SUGAR BEET

PRODUCTION & COSTS

IN

Santa Barbara County

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Co-operative Extension Work in Agriculture & Home Economics
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SUGAR BEET PRODUCTION AND COSTS IN SANTA BARBARA COUNTY

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Sugar beets are an important field crop in Santa Barbara County. The annual cash value is approximately $800,000.

Sugar beet acreage has decreased in Santa Barbara County due to competition from other crops. The 1953-57 average was 5,350 acres, compared to 2,540 acres for 1959-63. In 1963, yields averaged 23.7 tons/acre.

SOILS - Sugar beets produce good yields on soils ranging from sandy loams to clays. On deep well-drained soils, the roots will penetrate the soil to a depth of 5-6 feet. Once a stand is established, sugar beets have a high salt tolerance.

LAND PREPARATION - Land is prepared for planting from October through March. A typical operation may include disking, plowing, disking (2 times), land planing, and then listing for planting.

PLANTING - The planting season begins in December and continues through March. Sugar beets are planted on 38-40 inch double-row beds and on 22-30 inch single-row beds. The seed is planted not over 1 inch deep at a rate of 6-12 seeds/foot.

THINNING - The beets are thinned to a 6-8 inch spacing when they have 4-6 true leaves. Research has shown that variations in spacings from 4-12 inches have little effect upon yield. Gaps larger than 16 inches should be avoided.

IRRIGATION - Good yields require good irrigation practices. Sugar beet yields are reduced if the beets suffer from lack of available water. The number of irrigations required depends upon soil texture, evapotranspiration rate and the length of growing season. Sugar beets will use from 2.5 to 3.5 acre feet of water. Furrow and sprinkler irrigation methods are used.

FERTILIZER - Good sugar beet yields require good soil fertility. A 28 ton crop of sugar beets removes about 145 lbs. of N, 22 lbs. of P (50 lbs. P_2O_5), and 142 lbs. of K (170 lbs. K_2O) from the soil.

Nitrogen - Generally, nitrogen is applied in split applications. The first application of 50-75 lbs. of N is side-dressed following thinning. A second application of 75-125 lbs. of N is applied 6 to 8 weeks later.

Phosphorus - Some soils respond to phosphorus. An application of 22 lbs. of P (50 lbs. P_2O_5) before planting, or side-dress following thinning, is usually adequate.

Potassium - A few soils are deficient in potassium. If a deficiency exists, apply 40-80 lbs. of K (48-97 lbs. K_2O) before planting, or side-dress following thinning.

HARVESTING - Harvesting begins in August and continues through November. Date of harvest is established in the contract with the sugar company. The beets are harvested with mechanical diggers, owned by the grower or custom operators.

MARKETING - Sugar beet production and marketing is regulated by the Federal Sugar Act. Sugar beets produced for sugar are grown only under contract with individual processing companies.

Payments to the growers are based on 1) sugar content of the beets; 2) the net selling price received by the company; and 3) a federal government "conditional payment", handled by the local office of the Commodity Stabilization Service.

NEMATODES

Sugar Beet Nematode - Practically all land used in this area for the production of beets is infested with this pest. The best control is crop rotation with 3 or more years out of sugar beets, broccoli, brussel sprouts, cabbage, cauliflower, and spinach.

Many weeds (mustard, black nightshade, etc.) are host plants and should be controlled.

Root Knot Nematode - The root knot nematode caused economic losses in localized areas. This nematode is more common on sandy

Santa Barbara County 1965

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SAMPLE COSTS TO PRODUCE SUGAR BEETS

Based on 1,000-acre farm
300 acres sugar beets
Yield - 28 tons per acre

Labor: Tractor Driver @ $1.65/hour
Irrigation @ 1.40/hour
Other Labor @ 1.25/hour

Operation Costs:
40 hp crawler-diesel @ $1.46/hour
30 hp wheel-gasoline @ 0.95/hour

Operation	Hours per Acre	Labor	Fuel & Repairs	Materials: Kind and Amount	Materials: Cost	Cost Per Acre: Sample Cost	Cost Per Acre: Your Cost
Cultural							
Land preparation	4.0	$ 6.60	$ 7.00			$ 13.60	
Plant	.7	1.25	1.25	Hybrid seed @ .75/lb, 5 lb/ac	$ 3.75	6.25	
Fertilize 2 times				N=175 lb @.10-P_2O_5-50 lb @.10	22.50		
				Application	4.00	26.50	
Irrigate 8 times	12.0	16.80		3 ac. ft. @ 5.00/ac ft	15.00	31.80	
Roll beds 2 times	.5	.80	.55			1.35	
Cultivate 5 times	2.5	4.15	3.10			7.25	
Hand thin	20.0	23.00				23.00	
Hoe	8.0	10.00				10.00	
Total Cultural	47.7	$ 62.60	$ 11.90		$45.25	$119.75	
Harvest							
Mechanical digger	3.0			Contract @ $1.35/ton		37.80	
Haul	7.0			Contract @ 1.20/ton, 12 miles		33.60	
Total Harvest	10.0					71.40	
Misc. Overhead						8.00	
Rent						65.00	
Total Cash Cost						$264.15	
Management 5% of 28 tons @ 14.00 ($392)						19.60	
	Investment	Annual Cost: Per Acre	Annual Cost: Depreciation	Annual Cost: Interest			
		$ 67.00	10 years - $6.70	$1.95		8.65	
Total Cost per Acre						$294.40	
Cost per Ton @ 28 tons						$ 10.51	

SUGAR BEET PROFITS AS AFFECTED BY YIELD & PRICE

Yields Tons/Acre	Harvesting Cost	Total Production Cost per acre	Sugar beets - Price / Ton $12.00 profits per acre	$13.00	$14.00
18	$48.60	$271.60	-$55.50	-$37.60	-$19.60
20	53.00	276.00	- 36.00	- 16.00	4.00
22	57.42	280.42	- 16.42	5.58	27.58
24	61.68	284.68	3.32	27.32	51.32
26	66.30	289.30	22.70	48.70	74.70
28	71.40	294.40	41.60	69.60	97.60
30	76.30	299.30	60.70	90.70	120.70
32	81.60	304.60	79.40	111.40	143.40
34	86.70	309.70	98.30	132.30	166.30
36	91.80	314.80	117.20	153.20	189.20

Cost of digging - 18 tons @ 1.50/ton
20 tons @ 1.45/ton
22 tons @ 1.41/ton
24 tons @ 1.37/ton
26 tons and over @ $1.35/ton

Cost of hauling - @ $1.20/ton

UC Cooperative Extension

1/15/65 300c.