

MOJAVE VALLEY ALFALFA

A STUDY OF COSTS

000

HAY

SEED

University of California
Agricultural Extension Service
San Bernardino County
UC COOPERTIVE EXTENSION

ALFALFA COST STUDY DESERT AREA
HAY AND SEED

Six alfalfa growers in the Mojave Valley cooperated in keeping Cost records during 1953. Three growers produced certified seed. Three growers received their income entirely from hay production. There was a total of 333 acres for which records were kept.

This Study was developed so that:

1. New growers can get an idea of the costs involved in hay and seed production.
2. Established growers can compare their operations with those in the Study.

1953 hay prices dropped about \$10.00 per ton over 1952 prices.

The hay yields (6.9 to 8.24 tons/A) represent top farms in the desert.

The seed yields (393-453 lbs/A) are about one-half to two-thirds of good yields.

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TABLE I -- ALFALFA HAY SUMMARY (PER ACRE)

	I	II	III
Gross Income	\$197.25	\$169.30	\$167.71
Cash Costs	61.30	65.89	54.89
Net Cash Income	<u>\$135.95</u>	<u>\$103.41</u>	<u>\$112.82</u>
Capital and Management Income	93.20	66.92	31.73
Farmer Labor	13.94	10.43	42.49
Net Income	<u>\$107.14</u>	<u>\$ 77.35</u>	<u>\$ 74.22</u>

ALFALFA SEED SUMMARY (PER ACRE)

	IV	V	VI
Gross Income	\$110.26	\$127.58	\$ 98.92
Cash Costs	75.03	123.81	76.19
Net Cash Income	<u>\$ 35.23</u>	<u>\$ 3.77</u>	<u>\$ 22.73</u>
Capital and Management Income	(-)15.53	(-)20.94	(-)23.85
Farmer Labor	31.11	-	17.51
Net Income	<u>\$ 15.58</u>	<u>(-) \$ 20.94</u>	<u>(-) \$ 6.34</u>

TABLE II -- GENERAL SUMMARY OF YIELD, INCOME, COSTS AND EARNINGS PER ACRE

ITEMS	SERIAL NUMBER						YOUR COSTS
	1	2	3	4	5	6	
YIELD							
Hay - Tons Per Acre	8.24	6.9	7.33	-	.63	.27	
Seed - Pounds Per Acre	-	-	-	453	401	393	
Screenings - Pound	-	-	-	92	131	61	
Straw Tons	-	-	-	.36	.53	-	
INCOME PER ACRE							
Hay	189.41	165.72	167.71	-	15.63	6.11	
Seed	-	-	-	107.36	104.35	92.20	
Straw and Screenings	-	-	-	3.82	7.60	.61	
Pasture	7.84	3.78	-	-	-	-	
TOTAL INCOME	197.25	169.30	167.71	110.26	127.58	98.92	
COSTS PER ACRE							
Cultural Labor and F.P.	4.59	4.20	24.50	37.79	22.53	25.80	
Harvest	48.69	43.25	60.99	43.29	63.13	36.06	
Materials	22.20	28.86	24.24	44.67	36.91	36.60	
Cash Overhead	6.53	7.23	8.27	8.15	9.21	6.62	
TOTAL CASH COSTS	82.00	83.54	118.00	133.90	131.78	105.08	
DEPRECIATION	22.24	18.84	17.98	14.55	16.74	17.69	
INTEREST ON INVESTMENT	21.60	23.28	20.47	10.75	7.97	13.24	
TOTAL ALL COSTS	125.65	125.66	156.47	136.54	156.49	136.01	
CAPITAL & MANAGEMENT INCOME	93.20	66.92	31.73	-15.53	-20.94	-23.85	
MANAGEMENT INCOME	71.60	43.64	11.24	-26.28	-28.91	-37.09	

TABLE III --- SOME MANAGEMENT PRACTICES AND OTHER ITEMS

ITEMS	SERIAL NUMBERS					
	1	2	3	4	5	6
Variety	Cal. Com.	Cal. Com. Caliverde	Cal. Com.	Buffalo	Buffalo	Buffalo
Age of Stand (years)	3 - 6	1 - 7	2 - 12	2	2	1 - 2
Number Cuttings - Hay	-	5	5	-	1	Clipping
Selling Prices						
Hay Per Ton	23.00	24.00	23.00	-	25.00	22.00
Seed, No. 1-Recleaned Per Cwt	-	-	-	27.64	27.64	27.64
Straw Per Ton	-	-	-	8.01	12.00	-
Investment Per Acre						
Land	300.00	300.00	300.00	140.00	75.00	150.00
Irrigation Facilities x	75.00	100.00	75.00	33.00	53.13	87.84
Alfalfa Stand x	20.00	20.00	20.00	27.00	27.00	27.00
All Other x	96.34	45.62	14.85	15.00	4.17	-
TOTAL	431.94	465.62	409.85	215.00	159.30	264.84
Operation & Mgmt. Practices						
How Planted	Border	Border	Border	Rows 32"	Rows 32"	Rows 32"
Number of Cultivations	-	-	-	3	3	3
Number of Irrigations	20	16	18	12	6	8
Number of Dustings	-	-	-	3	1	2
Bees for Pollination	-	-	-	-	Yes	-
Source of Water	Wells	Wells	Wells	Wells	Wells	Wells
Cost of Water Per Acre xx	15.38	24.14	16.95	15.00	30.62	32.00
Cost of baling per ton	2.71	2.75	3.65	6.58	4.00	5.00
Cost of Combining Seed Per Acre	-	-	-	-	-	11.34

x -- one-half original cost. xx -- power bills only

TABLE IV -- WATER DATA

	1	2		3		4	5	6
		(1)	(2)	(1)	(2)			
Well - Depth in Feet	204	150	200	2 wells	200	130	325	158
Size of Casing	16"	14"	14"	14"	16"	12"	10"	8"
Pumping Lift	98'	100'	100'	85'	105'	95'	220'	128'
Miners Inches	40" - 60"	37"	37"	130"	100"	51"	95"	60"
Number of Irrigations	20	16		18		12	6	8
Total Acre Feet	6.7	7.4		7.0		4.6	3.5	4.5

SEED

The difference in water use between seed and hay is still the important factor in choosing seed production.

Low seed yields in this county can be traced to improper irrigation and lygus bug control.

Yellow clover aphid will force many seed growers to improve their insect control. Costs should influence better irrigation methods.

500 pounds of seed per acre pays costs of production. Yields should average 750 pounds per acre for minimum farmer returns.

HAY

Few growers produce as much as those reported in this Study.

For better profits, growers must increase yields and plan better marketing programs.

A combination of seed and hay would allow farmers to fit their crop to the best price. Buffalo alfalfa produces high hay yields and could be used for certified seed crops.

Alfalfa acreage in California is increasing and competition is becoming severe.

Phosphate fertilizer appears to be an unprofitable cost on some farms with present application methods.

**CALIFORNIA SEED PRODUCTION
CERTIFIED VARIETIES**

	<u>1952</u> <u>Acres</u>	<u>YieldPer</u> <u>Acre</u>	<u>1953</u> <u>Acres</u>	<u>YieldPer</u> <u>Acre</u>	<u>1954</u> <u>Acres</u>	<u>YieldPer</u> <u>Acre</u>
Ranger	39,768	555	43,077	524	43,952	519
Buffalo	11,545	563	12,178	564	10,071	492
Atlantic	3,231	444	4,523	430	3,925	447
Narragansett	0	0	318	449	1,726	341
Vernal	0	0	10	600	3,645	589
Williamsburg	48	377	406	1179	461	1068
Caliverde	780	228	3,080	486	6,290	446
California Total	55,372		63,592		70,070	

Total U.S. Certified -- 182,631 acres (includes 22,245 acres Grimm and Ladak)

U. S. Average Yield -- 165 pounds (1954)

**U. S. and California Acreage, Production, Average Yields, and
Farm Price of Alfalfa Seed, 10-Year Average 1939-1948 and
Annually 1949-1953.**

	California	4 States*	U.S.
	<u>Acreage harvested</u>		
10-yr. av.			
1939-1948	23,460	91,100	886,950
1949	62,000	154,000	1,102,400
1950	115,000	211,000	926,600
1951	77,000	151,000	883,500
1952	84,000	145,500	1,339,500
1953	99,000	142,700	941,700
	<u>Production (clean seed) - 1,000 lbs.</u>		
10-yr. av.			
1939-1948	3,830	12,682	69,940
1949	13,900	28,200	116,890
1950	31,000	46,400	104,950
1951	25,000	38,600	104,620
1952	39,900	51,290	180,326
1953	44,175	52,937	133,226
	<u>Yield per acre (clean seed) - lbs.</u>		
10-yr. av.			
1939-1948	163	140	79
1949	220	183	106
1950	270	220	113
1951	325	256	118
1952	475	353	135
1953	475	371	141
	<u>Average farm price - ¢ per lb.</u>		
10-yr. av.			
1939-1948	26.6	25.8	28.2
1949	27.2	28.1	37.5
1950	25.6	26.0	36.8
1951	39.9	37.0	45.5
1952	36.5	34.6	32.8
1953	24.5	23.9	21.7