

Asel Reed

Sample Inputs and Costs for Sugar Beets
San Benito County, Yield 20 Tons per Acre

	Man labor	40 h.p. tractor	30 h.p. tractor	1½ ton truck	Cost per acre	Cost per ton
	Hours per Acre					
Land preparation incl. shape beds	4.0	3.8		.1	14.53	
Plant	1.2		.4		1.96	
Fertilize - contract					1.50	
Cultivate	1.6		1.6		4.32	
Thin. contract					17.00	
Hoeing and weeding, variable	25.0				21.25	
Irrigation, 3 times incl. ditch	18.0	.1			16.46	
Miscel.	2.0	.2	.5	.2	3.82	
Subtotal cultural labor cost	51.8	4.1	2.5	.3	80.84	4.04
Lift, top and load - contract					29.00	1.45
Haul contract at \$1 per ton					20.00	1.00
Total labor cost	51.8	4.1	2.5	.3	129.84	6.49
Irrigation water, power to pump 18 A. inches					6.30	
Seed, 7 lbs. @ 55¢					3.85	
Fertilizer, commercial 500 lbs. to give 100 lbs. nitrogen.					18.75	
Total material cost					28.90	1.45
Total labor and material cost					158.74	7.94
General expense, 5% of above labor and material					7.94	
County taxes, land and equipment					9.00	
Repairs other than tractors and truck					2.00	
Insurance, comp. 1.00, other .30					1.30	
Total cash overhead cost					20.24	1.01
Total cash cost					178.98	8.95
Investment and investment overhead based on a 100 acre farm, 40 A. of beets	Orig. cost	Av. value	5% int.	Depreciation		
	Dollars per A.					
General bldg. and improvements	20.	10.	.50	.50		
Irrigation, well, pump and pipe	86.	43.	2.15	3.43		
Tillage and cultiv. equipment	36.	18.	.90	2.44		
Sugar beet planter	8.	4.	.20	.40		
Miscellaneous tools, etc.	10.	5.	.25	1.00		
Land	800.	800.	40.00	--		
Total investment	960.	880.				
Total depreciation				7.77	7.77	.39
Subtotal cash and deprec. costs					186.75	9.34
Total interest on investment			44.00		44.00	2.20
Total all costs					230.75	11.54
Less value of tops @ 40¢ per ton of beets					8.00	.40
Net cost of beets					222.75	11.14

Labor costs above are figured at the following hourly rates: man labor tractor, \$1.10; hoeing etc., .85 other .90; 40 hp. tracklayer tractor \$2.60, 30 hp. wheel tractor \$1.60 and 1½ T. truck \$2.50. Tractor and truck rates include overhead and repairs as well as operating costs.

Among the irrigated crops grown in San Benito County, sugar beets have occupied an important position. Since 1932, when curly top disease resistant strains of beets were introduced, land used for this crop has varied from 1600 to 8000 acres. Of the total irrigable open land in San Benito County it is believed the maximum acreage of sugar beets should not exceed 5000 acres annually, otherwise sound rotation practices will not be followed. The heavy plantings between 1946 and 1950 of 6000 to 8000 acres, and consequent increase in the sugar beet nematode population in the soils, were responsible for the small planting of 2100 acres in 1952. In 1953 there were 2877 acres harvested, while the contracted acreage in the county for 1954 is 4936 acres.

Requirements: Sugar beets make their best growth on deep, well-drained soils. The heavier soil types such as loams, silt loams and clay loams are preferred. The crop will stand more alkali, salt and boron than many other irrigated crops, but soils with excessive concentrations should be avoided. Although this crop can be grown in the hot interior valleys of the state, high yields and sugar content are favored by a long and moderately cool growing season such as is found in San Benito County.

Irrigation: An abundant supply of irrigation water is necessary for the production of this crop. A minimum of three irrigations is needed, with a total of at least 18 acre inches. If winter rainfall is deficient and germination must be started by irrigation more than three applications are necessary. Sugar beets are less sensitive to impurities in the irrigation water than many crops. All of the irrigation waters in San Benito County are suitable for this crop.

Fertilizing: Beets are heavy users of nitrogen, and good farming practice calls for fertilizing before planting, followed by a second application at thinning time. A minimum of 100 pounds of nitrogen per acre is usually needed. Applications should be so made that the nitrogen content of the plants will be reduced as harvest approaches. High nitrogen in plants at harvest results in low sugar content of the beets.

Pest Control: The most serious pest of sugar beets is the sugar beet nematode. Where it is abundant, profitable yields of beets cannot be obtained. Practically all land used in the production of beets in California is infested with this pest. Control measures are limited to rotations. Beets or other host plants should not be planted on the same land more frequently than once in three or preferably four years. Such rotation practices will reduce the soil nematode population sufficiently so that high yields can be secured. Diabrotica damage, wireworms, cutworms, curly top and downy mildew also occasionally cause trouble.

Marketing: Sugar beets are not planted unless the grower has a contract with one of the two sugar processing companies operating in this area -- Spreckels and Union Sugar Companies. The crop is under federal government production controls under the Sugar Act. Payments for sugar beets are based on the price received for sugar by the processors, and final payment is not made until after the season's pack is sold. In addition to payment from the processors, the grower also receives payments from the federal government from funds received from the processing tax. This amounts to \$.80 per 100 pounds of recoverable sugar. In 1953 the average payment made to growers in San Benito County was \$59.91 per acre. Total returns per ton of beets with 18% sugar approximated \$16.06 in 1953.

Yields: Yields and sugar percentages vary from year to year. High yields of 40 tons per acre have been received, but average and probably normal yields are about 18 tons per acre of beets that average 18% sugar.

Production Costs: On the opposite side of this sheet are sample production costs based on local observation and inquiry. These are not represented as average costs, but are believed to be fairly typical for 1954. Actual costs may vary widely from year to year and farm to farm.