

*Jackison Davidson - Veg & Field Crops - S.B. 383-3871*

ALFALFA FOR HAY - WESTERN RIVERSIDE COUNTY  
SAMPLE PRODUCTION COSTS - 1976

*BRN#364*

Based on a hay of 8 tons per acre per year. Field labor at \$3.50/hour, tractor labor at \$4.25/hour, including social security and workmen's compensation. Five-year life of alfalfa stand.

OPERATION	HRS/ ACRE	LABOR COST	EQUIP. COST	MATERIALS		COST/ ACRE	TOTAL COST/ACRE
				KIND	AMOUNT		
Pre & Post Plant Irrigate	2.3	\$8.05	\$	Water	5"	\$12.00	\$ 20.05
Plow 1X (Or Chisel)	0.5	2.12	2.62				4.74
Disc 2X	0.5	2.12	2.45				4.57
Harrow (Spike 1X)	0.25	1.06	0.44				1.50
Float 1X	0.5	2.12	0.72				2.84
Plant & Fertilize 1X	0.7	2.97	2.90	Seed	20 Lbs.	40.00	45.87
Cultipack 1X	0.2	0.85	1.24				2.09
Depreciation & Interest on Investment on Equipment (For Stand Establishment)							7.64
<b>TOTAL STAND ESTABLISHMENT</b>							<b>\$ 89.30</b>
Irrigate 10X	8.0	28.00		Water	4.5 AcFt	125.00	\$153.00
					@ \$30.00		
Weed Control 1X (Contract: Material and Application)							18.00
Pest Control (Contract: Material and Application)							7.50
Fertilize 1X	0.3	1.28	0.48	P <sub>2</sub> O <sub>5</sub>	80 Lbs.	8.00	9.76
<b>TOTAL ANNUAL CULTURAL OPERATIONS</b>							<b>\$188.26</b>
Mow and swath 6X	1.6	5.60	8.94				\$ 14.54
Bale (Contract: @ \$5.50/Ton)							44.00
Roadside Bales (Contract: @ \$2.00/Ton)							16.00
<b>TOTAL HAY HARVEST AND HAULING COSTS</b>							<b>\$ 74.54</b>
Cash Overhead (Office, Car, Phone, Insurance, Etc.)							\$ 30.00
County Taxes on Equipment Only (For Equipment Used in Annual Operations)							1.95
Cash Rent							50.00
<b>TOTAL CASH OVERHEAD</b>							<b>\$ 81.95</b>
		Investment Per Acre	Depreciation	Interest on Investment @ 7% of $\frac{1}{2}$ Cost			
Alfalfa Stand		\$ 89.30	\$17.86	\$3.13			
Buildings		15.00	1.50	0.53			
Irrigation System (3/4 Basis)		168.75	11.25	5.91			
Tractors & Field Equipment (Not Including Baler)		5.67	0.57	0.20			
		<u>\$278.72</u>	<u>\$31.18</u>	<u>\$9.77</u>			
<b>TOTAL DEPRECIATION AND INTEREST ON INVESTMENT</b>							<b>\$ 40.95</b>
<b>TOTAL COST PER ACRE</b>							<b>\$385.70</b>
<b>TOTAL COST PER TON</b>							<b>\$ 48.21</b>

Prices for alfalfa hay as reported by the Agricultural Commissioner's Office have varied from a low of \$41.32 (1972) to a high of \$87.07 (1974) in the period of 1972 to 1976. The 1976 price was \$80.39.

The University of California Cooperative Extension in compliance with the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and the Rehabilitation Act of 1973 does not discriminate on the basis of race, creed, religion, color, national origin, sex, or mental or physical handicap in any of its programs or activities. Inquiries regarding this policy may be directed to: Warren E. Schoonover, 317 University Hall, University of California, Berkeley, California 94720. (415) 642-0903.

## ALFALFA FOR HAY OR GREEN CHOP---WESTERN RIVERSIDE COUNTY

Twelve to fifteen thousand acres of alfalfa are grown in Western Riverside County for hay or green chop. Yields range from seven to eight tons of hay or forty to fifty tons of green chop per acre under good management. Six or seven cuttings of alfalfa for hay are made per year.

SOIL: Alfalfa prefers a deep, medium soil (sandy loam to loam), but will grow on sandy and clay soils by adjusting irrigation techniques. On sandy soils, frequency of irrigation may need to be increased, also on shallow, hardpan soils.

### PLANTING:

Varieties - WR-501, El Camino, and Eldorado are gradually replacing the formerly popular Moapa. WR-501 is susceptible to bacterial wilt, however, and should not be grown where this disease is in the soil. All three of these varieties are resistant to the presently known biotypes of spotted alfalfa aphid.

Dates - Where possible, October and November plantings are preferred, but where alfalfa follows a late-harvested summer crop, February or March seedings are satisfactory, though usually lower yielding the first year than fall seedings. December and early January plantings should be avoided.

Methods - For plantings before fall rains, pre-irrigation is desirable. Alfalfa requires a well worked but firm seed bed. If, after floating, the land is still fluffy, cultipacking may be necessary before and after seeding. Seed one-half to one inch deep into moist soil. A light sprinkling after seeding is also desirable for maximum germination and may be essential if crusts form following rains. Seeding rates of 20 to 25 pounds per acre are commonly used though 15 pounds should be adequate on a well prepared seed bed and very uniform seeding. Growers who intend to border-check irrigate may obtain a publication, "THE BORDER METHOD OF IRRIGATION" from the Extension Office.

IRRIGATION: Most growers in Western Riverside County use sprinkler irrigation and secure maximum yields with four acre feet of water per acre per year. Frequency of irrigation depends on soil texture. Sandy soils or shallow hardpan soils may require two irrigations per cutting in the summer period. On deep loam soils, one to one and a half irrigations per cutting may be adequate.

FERTILIZER: Alfalfa is a legume and can supply its own nitrogen if the proper nodule-forming bacteria are present as is the case with most soils on which alfalfa has been grown. On land which has been in dry-farmed grain for a long period of years, the seed should be inoculated with fresh inoculum at planting time. Phosphorous is lacking in some soils in Western Riverside County. If test strips in your field show increased growth, eighty pounds per acre of  $P_2O_5$  (35 pounds P) is recommended, except on land which has been heavily manured.

HARVEST: The optimum stage for cutting is at the ten percent bloom stage, or when sixty percent of the crowns have buds of regrowth averaging 0.75 inches.

PEST AND WEED CONTROL: Egyptian alfalfa weevil has become an annual problem. Pea aphid some years affects even spotted - alfalfa-aphid-resistant varieties. Different weed pests require different treatments. Growers should obtain publications containing the latest UC recommendations for pest and weed control from the local Cooperative Extension Office.

ALFALFA FOR GREEN CHOP  
WESTERN RIVERSIDE COUNTY - 1976  
SAMPLE COSTS OF PRODUCTION

Based on a green-chop yield of 50 tons per acre per year. Tractor labor @ \$4.25/hr., field labor @ \$3.50/hr., including social security and workmen's compensation. Tractors: 65 hp. wheel diesel @ \$1.60/hr., 30 hp. wheel gas @ 85¢/hr. Four-year life for alfalfa stand.

OPERATION	HRS/ ACRE	LABOR COST	EQUIP. COST	MATERIALS		COST/ ACRE	TOTAL COST/ACRE
				KIND	AMOUNT		
Pre & Post Plant Irrigate	2.3	\$8.05	\$	Water	5"	\$12.00	\$ 20.05
Plow 1X (or chisel)	0.7	2.12	2.62				4.74
Disc 2X	0.6	2.12	2.45				4.57
Harrow (spike 1X)	0.25	1.06	0.44				1.50
Float 1X	0.5	2.12	0.72				2.84
Plant & Fertilize 1X	0.7	2.97	2.90	Seed	20 Lbs.	40.00	45.87
Cultipack 1X	0.2	0.85	1.24				2.09
Depreciation & Interest on Investment on Equipment (For stand establishment)							7.64
<b>TOTAL STAND-ESTABLISHMENT</b>							<b>\$ 89.30</b>
Irrigate 10X	8.0	28.00		Water	4.5 AcFt.	125.00	\$153.00
Weed Control 1X (Contract: Material and application)							18.00
Pest Control 1X (Contract: Material and application)							7.50
Fertilize 1X	0.3	0.60	0.32	P <sub>2</sub> O <sub>5</sub>	80 Lbs.	8.00	9.75
<b>TOTAL ANNUAL CULTURAL OPERATIONS</b>							<b>\$188.25</b>
Mow and Rake 7X	1.9	8.07	10.50				\$ 18.57
Chop & Haul (Contract: @ \$2.25 50 Tons)							112.50
<b>TOTAL GREEN CHOP HARVEST &amp; HAUL COSTS</b>							<b>\$131.07</b>
Cash Overhead (office, car, phone, insurance, etc.)							\$ 30.00
County taxes on equipment only (for equipment used in annual operations)							1.95
Cash rent							50.00
<b>TOTAL CASH OVERHEAD</b>							<b>\$ 81.95</b>
		<b>INVESTMENT PER ACRE</b>	<b>DEPRECIATION</b>	<b>INTEREST ON INVESTMENT @ 7% OF 1/2 COST</b>			
Alfalfa Stand		\$ 89.30	\$22.33	\$3.13			
Buildings		15.00	0.75	0.53			
Irrigation System (3/4 Basis)		168.75	11.25	5.91			
Tractors & Field Equipment		5.67	0.57	0.20			
		<u>\$278.72</u>	<u>\$34.90</u>	<u>\$9.77</u>			
<b>TOTAL DEPRECIATION AND INTEREST ON INVESTMENT</b>							<b>\$ 44.67</b>
<b>TOTAL COST PER ACRE (Chopped and Hauled)</b>							<b>\$445.94</b>
<b>TOTAL COST PER TON (Chopped and Hauled)</b>							<b>\$ 8.92</b>
<b>TOTAL COST PER ACRE (Not Including Chop &amp; Haul)</b>							<b>\$333.44</b>
<b>TOTAL COST PER TON (Not Including Chop &amp; Haul)</b>							<b>\$ 6.67</b>

Prices for green chopped alfalfa are not reported separately from hay by the Agricultural Commissioner's Office. Prices for green chop generally follow a one to four ratio to alfalfa hay. Prices for alfalfa hay have varied from a low of \$41.32 (1972) to a high of \$87.07 (1976) in the period from 1972 to 1976 inclusive. The 1976 price was \$80.39.

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