

# Alfalfa: Planning and Management With Volatile Prices<sup>1</sup>

by

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Hay prices are \$10-15 per ton below a year ago at the same time a year ago, and many market watchers are asking, "What happened?" Some of the present market situation may be explained by normal supply-demand relationships; but much of the remainder lies in the prevailing market psychology, and this latter aspect makes the commodity one of the most difficult and interesting to follow and forecast.

California hay prices are a function of the following major ingredients

- (1) Prevailing hay inventory levels (prior year production)
- (2) Current year production (both anticipated and actual)
- (3) Competition from other feedstuffs
- (4) Total forage consuming animal units (numbers)
- (5) Relative economic health of the forage consuming sectors

## Hay Stocks Were Very Low This Year.

Winter and spring alfalfa inventories were very low this year. In fact, the May 1 California inventory was lower than any year since 1975, and only up slightly from last year. The May 1 inventory was lower in four of the seven western states than at the same time during the past two years, and in the aggregate, was down about 2 percent from last year and nearly 33 percent from two years ago. Part of this was due to the occurrence of a relatively hard winter in some of the Pacific North Western states, and part was due to a continuing relatively high animal inventory in the West (Table 1.)

A conclusion from the prior evaluation is that if an analyst were to base market outlook on spring inventories alone, he or she would be very bullish---but other forces have been at work in the market.

## Regional Alfalfa Acreage and Production Increased.

According to the latest crop reports, harvested acreage of alfalfa is going to be higher than last year in 5 of the 7 Western states. The largest proportionate increase came in California, with nearly 70 thousand new acres going into production, an increase of 7.4 percent. Most of the other states exhibited nominal increases of 1 to 2 percent. Another interesting facet relates to forthcoming 1984 alfalfa production. Crop and Livestock Reporting Service reports indicate higher 1984 yield per acre in 4 of the 7 Western states. California yields are currently estimated to average about 6.6 tons per acre this year, and this figure would rank with the all time average high yields. In this latter sense, it has been a bumper year for alfalfa production, and quality is probably higher than in the past as well, due to the prevalence of almost ideal growing and harvesting conditions throughout the spring and summer. Compare 1984 California conditions to those of the past two years! (Tables 2. and 3.)

An evaluation of harvested acreage in conjunction with greater yields per acre leads to the conclusion that 1984 California production could be up nearly 11 percent over last year--and this is bad news for prices. Production in six of the other Western states will be up only 1 percent, but the higher California output adjusts the regional increase to more than 4 percent.

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If we look at the historical balance sheet of alfalfa production, we have to believe the January 1, 1985 and May 1, 1985 inventories are going to be historically much below average (Table 4). This will place pressure on expectations about the rate of new seeding, and growing and harvesting conditions for the spring crop, and there is always a lot of brinkmanship when this approach is used. Last year the dairymen pushed into a strong bargaining position with the aid of ideal weather. Will the same thing happen this year? We will all be watching the late winter and spring situation with a great deal of expectation.

#### **Greater Feed Grains Production Points to Lower Grain Prices**

While most alfalfa growers tend to view alfalfa prices as being affected mainly by supplies of other forages, feedgrains prices also indirectly impact forage prices. Corn production will be more than 80 percent larger than last year's drought ridden crop, and this means much lower grain prices--some analysts are pegging them near loan levels before the marketing year is over. Lagging international demand and a myriad of other factors are mainly responsible, but in an overall sense, it translates into a buyer's rather than a seller's market. This ultimately results in lower silage prices in addition to the direct ability to efficiently utilize more grain in rations.

#### **Animal Numbers Remain High: The Dairy Industry Remains Vulnerable**

The dairy and overall livestock inventory remains relatively large by historical standards, but the key issue here is that both legislation and industry attitudes are conditioned to lower market prices due to lower support levels. The dairy industry has desperately wanted lower feed prices and their "jawboning" in regards to lower prices began early this year, well before any justification was evidenced by forthcoming market supplies. Translated into practicalities, this has meant more "hand-to-mouth" buying, ration substitution of lower quality roughages to the maximum extent possible, and an overall tougher bargaining position.

The September 1 dairy cow inventory showed California milk production and dairy numbers at higher levels than last year. But the September report also indicated much higher use of concentrates than other Western states. All the indicators point to more-and-more of a push to increased efficiency in the California dairy herds--and this means a return to the "go-go" days of 1980 and 1982 are unlikely. To counterbalance this pessimistic statement is the realism of historically very low stocks, high animal numbers and greater off season pressure on prices--hence more highly volatile markets than we have seen in the past.

#### **What Does the Longer Term Hold?**

The most interesting aspect of the current situation relates to the sudden increase in California forage production and its relative permanency. The 1984 acreage increase was much larger than I had anticipated, and if it holds, the alfalfa market could be in trouble for another year or two. This latter question is the most intriguing, because alfalfa can be removed relatively quickly, despite the fact a good stand may take two or more years to establish. Nothing is more conducive to alfalfa removal than \$60 per ton prices, so substantial acreages will likely be removed this year, particularly in those regions with some other alternatives.

What caused the increase? The answer lies in relative prices and relatively poor alternative commodity opportunities. A typical Northern California operator may have 5-6 cropping alternatives (tomatoes, sugar beets, wheat, barley, corn and alfalfa). Tomatoes and sugar beets are tied up in marketing quotas and prices of the remaining commodities have been relatively depressed. Alfalfa prices last year were undoubtedly an attractant. We can see the roller coaster effect on alfalfa prices when we compare the winter and summer price situation (Table 5). I am inclined to believe the summer has been an unusual aberration due to the historically favorable growing conditions. Thus, I expect prices to move much higher, perhaps \$20-30 per ton higher than the late October situation--there are just too many fundamental factors pointing in that direction.

The relative profitability under the current economic environment will be the \$64 question, particularly in those regions with relatively high water costs.

Table 1.  
Hay Stocks on Farms, January 1 and May 1, Selected States and U.S., 1982-84

STATE	January 1			May 1		
	1982	1983	1984	1982	1983	1984
1,000 Tons						
Arizona	207.0	137.0	116.0	109.0	19.0	12.0
California	2,669.0	1,608.0	1,323.0	471.0	337.0	368.0
Idaho	3,073.0	2,712.0	2,850.0	757.0	489.0	393.0
Nevada	628.0	679.0	758.0	105.0	113.0	189.0
Oregon	2,165.0	1,958.0	2,185.0	289.0	267.0	281.0
Utah	1,530.0	1,313.0	1,084.0	328.0	233.0	205.0
Washington	1,652.0	1,473.0	1,723.0	508.0	289.0	267.0
Seven Western States	11,924.0	9,880.0	10,039.0	2,567.0	1,747.0	1,715.0
United States	99,476.0	106,650.0	90,753.0	26,155.0	29,052.0	20,558.0
Seven West./United States	.1199	.0926	.1106	.0981	.0601	.0834

Table 2.  
Alfalfa Hay Production, Seven Western States and U.S., 1983-84

STATE	Area Harvested		Yield		Production	
	1983	1984	1983	1984	1983	1984
	1,000 Acres		Tons		1,000 Tons	
Arizona	145.0	150.0	7.3	7.2	1,059.0	1,080.0
California	950.0	1,020.0	6.4	6.6	6,080.0	6,732.0
Idaho	1,030.0	1,040.0	3.9	4.0	4,017.0	4,060.0
Nevada	230.0	210.0	3.9	4.0	897.0	840.0
Oregon	440.0	450.0	4.2	4.2	1,848.0	1,890.0
Utah	455.0	465.0	3.9	4.1	1,775.0	1,907.0
Washington	440.0	430.0	4.0	4.0	1,760.0	1,720.0
Seven Western States	3,690.0	3,765.0			17,436.0	18,229.0
United States	25,710.0	27,257.0			82,212.0	92,562.0
Seven West./United States	.1435	.1381			.2121	.1969

Table 3.  
California Hay Crop Production and Yield: 1978-84

Year	Alfalfa Acres -Acres-	Alfalfa Yield -Tons-	Other Hay -Acres-	Yield -Tons-	Total Crop -Acres-	Average Yield -Tons-
1978	1,090,000	5.45	520,000	1.95	1,610,000	4.31
1979	1,050,000	6.00	510,000	1.95	1,560,000	4.67
1980	1,030,000	6.40	520,000	2.20	1,550,000	4.99
1981	1,050,000	6.30	515,000	2.40	1,565,000	5.01
1982	960,000	6.70	510,000	2.40	1,470,000	5.20
1983	950,000	6.20	530,000	2.50	1,480,000	4.87
1984	1,020,000	6.60	530,000	2.40	1,550,000	5.16

\*Source: California Crop and Livestock Reporting Service

Table 4.  
California Hay Crop Production and Inventories: 1978-84

	Carryover May 1 -Tons-	Alfalfa Production -Tons-	Other Hay Production -Tons-	Total Crop Production -Tons-	Total Supply -Tons-	Stocks Jan. 1 -Tons-
1978	1,082,000	5,940,000	1,014,000	6,954,000	8,036,000	2,226,000
1979	765,000	6,300,000	994,500	7,294,500	8,059,500	2,043,000
1980	620,000	6,592,000	1,144,000	7,736,000	8,356,000	2,708,000
1981	542,000	6,615,000	1,236,000	7,851,000	8,393,000	2,669,000
1982	471,000	6,432,000	1,224,000	7,656,000	8,127,000	1,608,000
1983	337,000	5,890,000	1,325,000	7,215,000	7,552,000	1,323,000
1984	368,000	6,732,000	1,272,000	8,004,000	8,372,000	1,200,000

\*Source: California Crop and Livestock Reporting Service

Table 5.  
Alfalfa Hay Prices, California Central Valley: 1979-84  
U.S. Number 1 Leafy

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ave.
	-Dollars Per Ton-												
1979	75.90	-	-	90.50	94.88	94.88	83.80	80.50	87.75	91.00	-	-	87.40
1980	-	-	125.12	109.17	111.88	105.50	92.00	89.12	91.00	93.75	97.50	99.00	101.41
1981	99.00	-	-	96.50	97.00	85.00	73.38	67.90	69.00	70.50	-	80.00	82.03
1982	82.50	81.25	80.62	-	102.50	95.75	90.00	-	-	92.50	-	-	89.30
1983	-	-	-	107.50	113.83	108.25	93.75	92.50	93.12	95.00	95.00	-	99.87
1984**	122.50	-	-	98.00	101.87	96.25	91.25	82.50	82.50	87.30	-	-	

\* Source: California Federal State Market News Service

\*\* 1984 Represents Simple Average of Weekly Prices for Each Month