

SAMPLE COSTS
TO
PRODUCE ALFALFA HAY
IN
ANTELOPE VALLEY
1965

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COST STUDY COMMENTS

Alfalfa is well adapted to the Antelope Valley. It has been the predominant crop for the past forty years and will remain dominant in the foreseeable future. Alfalfa is a less risky crop to grow than most annual crops. On the sandy soils in the Valley, annual cropping is risky due to the susceptibility of such soils to blowing. A few hours of heavy wind on a newly cultivated sandy soil can wipe out a new crop. Being a perennial, alfalfa requires establishment only every four to nine years depending upon the variety.

Alfalfa is relatively easy to grow, almost completely mechanized, and has a low per-acre labor requirement. Because of large investments in machinery and low income in returns per acre, large acreage ranches are the rule. Profit is usually small and frequently less than sufficient to make an adequate return on total investment. If land prices, as well as operating costs, continue to rise, the returns from alfalfa may reach the point of returning nothing on investment or, perhaps, not even covering cash costs. At that point, Antelope Valley alfalfa production will undoubtedly greatly diminish. In the meantime, alfalfa production is not profitable from an economic standpoint of considering returns on investment. Why, then, is alfalfa grown and probably will continue to be grown in the Antelope Valley? The answer appears to involve the financial position of ranchers and the anticipation of continuing inflationary land prices.

Producers who own their present land without indebtedness and are able to live on the cash returns in excess of actual cash costs anticipate eventual profits through disposal of property at increased values. Investors also expect to be able to cover cash costs in the interim period in order to take advantage of inflationary trends in land prices. Thus land owners, if financially possible, are willing to forego present returns on investment in agricultural production in order to realize eventual appreciation in the investment itself. How long alfalfa can continue to be produced on this basis is difficult to predict.

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Based on a 240-acre farm, a yield of 7.25 tons with 5 cuttings of Lahontan alfalfa, flood irrigated; cash costs per hour for labor of \$2.00, 20-HP tractor - \$.80, 30-HP tractor \$.95, and 40-HP diesel tractor \$.85. Assumes the owner or manager retained full time and one irrigator for an 8-month period.

	Hours Per Acre	Labor Cost	Equipment Cost	Materials		Total Cost	Cost/ Ton
				Kind & Amount	Cost		
Irrigate	7.0	\$14.00	\$ 4.00	6.5 acre-ft. at \$6.15/acre-ft.	\$40.00	\$ 58.00	
Fertilize - 20-HP attach				63# P ₂ O ₅ , includes application		6.15	
Insect, rodent, or weed control	1.0	2.00			2.00	4.00	
TOTAL CULTURAL COST						\$ 68.15	\$ 9.40
Mow 5x mower windrow swather 14 ft.	1.3	\$ 2.60	\$ 2.67			\$ 5.27	
Baler 5x 3 wire + 30-HP tractor	1.2	2.40	3.32	Wire \$.75/ton	\$ 5.44	11.16	
Rake 2x wheel + 20-HP tractor	.2	.40	.21			.61	
Haul & roadside 40-HP, harrow-bed wagon	1.0	2.00	3.00			5.00	
TOTAL HARVEST COSTS						\$ 22.04	\$ 3.04
	<u>Investment Per Acre</u>	<u>Depreciation Per Acre</u>	<u>Interest Per Acre</u>	Management		\$ 5.00	
Land	\$ 500.00	-	\$ 30.00	General Expense *		9.00	
Wells & pumps 2x 700'	150.00	\$ 11.80	4.50	Taxes		7.50	
Irrigation system & leveling	120.00	4.00	3.60	TOTAL MISC. EXPENSE		\$ 21.50	\$ 2.96
Buildings	10.00	.50	.30	TOTAL CASH COSTS		\$111.69	\$15.40
Equipment harvesting	78.54	8.50	2.06	Depreciation on stand (\$34 for 7 years)		\$ 4.86	
Tractors & pickup	60.62	7.02	1.82	Depreciation - Bldgs. & equip.		33.07	
Cultural equipment	12.50	1.25	.38	Interest on investment @ 6%		42.66	
TOTAL	\$ 931.66	\$ 33.07	\$ 42.66	TOTAL NONCASH COST		\$ 80.59	\$11.12
				TOTAL ALL COSTS		\$192.28	
				TOTAL COST PER TON			\$26.52

* General expense may exceed this amount because two men may be retained full time and wages reflected in actual operations may not provide for total hours and cost.

To survive the inflation of labor and operating costs, profits per acre will become smaller and ranches will continue to get larger. Larger ranches will require better management with tighter operating costs. A recent study conducted in the San Joaquin Valley showed that a 640-acre ranch could pay 2 times as much for water as an 80-acre ranch and still leave enough income to support the operator.

Investment is figured on new equipment, wells, and today's price for raw land. Many operators are working on less expensive equipment, some of which may be depreciated out and still be very serviceable. Also, many ranches were developed on less expensive land.

This study should be considered an average and may be either below or above your operating costs.

SELLING PRICE OF ALFALFA OVER PAST 10 YEARS

<u>Year</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>
Price	\$28.00	24.00	25.50	26.15	32.11

<u>Year</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
Price	\$27.50	22.00	26.00	33.75	27.00

Average 1955 to 1964 - \$27.20

Average 1945 to 1954 - \$26.75

Irrigation Systems

There is little, if any, difference in the average cost of installation and/or operating costs between a wheel-move sprinkler system or a concrete pipe flood system.

Soil type and topography will determine which system would be most efficient. As a general statement, on heavier type soils the flood system would likely be more economical, whereas on sandier soils the sprinkler system may be the most economical. The initial investment of hand-move sprinklers over wheel-move sprinklers would be less, but finding reliable labor plus the added cost of moving the hand-move lines offset this advantage for most alfalfa ranchers.

A wheel-move sprinkler system will have a higher maintenance cost than a concrete pipe system. The boosting cost of water for sprinklers would be approximately \$20 per acre more than a flood system if both used the same amount of water. Only where application efficiency offsets the additional costs of boosting and maintenance will the sprinkler system be more profitable. Either system has its limitations and drawbacks; thus, which system is best suited to a particular ranch will depend on the ranch conditions and operator's preference. Poorly designed systems of either type will reduce alfalfa yields.