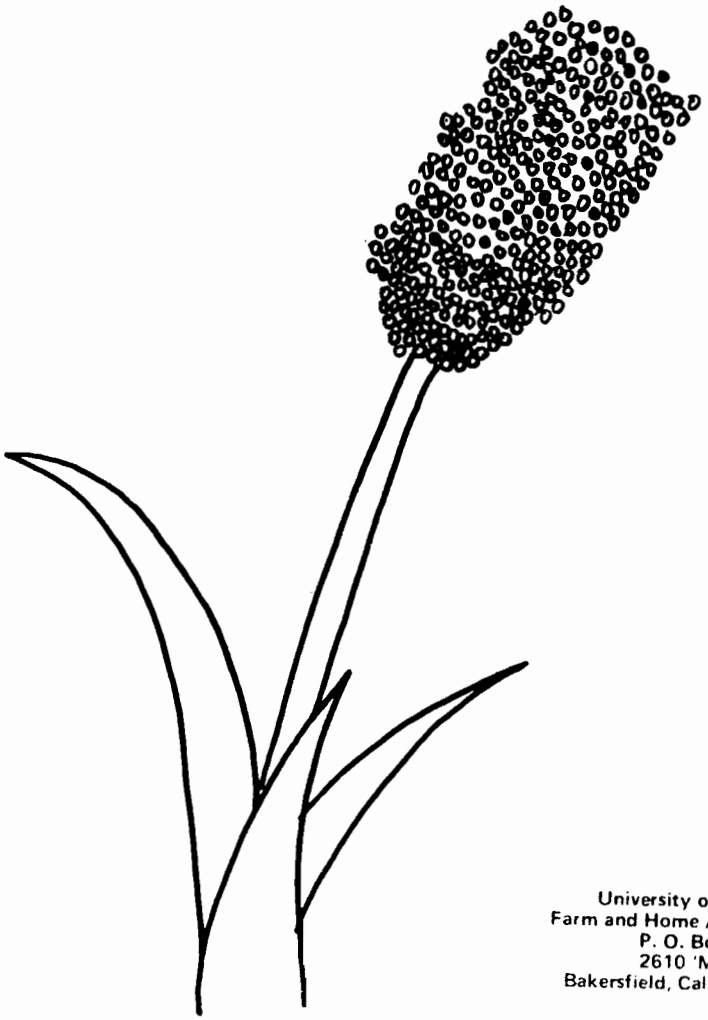
GRAIN SORGHUM

SR-VS-75-1

(MILO)

COSTS & GENERAL HINTS ON PRODUCTION



University of California
Farm and Home Advisor's Office
P. O. Box 2509
2610 'M' Street
Bakersfield, California 93303

UC Cooperative Extension

SUGGESTIONS ON GROWING GRAIN SORGHUM

David R. Woodruff, Farm Advisor

GENERAL:

Grain sorghum, also called milo, is an excellent crop to use in a double cropping program. It may follow wheat, barley, oats, early potatoes or any other crop harvested by mid June. One outstanding point of grain sorghum is its ability to produce grain with a relatively limited supply of water.

SOIL REQUIREMENTS:

Grain sorghum grows successfully on all soils though it does best on medium textured soil types. It grows slightly better on sandy or light textured soils than it does on clay or heavy textured soils. It is fairly tolerant to alkali but yields are reduced with electrical conductivities above 6 millimhos.

VARIETIES:

There are many good varieties to choose from. More important than the variety itself is to choose the proper maturity range. Varieties are divided into many groups which mature from 110 days to over 140 days. Check with the farm advisor's office each spring for the current maturity grouping list. Many of the hybrid varieties now in use will develop offtypes. These offtypes may be taller or shorter, with heads that shatter, and various other undesirable characteristics. Outcrosses in grain sorghum occur because the plant is not self pollinated. Pollen from male pollinators usually predominate other stray pollens from Johnsongrass, shattercane and sudangrass. These stray pollen particles do fertilize a few seeds which appear in the next crop. Seed of hybrid sorghum must be

COST ANALYSIS WORK SHEET

SAMPLE COSTS TO PRODUCE GRAIN SORGHUM IN KERN COUNTY (Single Crop) - 1975

Based on man labor at $3.00 and $3.60 per hour, including compensation insurance and Social Security; 80 h.p. wheel tractor cash cost per hour $8.60; Depreciation $1.45; Interest .65

David R. Woodruff

Operation	Hours Per Acre	Cash and Labor Cost Per Acre: Labor	Fuel and Repairs-Equipment	Materials and Other Costs		Sample Costs	My Costs
Cultural:							
Land preparation	2.0	$ 7.20	$ 7.20			$ 14.40	
Plant & fertilize (2 men)	.5	3.30	1.80	Seed 12 lbs. @ .50	$ 6.00	11.10	
				Nitrogen: 90 lbs. @ .25	22.50	22.50	
Irrigate: 1 pre, 3 crop	6.0	18.00	3.60	Water: 2 ft. @ $10.00	20.00	41.60	
Cultivate: 2 times	1.0	3.60	3.60			7.20	
Taxes					13.80	13.80	
Miscellaneous overhead		9.60	10.40		7.50	27.50	
Total Cultural Costs		$41.70	$26.60		$69.80	$138.10	
Harvest:							
Combine		Contract: $8.00 + .25 cwt.			$20.50	$ 20.50	
Haul		2 1/2 tons @ $2.50 hauling			6.25	6.25	
Total Harvest Costs						$ 26.75	
Total Cash and Labor Costs						$164.85	
		Cash and Labor Cost per Ton @ 5,000 lbs. yield				($ 65.95)	

Costs at Varying Yields	
Pounds Per Acre	Total Cost Per Ton
4,000	$138.00
5,000	112.00
6,000	95.00
7,000	82.00

Investment	Per Acre	Annual Cost: Depreciation	Interest 9%	
Land	$800.00		$72.00	
Irrigation System	250.00	$18.75	11.25	
Tractor 4 1/2 hrs.		6.50	2.90	
Equipment	25.00	2.50	1.10	
Total		$27.75	$87.25	$115.00
TOTAL COST PER ACRE				$279.85
TOTAL COST PER TON @ 5,000 LBS. YIELD				$112.00

ABOUT THESE COST DATA - - - - -

The costs of production in any agricultural enterprise will vary considerably from ranch to ranch. The input and cost data in this booklet are sample costs. They are intended to be used only as educational guides in assisting you to appraise and plan your own crop and livestock program.

These cost data do not represent industry averages.

purchased new each year, otherwise a variety of types will appear.

PREPARATION OF SOIL AND PLANTING:

Like all other crops, a firm, moist seedbed is required for best results. Pre-irrigation is the best method, however, planting dry, then irrigating up is practiced and successfully if weeds are not a serious problem. Grain sorghum may be broadcast, drilled or seeded in rows.

PLANTING RATIO:

Plants should be spaced about 3 to 4 inches apart in the row. This usually works out to be about 5 pounds of seed on a 36 to 40 inch spacing. For narrower spacings increased seeding rates will approach 10 pounds per acre. Under most Kern County conditions 5 to 7 pounds are all the seed needed. Seed should be placed in moist soil no deeper than 2 1/2 inches. Shallower placement is suggested if crop is to be irrigated up, usually 1/2 to 3/4 of an inch.

PLANTING TIME:

Grain sorghum may be planted from April 15 to July 15. Planting before April 15 will not grow well because of cool weather. Planting after July 15 generally will not allow time enough for the crop to mature before adverse weather sets in. Late planting are also subject to the sorghum midge which can totally destroy the crop.

FERTILIZATION:

When following potatoes where there is usually a large amount of carry-over, the application of nitrogen may be lighter. In any instance, probably 90 to 125 pounds of nitrogen is all that will be required. If nitrogen is to be applied, application should be made at seeding time, if possible.

IRRIGATION:

Timing the irrigation of grain sorghum is very important. Since sorghums are usually planted in hot weather, a pre-irrigation is necessary. Then, on good permeable soil, the following schedule can be used for maximum yields: If water is available for only one irrigation, make sure this is applied when the crop is in the "boot stage". If water is available for two irrigations, apply in the "boot stage" and two weeks after heading. If three irrigations are possible, apply in the tiller stage, the "boot stage", and two weeks after heading.

On soils that are tight or very sandy, it may be necessary to water as frequently as every 7 to 10 days during the heat of the summer until the seed in the central or main stems is in the soft dough stage.

CULTIVATION:

The main reason for cultivation is weed control. Although in some soils a cultivation also improves water penetration for the next irrigation. One must remember however, that soils also will dry out when cultivated, so care must be taken in avoiding unnecessary cultivation.

HARVESTING:

Harvesting is done by combine. Moisture content should be below 15 percent so that drying charges are avoided. Sometimes in the late fall it is necessary to dry grain sorghum because of adverse weather conditions.

YIELD:

From 4,000 to 7,000 pounds per acre can be expected. Yields as high as 9,000 pounds have been accomplished.

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