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GRAIN SORGHUMS FOR FEED AND FORAGE

Nearly 10,000,000 acres will be seeded to grain sorghums in 1950 by southwestern farmers, according to the United States Department of Agriculture's survey of intentions to plant as of March 1. If the drought continues in major wheat-producing areas of Texas, Oklahoma, and New Mexico, additional acreage may be shifted to this important and versatile feed crop.

The development of combine-type grain sorghums has permitted the complete mechanization of this crop and has made it especially suitable to the large-scale operations prevalent in the Texas High Plains and eastern New Mexico counties. In these areas grain sorghums usually outyield corn, both on dry land and under irrigation. The results of 8 years' research at the Texas Agricultural Experiment Substation at Lubbock, shown in the table below, emphasize the superiority of grain sorghums over corn under dry land conditions in these areas. During these tests rainfall was above average during 4 years and considerably below average during the other 4 years, the annual rainfall ranging from 9.47 inches in 1948 to 40.55 inches in 1941. It is significant to note that the grain sorghums outyielded both the open-pollinated and hybrid corn in each of the 8 years.

The fact that sorghums produced a crop in each year, even under conditions of extreme drought, emphasizes the adaptability of this crop to the subhumid conditions encountered in the Texas High Plains and eastern New Mexico counties.

Variety Tests at Dalhart

Plainsman, Club X Day No. 16, and Finney milo produced the highest yields of grain in variety tests conducted at the Dalhart Field Station of the United States Department of Agriculture during 1944-48, inclusive. Results of these tests are shown in the table on page 2.

One of the most interesting features of these tests at Dalhart is the comparison obtained between yields on land previously in fallow and land that had been continuously cropped. Throughout the 5-year period the average per acre yield of sorghums on the fallowed land exceeded that on the cropland by 16½ bushels.

HIGH-YIELDING CORNS AND GRAIN SORGHUM AT LUBBOCK, 1941-48
(In bushels per acre)

	Corn				
	Open-pollinated		Hybrids		Grain sorghum
Year	Mexican June	Surecropper	Texas 8	Texas 12	Plainsman
1941	20.2	29.8	27.4	23.7	38.4
1942	17.6	31.2	41.0	39.8	41.2
1943	20.6	17.9	20.8	21.4	28.8
1944	24.3	23.1	33.1	29.9	47.0
1945	....	....	....	....	3.4
1946	4.6	1.5	2.9	2.3	4.8
1947	18.2	20.8	23.0	20.5	26.7
1948	....	....	....	....	3.4
Average	13.2	15.5	18.5	17.2	24.2

Furthermore, in 1945 moisture was inadequate to get a stand on the cropland, while the average of all varieties on the fallowed land was 27 bushels per acre. This emphasizes the importance and profitableness of the practice of fallowing the land in the drier areas of Texas, New Mexico, and Oklahoma, where moisture is most frequently the limiting factor in crop production. Contour cultivation, use of stubble mulch, and, sometimes, chiseling are essential to moisture conservation during the fallow period. Weeds or volunteer wheat should not be permitted to make rank growth on fallow land, as their growth depletes moisture supplies and defeats the purpose of fallowing.

Variety Tests at Big Spring

Results during the past 5 years at the Big Spring Field Station of the United States Department of Agriculture show that Plainsman and Caprock, two late-maturing combine varieties, averaged 3 to 4 bushels per acre more than the earlier varieties, such as Westland and Martin, and, in general, yielded as well as or slightly better than the older standard varieties.

In these tests the Hegari-type varieties, with the exception of regular Hegari, were about equal in yield to the better new combine varieties. Early Hegari, because of its surety of production in dry seasons, yielded 5 bushels more than regular Hegari in these tests.

Date of Planting

In both the Dalhart and Big Spring tests, experiments were conducted to determine the most profitable time of planting grain sorghums in these areas. The dates used at Dalhart were June 1 and June 15. Results of the tests indicate that either of these dates is satisfactory, although the June 1 plantings averaged about 1 bushel more per acre.

In the Big Spring tests, three dates were used —May 15, June 1, and June 15. Results of these tests indicate clearly that sorghums planted June 15 in the Big Spring area generally will outyield those planted June 1, and both June 1 and June 15 are better than May.

Results of these experiments are most applicable to the semihumid sections of west Texas, eastern New Mexico, and western Oklahoma. However, farmers in central and northern Texas, particularly in the Low Rolling Plains, will usually obtain similar results. Yields may be somewhat higher and the chances of crop failure due to drought are less of a threat in these areas of higher rainfall.

Forage Sorghums for East Texas

The wide range of sorghum varieties and types permits the production of this crop under many soil and climatic conditions. Thus, in east Texas, while corn rather than sorghum is usually grown for grain, certain forage sorghum varieties have proved to be highly profitable for the production of silage.

At the Nacogdoches Substation of the Texas Agricultural Experiment Station, tests were conducted on 16 varieties of sorghums in 1949. The land planted to sorghums was idle the previous year, and the sorghum crop received

GRAIN SORGHUM VARIETY TEST ON FALLOW LAND AT THE DALHART STATION 1942-48

(In bushels per acre)

Variety	1942	1943	1944	1945	1946	1947	1948	Annual average adjusted
Finney milo	49.8	66.1	46.4	30.0	52.7	57.1	43.3	49.3
Hegari	56.0	47.1	37.5	23.8	58.0	49.6	52.7	46.4
Dalhart Wheatland	42.4	47.5	47.8	28.9	44.0	35.3	50.0	42.3
Early Hegari	46.2	41.1	40.7	31.4	56.5	40.6	23.2	40.0
Beaver Sel. 255	33.9	39.7	43.3	22.1	45.5	44.2	20.1	35.5
Plainsman	....	....	52.9	33.7	56.7	49.6	50.0	50.3
Club X Day No. 16	....	....	51.6	32.8	57.8	48.7	48.2	49.5
Martin	....	....	48.9	24.3	51.1	46.4	39.7	43.8
Westland	....	....	40.7	21.2	43.3	43.7	42.0	39.9
Midland	....	....	48.7	23.5	48.0	35.3	32.1	39.2

500 pounds of 0-12-12 fertilizer at the time of planting and 200 pounds of nitrate of soda as a side dressing June 13. While it is impossible to obtain conclusive results in 1 year's tests, the results obtained at Nacogdoches in 1949 suggest that certain varieties of sorghums are definitely superior for the production of forage. Specialists conducting the experiments state that when both quality and quantity of forage and ease of handling are considered, it appears that either Atlas or Hegari is the most desirable crop for feed in this area. Dwarf combine-type grain sorghums, such as Plainsman and Caprock, were definitely inferior to the other sorghums for forage. Sudan grasses were low in forage yield, but the quality of hay produced was very good.

In the Gulf Coast Prairie region of Texas, where the production of grain sorghums has become an important enterprise, Schrock kafir (also known as Sagrain) is the most common grain sorghum variety grown. In 11 years of tests at the Angleton Experiment Station it has produced 50 percent more grain than corn. Hegari and Red Top are other varieties recommended for the area, with Hegari being the preferred forage variety for silage that is to be fed to dairy cattle. The high tannin content of Schrock kafir and Red Top makes them less desirable as dairy feed.

Pastures Reduce Dairyman's Costs

Records of Texas dairymen show that improved pastures are the most important factor in reducing the cost of producing milk. R. E. Burleson, associate extension dairy husbandryman of Texas A. and M. College, points out that some dairymen in the State, with the aid of improved pastures, are producing milk with a cash outlay for feed of 40 cents per hundred pounds, while others who do not have adequate pasture and home-grown forage are spending as much as $3.60 for each hundred pounds of milk produced.

As milk prices decline, the dairyman with adequate pastures will still make a profit, but those who are relying only upon "feed sacks" for their feed supply may find their operations unprofitable. Plans should be made now for emergency summer pasture, grazing for next winter, and improved permanent pastures for next year.

Louisiana State University suggests that dairymen divide the grazing period into three seasons: (1) spring, March 1 to June 30; (2) summer and fall, July 1 to October 31; and (3) winter, November 1 through February. The spring season usually presents no problem, since all of the clovers and grasses thrive during this period. For the summer and fall months the University recommends such crops as common and kobe lespedezas, Dallis, Bermuda, carpet, and Johnson grasses, Allyce clover, hairy indigo, and kudzu. For the winter season rescue and fescue grasses, rye grass, and Singletary peas usually give the most grazing.

New-Born Calves Need Colostrum

Colostrum, or the first milk secreted by the cow when she freshens, is of prime importance in getting the new-born calf off to a good start.

This first milk is rich in certain essential proteins, high in Vitamin A, and contains other important vitamins and perhaps unknown hormones or elements that clean out the digestive tract and prepare it for the invasion of bacteria so essential for proper digestion.

Calves should be permitted to nurse the cow for 3 days after freshening in order to insure that they obtain sufficient colostrum. If this practice is followed, calves are much less likely to develop scours and other digestive disturbances that retard their early development and sometimes result in rather heavy death losses.

Fly Population on the Increase

The fly population has increased steadily since 1947, in spite of the development and widespread use of new insecticides, such as

DDT and Methoxychlor, say leading entomologists.

Almost complete reliance upon the new insecticides for fly control, rather than upon a combination of sanitation and insecticides, is blamed by entomologists for the failure of today's campaign to eliminate these persistent and dangerous pests.

Elimination of breeding areas, such as open garbage cans, trash, and, around the barns, manure piles and other refuse, is the most important step in gaining effective fly control. Garbage should be disposed of daily, either by burying or burning, and all containers kept tightly covered. Around the dairy barn, manure should be hauled to the field daily or, if this is impractical, it should be sprinkled with lime.

Failure to use the recommended quantities of insecticide materials is another major cause cited by the entomologists for ineffective fly control. For example, many people fail to measure accurately the ingredients used in mixing spray solutions, and others do not do a thorough job of spraying.

Neglecting the application of control measures early in the season is a third very common cause of ineffective fly control. Buildings and animals should be sprayed as soon as flies put in their appearance in the spring. It has been said that one fly killed in the spring is the equivalent of killing a million in late summer.

FARM PRICES

No Price Support for Long Staple Cotton

The Department of Agriculture has announced that there will be no price support program for long staple cotton produced in 1950. Long staple cotton (principally American-Egyptian and normally with a staple length of 1½ inches or more) has been supported at 90 percent of parity in recent years.

New Support Price Announced for Wool

The United States Department of Agriculture has announced that the 1950 wool crop will be supported on a national average price of 45.2 cents per pound, grease basis. This compares with a support price of 42.3 cents per pound in 1949. The support program will be in effect from April 1, 1950, to March 31, 1951, and a schedule of price supports by grades will be announced shortly.

Support Price for Flaxseed

The United States Department of Agriculture has announced that the price of the 1950 flaxseed crop will be supported at $2.57—60 percent of parity, f.o.b. Houston and Corpus Christi. The price will be supported through loans and purchase agreements.

PUBLICATIONS

Louisiana Agricultural Experiment Station, Baton Rouge:

A 300-Unit Laying House, Agricultural Extension Publication 1039, by Clyde Ingram and Mansel Mayeux.

Control Cotton Insects, 1950, Agricultural Extension Publication 1041.

New Mexico Agricultural Experiment Station, State College:

Codling Moth Control in Southern New Mexico Orchards, Press Bulletin 1034, by J. R. Eyer and J. V. Enzie.

Oklahoma Agricultural Experiment Station, Stillwater:

Potassium in Oklahoma Soils: and Crop Response to Potash Fertilizer, Bulletin No. B-346, by Horace J. Harper.

Texas Agricultural Experiment Station, College Station:

Effect of Fertilizers on Yield and Quality of Sweet Potatoes in Central East Texas, 1949, Progress Report 1233, by H. C. Hutson and J. C. Smith.

Grasshopper Control, Progress Report 1235, by J. C. Gaines and H. A. Dean.

Copies of these bulletins may be secured by request to the publisher.