

## FUTURE OF ALFALFA HAY IN CALIFORNIA

Edward A. Yeary  
Farm Advisor-Statewide  
San Joaquin Valley Agricultural Research and Extension Center

Forecasts of the future of a crop in California are best made for a very short period of time. Forecasts about the future are made in the present. Assessments of future possibilities are based on what are currently known or perceived facts, on present knowledge about forces at work. This information is then examined in the dim light of the best outlook information available.

A review of some observations about supply, demand, competition, costs and prices will lead us to an assessment of what might occur in the near future, and what must occur if alfalfa is to expand significantly in acreage here in California.

### Demand

The demand for California's hay crop is our livestock and poultry industries. The dairy industry utilizes about 60% of our alfalfa production, and meat animals about 25%, so whatever happens to the livestock and dairy industries has a significant effect on our in-state alfalfa hay market.

Milk cows and heifers have increased in numbers from 800,000 in 1975 to 846,000 in 1978. Meat animal numbers are rising again after a significant drop at the end of the drought years. The effective demand for alfalfa hay in California is increasing.

### Supply

Production and acreage of alfalfa hay have both declined slowly but steadily since 1973, with the exception of slight gains in 1977. A price-depressing supply factor has been the build-up of stocks of alfalfa hay. These stocks more than doubled between 1976 and 1977.

In-shipments from other states in 1977 were little more than half those of 1976, and more in line with 1975 levels.

### Production Costs

In California, production costs per ton have more than doubled between 1970 and 1978; rising at a much higher rate than those of our surrounding states. The production cost differential is high enough to attract outside production into our market.

### Production in California

A brief review of California production data is revealing.

<u>Year</u>	<u>Acres harvested</u>	<u>Yield (tons) per acre</u>
1973	1,190,000	5.80
1974	1,150,000	5.90
1975	1,120,000	5.90
1976	1,100,000	6.00
1977	1,140,000	5.85
1978	1,090,000	----

In spite of all of the good work that has been done on crop improvement, insect control, etc., yield per acre has not risen very much.

Stand life has not changed significantly during these years of near static yield and steadily rising costs of production. The impact of all of this on the profitability of alfalfa hay is obvious.

Competition for California Land

Other crops compete for our alfalfa land. Cost and income data from the Fresno area are included to compare earnings from alfalfa hay with those of other crops, with varying yields and prices included.

Crop	Sample Net Income Per Acre			Net Income Per Acre	My Projected Net Income Per Acre		
	Yield Per Acre (Lb. Lint)	Approx. Unit Production Cost (Lb. Lint)	Unit Price (Lb. Lint)		Unit Cost	Unit Price	Net Income Per Acre
<u>Cotton**</u>							
Based on a 1.7 to 1 seet wt. to lint wt. with seed valued @ \$120 per ton							
	600	\$ .92	\$ .55	\$-222.00			
			.65	-162.00			
			.75	-102.00			
	1,000	.57	.55	- 20.00			
			.65	80.00			
			.75	180.00			
	1,400	.43	.55	168.00			
			.65	308.00			
			.75	448.00			
	(Tons)	(Ton)	(Ton)				
	6	\$ 98.85	\$ 55.00	\$-263.10			
			65.00	-203.10			
			75.00	-143.10			
<u>Alfalfa Hay</u>	8	78.01	55.00	-184.08			
			65.00	-104.08			
			75.00	- 24.08			
	10	65.51	55.00	-105.10			
			65.00	- 5.10			
			75.00	94.90			
	(Lb. Clean Seed)	(Lb.)	(Lb.)				
	500	\$ 1.25	\$ .80	\$-225.00			
			1.00	-125.00			
			1.20	- 25.00			
			.80	- 77.00			
<u>Alfalfa Seed</u>	700	.91	1.00	63.00			
			1.20	203.00			
			.80	140.00			
	1,000	.66	1.00	340.00			
			1.20	540.00			
	(Tons)	(Ton)	(Ton)				
	20	\$ 47.02	\$ 50.00	\$ 59.60			
			55.00	159.60			
			60.00	259.60			
<u>Tomatoes for Processing</u>	26	40.14	50.00	256.36			
			55.00	386.36			
			60.00	516.36			
	32	35.82	50.00	453.76			
			55.00	613.76			
			60.00	773.76			
	(Tons)	(Ton)	(Ton)				
	20	\$ 26.35	\$ 20.00	\$-127.00			
			25.00	- 27.00			
			30.00	73.00			
			20.00	- 2.43			
<u>Sugar Beets</u>	27	20.09	25.00	132.57			
			30.00	267.57			
			20.00	122.06			
	34	16.41	25.00	292.06			
			30.00	462.06			

\*\*Seed credit is applied to gross production costs to arrive at a cost for lint cotton.

Crop	Sample Net Income Per Acre			My Projected Net Income Per Acre			
	Yield Per Acre (Lbs.)	Approx. Unit Production Cost (Cwt.)	Unit Price (Cwt.)	Net Income Per Acre	Unit Cost	Unit Price	Net Income Per Acre
<u>Blackeye Beans</u>	1,600	\$ 30.83	\$ 20.00	\$-173.28			
			25.00	- 93.28			
			30.00	- 13.28			
			20.00	- 45.36			
	2,400	21.89	25.00	74.64			
			30.00	194.64			
<u>Barley</u>	3,200	17.42	20.00	82.56			
			25.00	242.56			
			30.00	402.56			
			(Ton)				
	1 3/4	\$166.80	\$ 85.00	\$-143.15			
			100.00	-116.90			
<u>Wheat</u>			115.00	- 90.65			
	2 1/4	130.60	85.00	-102.60			
			100.00	- 68.85			
			115.00	- 35.10			
	2 3/4	108.40	85.00	- 64.35			
			100.00	- 23.10			
<u>Safflower</u>			115.00	18.15			
			(Ton)				
	2	\$181.40	\$ 85.00	\$-192.80			
			100.00	-162.80			
			115.00	-132.80			
	2 1/2	146.00	85.00	-152.50			
<u>Safflower</u>			100.00	-115.00			
			115.00	- 77.50			
	3	122.33	85.00	-112.00			
			100.00	- 67.00			
			115.00	- 22.00			
			(Ton)				
<u>Safflower</u>	2,000	\$403.46	\$180.00	\$-223.46			
			230.00	-173.46			
			280.00	-123.46			
	3,000	268.97	180.00	-133.46			
			230.00	- 58.46			
			280.00	16.54			
<u>Safflower</u>	4,000	202.09	180.00	- 44.18			
			230.00	55.82			
			280.00	155.82			

There are few alternatives that are much better than alfalfa hay that do not require a contract. Likewise, there is little incentive to plow out alfalfa to get into production of most of the available alternatives.

#### Water

This is a major input into alfalfa hay production. Much of our water comes from wells in the Central Valley.

Water tables are falling and pumping costs continue to rise. We use from a low of 4' per acre to over 12' per acre. Unless prices rise significantly, and there is little reason to expect this, our production on sandy soils irrigated from deep wells will have to be converted to other crops that use less water.

### SUMMARY

The market demand for alfalfa hay in California will continue on into the future. In this time of high costs, high supplies, and lower prices, we expect our highest cost areas to shift to other crops. We are an attractive market for out-of-state growers and must expect a continuing supply from them, although this is not a large share of our market demand.

The amount of market that California growers supply will be regulated by alternatives and out-of-state competition.

Forces now at work suggest a slowly rising demand, and little change in acreage for 1979, with a slight decrease most likely at this time. The unpredictable forces of nature, such as another drought or bad weather at our normal planting times, could suddenly change this outlook.