

*As of Reed*SUGAR BEETSYields

Since 1963 the average yield of sugar beets for Ventura County has been over 25 tons per acre. In 1966, 1967, and 1968 it was over 30 tons per acre. Yields of 25 and 30 tons per acre are used in this sample to demonstrate the effect of yield on cost per ton.

Varieties and Seed

Decisions regarding varieties and seed are made by the sugar company. Breeding programs of the United States Department of Agriculture and sugar companies assure a steady improvement in varieties and seed types.

Soil and Climate

All of the level irrigated land in Ventura County and the climate that goes with it is suitable for sugar beet production. The acreage of sugar beets is limited by the demand for land by more intensive and higher income crops.

When to Plant and Harvest

Most sugar beet fields are planted between December 1 and March 1. Harvesting usually begins around the middle of August and continues throughout September. Because the date of harvesting of a sugar beet crop is not highly critical, it is not necessary to schedule plantings, but harvesting is scheduled so as to meet the steady demand for sugar beets by the sugar factory and to fit the capacity of the local sugar beet dump where beets are freed of some dirt and trash and loaded on railroad cars.

Planting, Cultivation, and Weed Control

All sugar beets here are planted 2 rows to a standard vegetable bed (40" centers). Conventionally the seed is drilled at the rate of about 7 lb/A and the fields hand thinned. There is an increasing acreage planted by precision planting in which single seeds are dropped about 2 inches apart. These fields may be mechanically thinned or hand thinned. Because of the ability of sugar beets to adapt themselves to a wide range of spacing, production is satisfactory whether single beet plants are spaced at 4 inches or 16 inches and a few doubles can be tolerated in what might be called a satisfactory stand. When conditions for emergence are highly satisfactory, and when seed of a high germination percentage can be used, planting to stand by dropping a seed every 3½ to 4

inches is worthy of trial. Precision planting and planting to stand is often discouraged by the low germination of available seed.

Selective herbicides available and recommended today appreciably reduce the cost of weed control but they leave some weeds to be taken out by cultivation and hoeing. Most weed control chemicals have been applied pre-emergence with incorporation. Recent observations have found post-emergence application of one or more herbicides encouraging.

Fertilizing

In most fields it is a good practice to apply about 125 lbs. of nitrogen per acre before planting or at planting time. This may or may not be sufficient for the whole season. Plant tissue analysis can be used to a good advantage in determining whether additional nitrogen is needed. Mid-season application of nitrogen is critical because if the sugar beet plants do not exhaust the nitrogen supply before harvest the sugar percentage tends to be low.

Irrigation

Sugar beets have a deep, vigorous root system, and when their leaves are fully developed they utilize large quantities of water. Because sugar beets are planted during the rainy season it may not be necessary to start irrigating sugar beets until April or May. Irrigation should be timed so as to keep the crop growing vigorously until shortly before harvest. Intervals between irrigations may range from 2 to 4 weeks. Little or no harm is done allowing the drier portions of the field to show some wilt, but wilting should be taken as a signal to irrigate. Because by the time sugar beets show symptoms of drought, they have probably extracted water from the soil to a depth of 4 feet or more, it is important to allow water to remain in the furrow long enough to replace moisture to a depth of 3 or 4 feet.

Pests and Diseases

It is advisable to treat most sugar beet fields for root-knot nematode before planting. Crop rotation of 4 years or more between sugar beet crops will usually keep sugar beet nematodes under control; but if cabbage or any other cole crops are planted in this interval, the loss from sugar beet nematodes can be serious.

Occasionally it is advisable to treat sugar beets for cutworms or other insect pests.

SUGAR BEETS, 1969

Yield: 25 Tons/A & 30 Tons/A Land Use: 8 Months

Remarks: Planted Dec. to Mar., and Harvested Aug. to Sept.

	Labor per Acre		Cash Costs per Acre		Total per Acre \$
	Hrs.	Cost \$	Machinery \$	Contract & Materials \$	
CULTURAL CASH COSTS					
Plow 1 x	.68	1.67	2.38		4.05
Disc and Roll 2 x	.52	1.27	1.82		3.09
Landplane 2 x	.52	1.27	1.82		3.09
Springtooth harrow 1 x	.16	.39	.56		.95
Fumigate, Fertilize, Furrow	Contract:		125 lb/A NH ₃ + 20 gpa DD applied,	54.40	54.40
Roll beds	.25	.61	.38		.99
Plant & apply insecticide & herbicide,	Contract:			25.52	25.52
Thin 1 x	Contract:			30.00	30.00
Cultivate 4 x	2.40	5.88	3.60		9.48
Hoe 1 x	10.00	19.50			19.50
Irrigate 5 x	6.25	12.19	.75	2 A-ft. @ \$5 10.00	22.94
Disc and Roll refuse 2 x	.52	1.27	1.82		3.09
Total Cultural Cash Costs		44.05	13.13	119.92	177.10

CASH OVERHEAD

Land rent	@ \$10.00 per acre-month x 8	80.00
Taxes on Machinery	@ .24 per acre-month x 8	1.92
Supervision	@ 2.00 per acre-month x 8	16.00
General Expense	@ 2.00 per acre-month x 8	16.00
Total Cash Overhead	@ 14.24 per acre-month x 8	113.92
Total Cash Costs except Harvesting.		291.02

HARVESTING CASH COSTS

Dig and Load, Contract	\$1.35/Ton, 25 T/A	33.75
Haul	Contract \$.85/Ton, 25 T/A	21.25
Total Harvest Cash Cost, 25 T/A		55.00
Total Cultural and Harvest Cash Cost, 25 T/A		346.02

INVESTMENT OVERHEAD

Depreciation	@ \$2.00 per acre-month x 8	16.00
Interest	@ .50 per acre-month x 8	4.00
Total Investment Overhead @ 2.50 per acre-month x 8		20.00
Total Cost per Acre, 25 T		366.02
Total Cost per Acre, 30 T		377.02

Total Cost per Ton @ 25 Tons/A \$14.64

Total Cost per Ton @ 30 Tons/A 12.57

CASH FLOW - EXCLUDING LAND RENT AND TAXES

Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

Start
\$110

Grow
\$75

Harvest
\$60

<u>Year</u>	<u>Acres</u>	<u>T/A</u>	<u>\$/Ton</u>	<u>\$/A</u>
1962	345	22.52	\$ 10.10	\$ 228
1963	1882	27.05	12.92	349
1964	4421	25.90	13.83	358
1965	2390	25.88	13.57	351
1966	1260	31.40	15.00	471
1967	1423	34.86	14.08	491
1968	1550	32.50	14.60	474