



MILO

as a

CASH CROP

University of California
Agricultural Extension Service
Merced County

MILO AS A CASH CROP

by

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Milo will be a new crop to many Merced County farmers in 1955. The price will be supported at 70% of parity this year and there are no restrictions on acreage. Recent development of early maturing varieties makes it possible to double crop milo after barley or other small grains. This leaflet outlines general practices for successful milo production. A table of sample costs of production has been prepared for your consideration. Since milo can be grown either as an early planted single crop or late planted double crop, two sets of costs have been worked up. Space has been provided for you to record your costs for future reference.

SOIL REQUIREMENTS

Heavy soils with good moisture holding qualities are desirable for milo. Of course the better the soil the better the crop. Milo is more tolerant of alkali than cotton, and less subject to injury from drought than corn. Cotton wilt, caused by a soil borne fungus, does not attack milo.

LAND PREPARATION

Too often milo is planted on a poorly prepared seedbed. For a double crop planting following barley it will usually be necessary to pre-irrigate. As a rule it will pay not to work the ground very deep. Moisture can be lost quickly at this time of the year. Often, disking twice followed by a light harrowing is sufficient. Try to end up with a firm, moist seedbed.

VARIETIES

The biggest news in milo production is the development of new early maturing varieties suitable for double cropping.

- Ryer-15 A selection of Double Dwarf 38 noted for earliness.
- Norghum Developed by South Dakota Experiment Station. Very early but some tendency to lodge.
- Reliance Developed by South Dakota Experiment Station. Larger head and stronger stalk than Norghum.
- Hegari Late maturing, good for silage (white).
- Double Dwarf 38 Late maturing, suitable only for early planted single crop.

YIELDS

State average - 2100 pounds per acre.

Merced County - Single crop: 4000 to 5000 lbs. per acre.
Double crop: 2000 to 4000 lbs. per acre.

PLANTING

1. Use corn or bean planter with sorghum plates for row planting. Grain drill or broadcast for solid planting. On clean ground a solid planting can be checked and flood irrigated. This also saves expense of cultivating.
2. Plant seed in moist soil up to $2\frac{1}{2}$ inches deep if necessary.

3. Double crop plantings of Ryer-15 should be planted at 20 lbs. to 30 lbs. per acre. Norghum should be planted 8 lbs. to 10 lbs. in rows or 20 lbs. broadcast. Reliance at a slightly heavier rate than Norghum.

A single crop early planting of Double Dwarf 38 can be planted at 5 lbs. per acre.

PLANTING TIME

Single Crop

April 15 -- May 10

Double Crop

June 15 -- July 1

SEED TREATMENT

Good insurance against seedling disease and kernel smut, use any one of several chemicals:

Ceresan M at 1 ounce per 100 pounds of seed.

Arasan at $3\frac{1}{2}$ ounces per 100 pounds of seed.

Phygon XL at 2 ounces per 100 pounds of seed.

This can be applied by the seed dealer or at home. (Also see page 4 for Wireworm control.)

FERTILIZER

Contrary to popular opinion milo is not hard on the soil. Any depressed yield of crops following milo can be corrected with an application of nitrogen fertilizer. In fact the milo itself will generally

respond well to an application of 100 pounds or more of actual nitrogen per acre. Fertilizer should be side-dressed at planting time or before the first irrigation.

IRRIGATION

With a good pre-irrigation two additional irrigations will usually be enough. It will take more frequent irrigations on light soil. Irrigation after heads have appeared is not recommended. It delays maturity and induces suckering. This is important for early harvest of dry grain.

WEED CONTROL

Cultivation does not conserve moisture except when it controls weeds. One to three cultivations may be required. This expense is saved in solid plantings.

INSECTS

Cutworms or Army worms: Dust or spray the rows with 2 pounds of actual DDT per acre.

Wireworms: Treat seed with Lindane, 4 ounces 25% Lindane per 100 pounds of seed, or 1-1/3 ounce 75% Lindane per 100 pounds of seed. This also controls seed corn maggot and can be combined with the chemical treatment for kernel smut.

Aphids: An occasional late season pest. Chemicals are available to control aphids, but control is usually not practical.

HARVESTING

Use a regular grain combine but avoid excessive cylinder speeds to prevent cracked grain. Often the moisture of the grain is too high for safe storage. It should be dried artificially if it is above 13% moisture for bulk storage.

The stover or stalks and leaves left after harvesting can be pastured. Hegari stalks are semi-sweet and relished by stock, but there is always some danger of prussic acid poisoning. Hegari is suitable for silage.

DRYING

Information is available at the Farm Advisors Office (Agricultural Extension Service, County Agricultural Building, 22 and N Streets, Merced) on forced air drying of milo with unheated air.

COST OF GROWING GRAIN SORGHUM IN MERCED COUNTY

On the following two pages are breakdowns of sample costs and space for recording your costs for growing milo based on a double crop (3,000 pound yield) and a single crop (4,500 pound yield).

These sample costs may not fit your conditions. On double cropped land the taxes, depreciation and interest have been pro-rated to two crops.

Where the operator owns the harvesting equipment the harvesting costs may be lower.

COST OF GROWING GRAIN SORGHUM IN MERCED COUNTY

BASED ON 3,000 POUND YIELD - DOUBLE CROP

(Man labor \$.90, Heavy Tractor \$2.50, Light Tractor \$1.20)

	Sample Costs Per Acre	My Costs Per Acre
Land preparation: 2 hrs. man & heavy tractor.....	6.80	
Plant & fertilizer: $\frac{1}{2}$ hr. 2 men & heavy tractor.....	2.15	
Irrigate - 2-3 times: 2 man hrs.	1.80	
Harvesting - (Contract at 50¢ cwt.)	11.00	
Hauling - (Contract at 10¢ cwt.)...	3.00	
TOTAL LABOR & FIELD POWER	24.75	
Irrigation water: $2\frac{1}{2}$ acre ft. ($\frac{1}{2}$)..	2.00	
Commercial fertilizer - 100# N. ...	12.00	
Seed - 12#.....	1.80	
TOTAL MATERIAL COST	15.80	
General expense - 5% of total labor and material.....	2.27	
County taxes ($\frac{1}{2}$).....	1.50	
Repairs, insurance, miscellaneous - cash costs.....	2.00	
TOTAL CASH OVERHEAD COSTS	5.77	
Depreciation:		
Irrigation facilities: \$60 cost - 20 year life ($\frac{1}{2}$).....	1.50	
Tillage and other equipment: \$15 cost - 10 year life ($\frac{1}{2}$).....	.75	
TOTAL DEPRECIATION	2.25	
Interest on investment at 5%:		
Irrigation facilities, tillage equipment, etc., at original cost ($\frac{1}{2}$).....	1.00	
Land at \$400 per acre ($\frac{1}{2}$).....	10.00	
TOTAL INTEREST ON INVESTMENT	11.00	
TOTAL COST OF PRODUCTION	59.37	
(Total cost of production per cwt. - \$1.99)		

50

COST OF GROWING GRAIN SORGHUM IN MERCED COUNTY
 BASED ON 4,500 POUND YIELD - SINGLE CROP

(Man labor \$.90, Heavy Tractor \$2.50, Light Tractor \$1.20)

	<u>Sample Costs</u> Per Acre	<u>My Costs</u> Per Acre
Land preparation: 2 hrs. man & heavy tractor.....	6.80	
Plant & fertilizer: ½ hr. 2 men & heavy tractor.....	2.15	
Irrigate - 2-3 times: 3 man hrs....	2.70	
Cultivate & furrow - 2-3 times: man & heavy tractor.....	3.40	
Harvesting - (Contract at 50¢ cwt.)	13.00	
Hauling - (Contract at 10¢ cwt.)...	5.00	
TOTAL LABOR & FIELD POWER	33.05	
Irrigation water: 2½ acre ft.	4.00	
Commercial fertilizer - 100# N. ...	12.00	
Seed - 12#.....	1.80	
TOTAL MATERIAL COST	17.80	
General expense - 5% of total labor & materials.....	2.54	
County taxes.....	6.00	
Repairs, insurance, miscellaneous - cash costs.....	2.00	
TOTAL CASH OVERHEAD COSTS	10.54	
Depreciation:		
Irrigation facilities: \$60 cost - 20 year life.....	3.00	
Tillage and other equipment: \$15 cost - 10 year life.....	1.50	
TOTAL DEPRECIATION	4.50	
Interest on investment at 5%:		
Irrigation facilities, tillage equipment, etc., at original cost	2.00	
Land at \$4.00 per acre.....	20.00	
TOTAL INTEREST ON INVESTMENT	22.00	
TOTAL COST OF PRODUCTION	87.89	
(Total cost of production per cwt. - \$1.98)		