

COOPERATIVE EXTENSION UNIVERSITY OF CALIFORNIA  
Placer and Nevada Counties

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# SAMPLE PRODUCTION COSTS

## ALFALFA HAY PRODUCTION 1976

**SOIL REQUIREMENTS:** Alfalfa is restricted to the deeper soils in Placer and Nevada Counties. Most of the alfalfa acreage is located along stream channels in the deeper alluvial soils. Alfalfa does poorly on soils which have hardpan or an impervious layer less than four feet from the soil surface.

**VARIETIES:** Alfalfa varieties are classified by dormancy characteristics into three groups. {1} The dormant or winter hardy varieties should be used at high elevations in Placer and Nevada Counties. {2} The semidormant or intermediate winter-hardy varieties are grown in the Sacramento Valley and upper foothills of Placer and Nevada Counties. {3} The non-dormant or non-hardy, winter-growing varieties can be grown on the Sacramento Valley floor.

**PLANTING DATE:** Planting dates vary with elevation. In the fall plantings can be made in September, October, and November, and in the spring, February, March and April. Early fall planting dates and late spring planting should be used at higher elevations to avoid heaving damage caused by cold weather. At the lower elevations plantings can be made later in the fall and earlier in the spring.

**SEEDING:** Seeding should be made on a firm, smooth moist seedbed. A ring roller or cultipacker prepares an excellent seedbed. Seed 25 lbs./acre when broadcasting and 20 lbs./acre when drilling seed.

### **FERTILIZATION:**

- Phosphorous - 80-100 lbs.  $P_2O_5$  per acre {35-44P} applied annually in the fall on most soils in Placer-Nevada Counties. The bicarbonate soil test can be used to determine if phosphorous is needed.
- Potassium - Some of the soils in Placer-Nevada Counties are low in potassium. Deficiency can be determined by plant tissue analysis.
- Lime - Alfalfa is extremely sensitive to acid soils and soils low in calcium. Applications of lime can correct both low calcium and acid soils.

**WATER:** Alfalfa hay required about 4 acre feet of water per acre during the growing season for maximum production. This may be one or two irrigations per cutting depending on soil type and depth. The irrigation system mentioned under investment on back page refers to irrigation well, pump, and portable hand line.

**WEED CONTROL:** To obtain the most current chemical control recommendations for weeds in seedling or established alfalfa ask for "Weed Control Recommendations" published annually by the University of California and available at the Farm Advisor's Office.

**CUTTING:** Quality hay depends upon timely cutting and proper curing. The best time to cut with the least injury to the stand is in the one-tenth bloom stage or when the next growth of the crown is one-half to one inch tall. Quality is also reduced when allowed to lay in swath or windrow longer than necessary to rake and bale.

SAMPLE COSTS TO PRODUCE ALFALFA HAY 1976

Production Data: 250 acre farm, 50 acres alfalfa, 6 tons/acre. Labor at \$2.85 & \$3.45 including fringe benefits.

Operation	Hours per Acre	Cash and Labor Cost per Acre				Total
		Labor	Fuel & Repairs	Materials Kind & Quantity	Cost	
<b>CULTURAL COSTS:</b>						
Irrigate 9X	6.0	\$17.10	\$	Water: 1/2 min. in.	\$21.00	\$38.10
Fertilize	.25	.85	.45	80 lbs. P <sub>2</sub> O <sub>5</sub> /acre at 20¢	16.00	17.30
Rodent Control	.10	.35	.15	Rent bait applicator	2.00	2.50
				1 lb. bait/acre at \$1.50	1.50	1.50
Misc. labor, materials, etc.		3.00	1.00		2.00	6.00
Interest on operating capital					2.95	2.95
<b>TOTAL CULTURAL COSTS</b>		<b>\$21.30</b>	<b>\$1.60</b>		<b>\$45.45</b>	<b>\$68.35</b>

<b>HARVEST COSTS:</b>						
Swath 5X	1.25	\$ 4.30	\$2.85		\$	\$ 7.15
Rake 5X	1.00	3.45	1.75			5.20
Bale 5X	1.15	3.95	3.15	Wire at \$2/ton	12.00	19.10
Haul	.48	1.65	2.00			3.65
<b>TOTAL HARVEST COSTS</b>		<b>\$13.35</b>	<b>\$9.75</b>		<b>\$12.00</b>	<b>\$35.10</b>

<b>CASH OVERHEAD:</b>						
Misc., office, etc.					\$ 6.55	
Taxes					12.00	
<b>TOTAL CASH OVERHEAD</b>						<b>\$18.55</b>

<b>TOTAL CASH COST</b>		<b>\$34.65</b>	<b>\$11.35</b>		<b>\$76.00</b>	<b>122.00</b>
Management 5% of 6 tons at \$60 per ton						\$18.00

INVESTMENT:	Per Acre	Annual Cost		
		Depreciation	Interest 8%	
Land	\$1000	\$	\$ 80.00	
Stand	100	14.30	4.00	
Irrigation system	475	23.75	19.00	
Equipment	728	72.80	29.15	
<b>TOTAL</b>	<b>\$2303</b>	<b>\$110.85</b>	<b>\$132.15</b>	<b>\$243.00</b>

<b>TOTAL COST PER ACRE</b>					<b>\$383.00</b>
Cost per ton at 6 ton yield					\$ 64.00

Yield in tons/acre	4	5	6	7
Total cost per ton	\$94	\$76	\$64	\$56

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EQUIPMENT INVESTMENT  
FOR ALFALFA HAY PRODUCTION

Item	Cost	Operation Cost per Hour
Tractor, 50 hp WD	\$11,200	\$2.10
Tractor, 30 hp WD	7,200	1.30
Disk	2,000	.90
Chisel	1,500	.65
Cultipacker	1,320	.60
Truck	8,000	
Pickup	5,000	
Fertilizer applicator	500	.50
Planter	2,900	2.05
Mower	1,100	.75
Rake	1,100	.45
Baler	4,500	1.45
Bale loader	16,800	4.20

TOTAL INVESTMENT \$63,120

Per acre on 250 acres for }

\$33,400 = \$133.60 }

Per acre on 50 acres for } =

\$29,720 = \$594.40 }

\$ 728.00

Depreciation per acre

\$ 72.80

Interest per acre

\$ 29.12