A funnel is inserted in the hole in the 2 x 4. An 8-inch funnel will hold about 2½ pounds of Norghum seed. A small gas funnel, which holds more seed, can be used. The rate of seeding is calibrated by the same method as with a corn planter, which method is explained in this leaflet.

## Rate of Planting

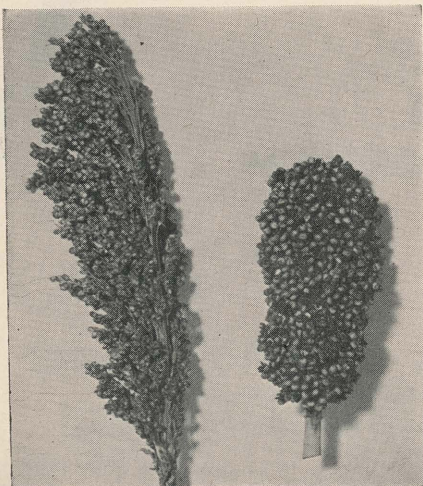
**For low rainfall areas:** Use 3 pounds seed per acre. Use planter plates that will drop 3 to 5 seeds per hill spaced 12 to 14 inches apart in the rows.

**For Heavier Rainfall Areas:** Use 4 to 5 pounds seed per acre. Use planter plates that will drop 3 to 5 seeds per hill spaced 6 to 9 inches apart in the rows. Rows can be 36 to 42 inches apart.

## Sorghum Plates for Corn Planter

For intermediate size seed varieties like Norghum, it has been calculated that the pounds of seed planted per acre amount to approximately one-half the number of seeds dropped per foot. **Example:** If 8 seeds are

*"Developed to Fit Our Climate-----"*



"Norghum, an early grain sorghum, was developed to fit the climate and growing conditions of our state. It is early, stands up well and the yields of grain have been consistently high. Formerly, grain sorghum varieties grown in South Dakota were introduced from southern states and were not well adapted to our shorter growing seasons. Tests made in different areas of the state, show that Norghum is adapted throughout South Dakota and should replace most of the older varieties now grown."—C. J. Franzke, associate agronomist, South Dakota Agricultural Experiment Station, from Station Bulletin 397.

AT LEFT: Norghum (shown at the left) has a much more open head than other grain sorghum varieties. This feature permits better, more even drying at harvest time. The head at the right is Midland. AT RIGHT: Norghum is a good yielder. Note how well it stands with upright heads clear of basal leaves. This, with its even drying, makes it easy to combine. Agronomist Franzke, who developed Norghum, is shown in the picture.



## Threshing

Reduce speed of cylinder by one-half to prevent cracking of seed. Remove concave teeth as necessary. Use same riddles and sieves as for barley.

## Storage

Have moisture content down to 12 percent or less. Clean the grain and remove broken kernels before storage.

The crop should be threshed only when the grain is dry and during good drying weather. Sorghum with 12 percent or less moisture and free from cracked kernels and broken stalks will keep as well as seed of small grains.

## About Stands

For best results plants should be from 6 to 12 inches apart in the row, 6 inches in humid areas and 12 inches in the drier areas. (Do not confuse this stand with rate of seeding. The rates of seeding advised in this circular are calculated to achieve a normal stand as stated above. In sorghum, many seeds, even if they germinate in the laboratory tests, do not come through the soil and produce plants. The sorghum seedlings are delicate and consequently many of them do not survive.)

Should the stand become too thick, in spite of precautions taken, or because of under-estimation of germination, the following practices are advised:

- (a) If stand is twice too thick—cultivate out every other row making rows approximately 80 inches apart.
- (b) If stand is one and one-half times too thick cultivate out every third row, which will give each row the benefit of 60 inches of spacing.

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### Agricultural Extension Service

South Dakota State College and United States Department of Agriculture,  
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George I. Gilbertson, Director of Extension

dropped per foot the rate of seeding is 4 pounds per acre. Use plates with holes large enough to hold 3, 4 or 5 seeds per hole. When fitting the seeds into holes by hand for testing they should be packed in tightly. All should be counted that will go into it at least half-way because a seed that is half-way in a hole will be dropped by the planter.

The holes should be counter sunk from the under side. Cut out at an angle of about 30 degrees. The upper edge of the holes should be counter sunk a very slight amount or just enough to take away the sharp edge. Use false ring, if necessary, to prevent leakage and cracking of small seed.

## Calibration of Planter

Because of the large variation in sizes of sorghum seed, even within the same variety, no "rule of thumb" in planting directions is absolutely reliable. Calibrate the planter each year as follows: (1) Block the drive wheel off the floor. (2) Turn drive wheel 10 complete revolutions, catching the seed in a pan. (3) Count the seed in the pan and divide the number of seeds by 10 times the circumference of the drive wheel (in feet). This gives the number of seeds planted per foot.

## Depth of Planting

Plant one inch deep in heavy soil; 1½ to 2 inches in sandy soils. An ideal way is to use furrow opener **on the contour**, planting the seed one inch deep in moist soil, regardless of soil type. Cultivate soon after sorghum has emerged.

## Harvesting

(1) Harvest with corn binder and cure in shocks; (2) combine crop after grain has matured and stalks dry. Moisture test should be 12 percent or less. (3) Harvest with swather, dropping two to four rows on adjoining stubble row for drying. Then harvest with combine equipped with pick-up attachment. Of course, in order to harvest by this method, the field must be level cultivated. Ridges would interfere with pick-up operations.