

RIDING ALFALFA'S PENDULUM: SITUATION AND OUTLOOK FOR 1991

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Once again, continuing drought conditions and water restrictions in California appears to have had little effect on acreage, yield and total production of alfalfa in the West in 1991. Dismal milk prices and heavy culling of dairy cows combined, with more than adequate stocks during the winter and spring of 1991, appear to have caused alfalfa prices to decline to pre-1988 levels. As we enter the 1992 season, demand for alfalfa is substantially depressed despite increasing prices for milk and dairy products. The substantial decline in demand for alfalfa beginning in March and April of 1991 was initially caused by the very low prices dairy producers were receiving for milk. As prices continued to remain at low levels, dairy producers were forced to cull heavily, substantially reducing the number of cows to be fed. Relatively buoyant beef prices encouraged both dairy and beef producers to send cattle to slaughter, thus reducing total cattle numbers and reducing demand for alfalfa.

While milk prices are expected to increase to more "normal" levels in 1992, it will take some time before dairy herds are rebuilt to pre-1991 levels. Therefore, demand for alfalfa hay is not expected to increase rapidly in the first half of 1992. On the other hand, continued drought conditions in California in the upcoming winter, and continued lower prices for alfalfa through the spring of 1992, could encourage some alfalfa producers to look for other alternatives.

OVERVIEW OF ALFALFA PRODUCTION TRENDS

Alfalfa Hay Stocks

The market for alfalfa in California is limited, by transportation costs, to a seven state region that includes California, Nevada, Arizona, Utah, Oregon, Washington and Idaho. Over the last three years December and May stocks of alfalfa have gradually increased to levels similar to those experienced during the period 1983-86. As stocks continue to build, prices tend to remain at lower, more stable levels, and the factors that cause alfalfa prices to increase are substantially diluted. For example, with current stocks at relatively high levels, prices for alfalfa in the spring of 1992 will likely be 10 percent lower than they were in the spring of 1991. Alfalfa hay stocks for the 7 state western region were at 9.8 million tons in January of 1991, up 16 percent over 1990 levels. U.S. stock were also up about 4 percent over 1990 levels at 105 million tons. By May of 1991, western region stocks were at 1.75 million tons, up 7 percent over 1990, while U.S. stocks actually declined slightly to 27 million tons.

California stocks on January 1, 1991 were about 1.91 million tons, about the same as the previous year. However, due to decreased demand for alfalfa during the spring of 1991, May 1 stocks stood at 332,000 tons, about 30 percent more than the previous year, and the highest since 1988.

Regional Acreage, Average Yields and Production

The seven-state region harvested acreage for 1991 is estimated to be about 3.9 million acres up slightly from 1990 levels, but lower than 1986 record levels. Harvested acreage of alfalfa in 1991 increased in only 3 of the 7 western states; Idaho, Utah and Washington. All other states actually reduced acreage. Harvested acreage in California actually decreased by 10,000 acres.

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Figure 1

Hay Stocks on Farms & Ranches December 1, 1980-90

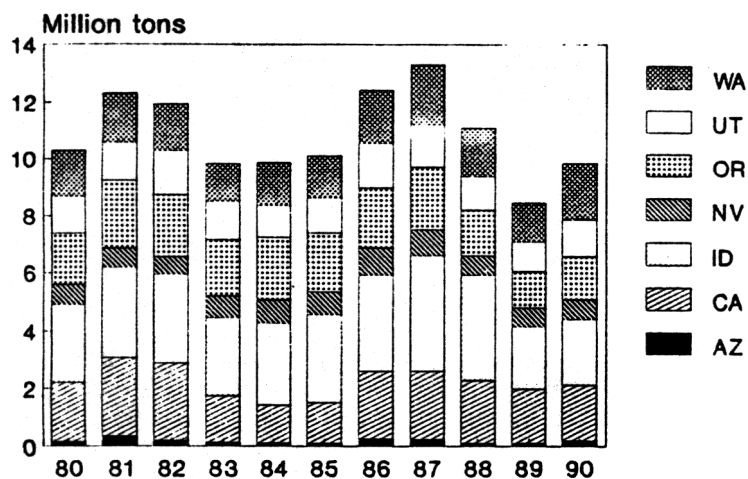
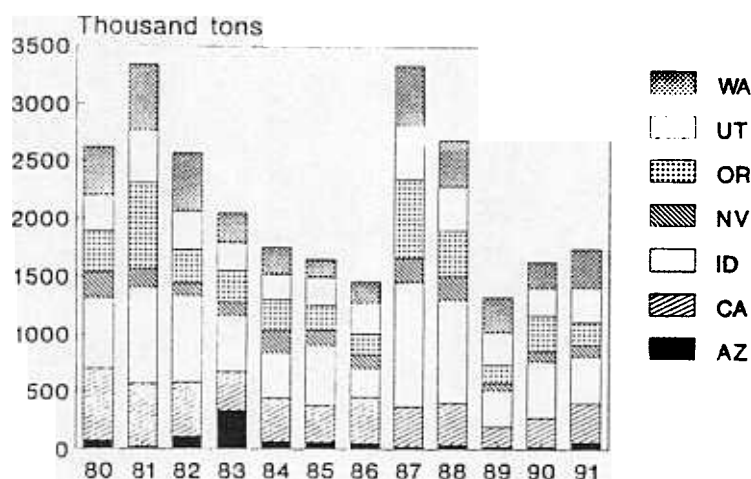


Figure 2

Hay Stocks on Farms & Ranches May 1, 1980-91



Regional average yields decreased in most states, with the exception being in Idaho and Utah where yields increased slightly. Washington's average yield continues to remain at an all-time high of 4.8 tons per acre, while California's average yield actually declined from 6.6 tons per acre to 6.5 tons per acre, presumably due to a combination of water restrictions and white fly infestations.

Total regional production of alfalfa hay in 1991 in the seven western states was about 1.4 percent above 1990 levels; just barely short of the 1986 peak levels of 19.2 million tons. However, total production actually increased in only 3 of the seven states in the western region; Idaho, Utah and Washington, the same states who experienced increases in average yield.

Figure 3

Alfalfa Hay Acreage Area Harvested - Seven Western States

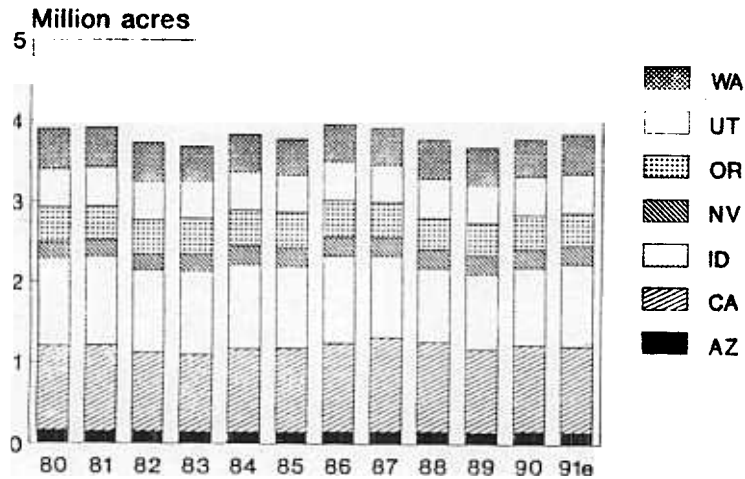
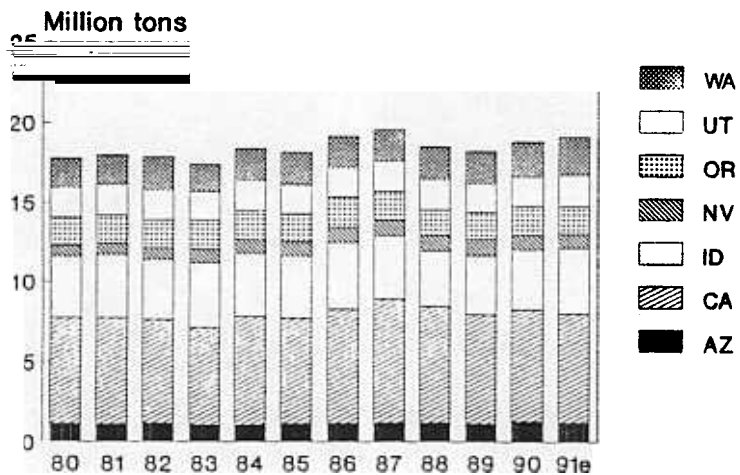


Figure 4

Alfalfa Hay Production Seven Western States



California Supply

California growers will harvest about 1.05 million acres of alfalfa this year, and about 630,000 acres of other hay for a total of about 8.73 million tons of total hay supplies in 1991. While alfalfa hay supplies are down slightly, other hay supplies have increased. With alfalfa and other hay stocks at current levels, the total supply of hay in California is up slightly from 1990 levels.

Figure 5

Total Alfalfa Hay Supply
Seven Western States

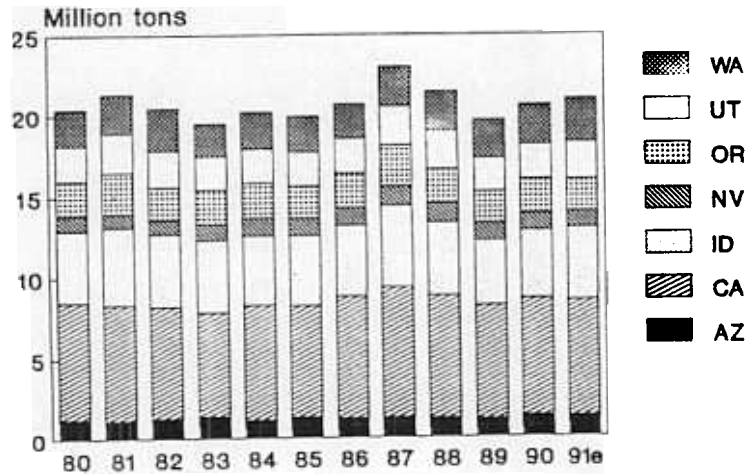


Figure 6

California Alfalfa Hay Production

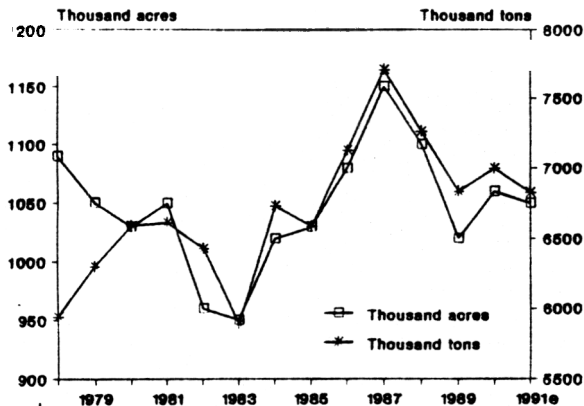
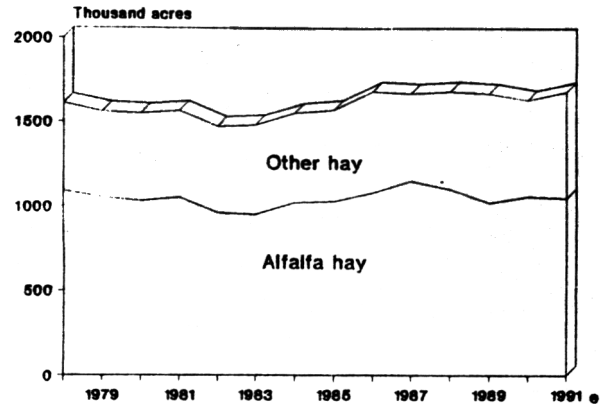


Figure 7

California Hay Production



Demand for Alfalfa in California

Approximately 70 percent of the total production of alfalfa hay in California is sold for dairy feed. Therefore, economic conditions that affect the dairy industry in California also affects the demand for alfalfa hay. The other 30 percent of alfalfa grown in California is used to feed beef cattle and horses.

Alfalfa competes in animal feed markets with other animal feeds such as corn, oats, wheat, barley and cottonseed, as well as a variety of other dairy feeds that are by-products of the fruit, nut and vegetable industries in California. Although alfalfa is the most important component of dairy cattle diets, use in rations is significantly determined by its price relative to other (competing) feeds.

The strong increases in dairy cow numbers in California over the last few years has been responsible for the relative increase in demand for alfalfa experienced in the last few years. However, the low prices paid for milk at the end of 1990 and through the first half of 1991 has forced dairy producers to cull heavily this year, thus substantially reducing the demand for alfalfa.

While milk prices will increase to more "normal" levels over the next few months, cow numbers will remain relatively flat until the spring, when a gradual build up will begin. However, it will take some time for herds to rebuild to pre-1991 levels. As a result, demand for alfalfa hay is not expected to increase to any substantial degree for the first half of 1992.

On the other hand, if winter rains and snow are insufficient to recharge aquifers, waterways and storage facilities, further water restrictions could cause some alfalfa producers to cut back on acreage, or to accept lower yields, which may reduce stocks and supplies causing prices to increase. In addition, lower alfalfa price may encourage some producers to switch to more promising alternatives. This too would reduce supply and increase prices. However, due to increased stocks-on-hand, developments that would normally drive alfalfa prices to higher levels are somewhat diluted.

Figure 8

CALIFORNIA ALFALFA HAY PRICES
Monthly Average Prices, 1989-1991

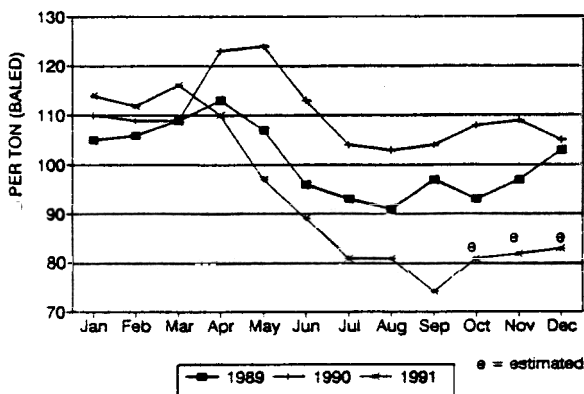


Figure 9

CALIFORNIA ALFALFA HAY PRICES
Annual Averages, 1981-1991

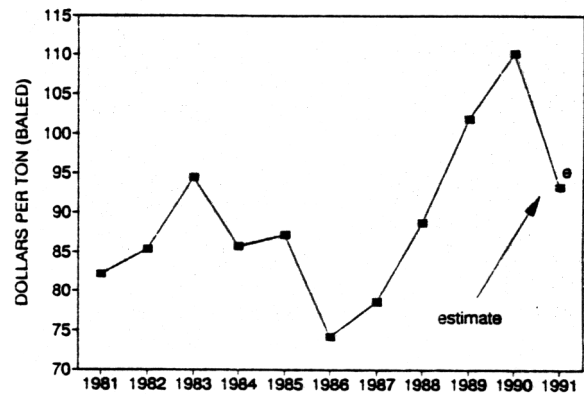


Figure 10

Estimated Alfalfa Hay Production - 1991
Seven Western States

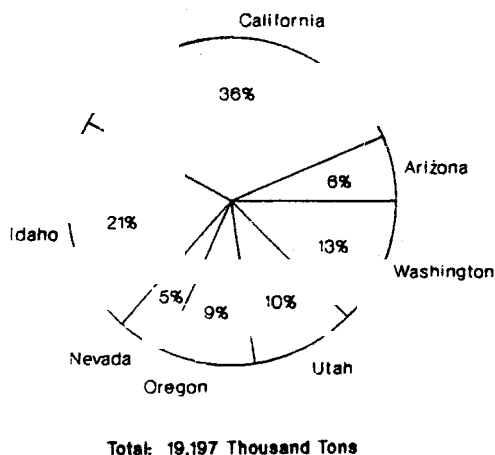
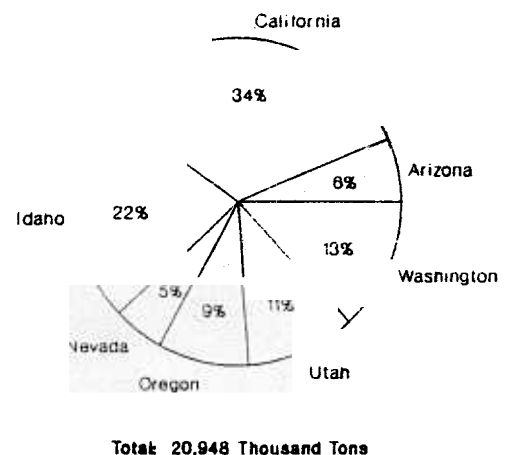


Figure 11

Estimated Alfalfa Hay Supply - 1991
Seven Western States



OUTLOOK FOR ALFALFA IN 1992

Supply

Changes in the supply of alfalfa hay are influenced by both long term and short term phenomena. In the long term, changes in planted acreage are mainly responsive to the profitability of alfalfa relative to other competing crops such as tomatoes, cotton, corn, wheat, rice and sugarbeets. As the price of alfalfa relative to these crops increases, alfalfa acreage tends to increase.

Changes in the short term supply of alfalfa are mainly dependent on factors that affect yield. Thus, if winter rains are insufficient to provide substantial water supplies in the spring, or if late spring rains should spoil the first or second cuttings of alfalfa, then alfalfa supplies could vary up or down by as much as 10 percent.

Prices for alfalfa prior to this year were relatively buoyant, and this is the major factor that has caused increases in supply. In addition, prices for the competing enterprises, while mixed in the last two years, have resulted in relatively stable supplies. Total acres planted to alfalfa in 1992 are not expected to increase over 1991 levels - and could decrease slightly. Total supplies of alfalfa in 1992 are expected to be about the same as 1991 at about 21 million tons for the 7 state western region.

Demand

Changes in the demand for alfalfa, as reflected in the price of alfalfa, are mainly due to dairy and beef prices, the prices of competing feeds, the number of dairy and beef cattle, and the supply of alfalfa.

Milk and meat prices (mainly milk prices) are expected to increase about 8 percent in 1992, and other feed prices will increase about 2.7 percent. However, these increases are offset by a substantial decline in total dairy and beef cow numbers. The net effect of these changes will be an increase in prices of about 6-9 percent above 1991 prices.

Table 1
Hay Stocks on Farms and Ranches
December 1, 1980-90

STATE	December 1										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
	-1000 Tons-										
Arizona	164.0	365.0	207.0	137.0	116.0	118.0	290.0	263.0	133.0	115.0	213.0
California	2,043.0	2,708.0	2,669.0	1,608.0	1,323.0	1,414.0	2,330.0	2,341.0	2,163.0	1,875.0	1,911.0
Idaho	2,682.0	3,120.0	3,073.0	2,712.0	2,850.0	3,036.0	3,304.0	4,008.0	3,648.0	2,183.0	2,287.0
Nevada	703.0	657.0	628.0	749.0	781.0	808.0	963.0	897.0	668.0	658.0	680.0
Oregon	1,798.0	2,382.0	2,165.0	1,958.0	2,185.0	2,023.0	2,100.0	2,200.0	1,591.0	1,243.0	1,498.0
Utah	1,276.0	1,338.0	1,530.0	1,328.0	1,089.0	1,231.0	1,559.0	1,503.0	1,176.0	1,013.0	1,274.0
Washington	1,621.0	1,733.0	1,652.0	1,337.0	1,528.0	1,471.0	1,868.0	2,104.0	1,700.0	1,351.0	1,986.0
7 Western States	10,287.0	12,303.0	11,924.0	9,829.0	9,872.0	10,101.0	12,414.0	13,316.0	11,079.0	8,438.0	9,849.0
United States	108,204.0	91,983.0	99,476.0	106,650.0	89,280.0	100,632.0	121,734.0	119,845.0	90,312.0	101,194.0	104,993.0
Seven Western/ United States	.0951	.1338	.1199	.0922	.1106	.1004	.1020	.1111	.1227	.0834	.0938

Source: National Agricultural Statistics Service, Crop Production, May issue

Table 2
Hay Stocks on Farms and Ranches
May 1, 1980-91

STATE	May 1											
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
	-1000 Tons-											
Arizona	77.0	25.0	109.0	333.0	73.0	66.0	55.0	25.0	41.0	27.0	26.0	71.0
California	620.0	542.0	471.0	337.0	368.0	314.0	400.0	345.0	360.0	173.0	256.0	332.0
Idaho	619.0	835.0	757.0	489.0	393.0	522.0	245.0	1,086.0	901.0	310.0	485.0	408.0
Nevada	216.0	164.0	105.0	125.0	195.0	135.0	130.0	206.0	207.0	67.0	88.0	109.0
Oregon	360.0	745.0	289.0	267.0	281.0	218.0	179.0	689.0	392.0	159.0	318.0	198.0
Utah	304.0	453.0	328.0	236.0	206.0	238.0	271.0	470.0	381.0	283.0	238.0	297.0
Washington	424.0	578.0	508.0	262.0	237.0	158.0	182.0	517.0	405.0	312.0	225.0	336.0
7 Western States	2,620.0	3,342.0	2,567.0	2,049.0	1,753.0	1,651.0	1,462.0	3,338.0	2,687.0	1,331.0	1,636.0	1,751.0
United States	33,346.0	25,429.0	26,155.0	29,052.0	20,558.0	26,863.0	26,698.0	32,418.0	27,353.0	17,507.0	27,089.0	27,056.0
Seven Western/ United States	.0786	.1314	.0981	.0705	.0853	.0615	.0548	.1030	.0982	.0760	.0604	.0647

Source: National Agricultural Statistics Service, Crop Production, May issue

Table 3
Alfalfa Hay Acreage
Seven Western States, 1980-91

STATE	1980	1981	1982	Area Harvested		1985	1986	1987	1988	1989	1990	1991 ^e
				1983	1984							
-1000 Acres-												
Arizona	165.0	160.0	160.0	145.0	150.0	145.0	155.0	160.0	155.0	150.0	165.0	160.0
California	1,030.0	1,050.0	960.0	950.0	1,020.0	1,030.0	1,080.0	1,150.0	1,100.0	1,020.0	1,060.0	1,050.0
Idaho	1,090.0	1,100.0	1,020.0	1,030.0	1,050.0	1,020.0	1,100.0	1,020.0	920.0	930.0	960.0	1,030.0
Nevada	215.0	210.0	215.0	230.0	235.0	235.0	240.0	245.0	250.0	245.0	240.0	235.0
Oregon	425.0	425.0	420.0	440.0	445.0	450.0	460.0	430.0	385.0	400.0	420.0	400.0
Utah	470.0	475.0	470.0	455.0	470.0	460.0	470.0	465.0	490.0	470.0	485.0	490.0
Washington	505.0	500.0	490.0	440.0	475.0	450.0	470.0	460.0	490.0	480.0	470.0	500.0
7 Western States	3,900.0	3,920.0	3,735.0	3,690.0	3,845.0	3,790.0	3,975.0	3,930.0	3,790.0	3,695.0	3,800.0	3,865.0

Source: National Agricultural Statistics Service, Crop Production, August issue

e = estimated

-42-

Table 4
Alfalfa Hay, Average Yields
Seven Western States, 1980-91

STATE	1980	1981	1982	Yield		1985	1986	1987	1988	1989	1990	1991 ^e
				1983	1984							
-Tons-												
Arizona	7.0	7.0	7.3	7.3	7.2	7.1	7.6	7.8	7.9	7.6	7.9	7.7
California	6.4	6.3	6.7	6.4	6.5	6.5	6.6	6.7	6.6	6.7	6.6	6.5
Idaho	3.5	3.6	3.7	3.9	3.8	3.5	3.8	3.9	3.8	4.0	3.9	4.0
Nevada	3.5	3.6	3.5	3.9	4.0	4.1	4.1	4.2	4.2	4.4	4.1	4.0
Oregon	4.2	4.1	4.2	4.2	4.1	4.1	4.2	4.2	4.1	4.3	4.3	4.3
Utah	3.9	4.1	4.0	3.9	4.0	3.9	3.9	4.1	3.9	3.7	3.8	4.0
Washington	3.7	3.7	4.3	4.0	4.3	3.9	4.2	4.3	4.2	4.3	4.8	4.8

Source: National Agricultural Statistics Service, Crop Production, August issue

e = estimated

Table 5
Alfalfa Hay, Total Production
Seven Western States, 1980-91

STATE	Production											
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991e
-1,000 Tons-												
Arizona	1,155.0	1,120.0	1,168.0	1,059.0	1,080.0	1,147.0	1,178.0	1,248.0	1,225.0	1,140.0	1,304.0	1,232.0
California	6,592.0	6,615.0	6,432.0	6,080.0	6,732.0	6,592.0	7,128.0	7,705.0	7,260.0	6,834.0	6,996.0	6,825.0
Idaho	3,815.0	3,960.0	3,774.0	4,017.0	3,938.0	3,852.0	4,180.0	3,978.0	3,496.0	3,720.0	3,744.0	4,120.0
Nevada	753.0	746.0	753.0	897.0	940.0	936.0	984.0	1,029.0	1,050.0	1,078.0	984.0	940.0
Oregon	1,785.0	1,743.0	1,764.0	1,848.0	1,825.0	1,778.0	1,932.0	1,806.0	1,579.0	1,720.0	1,806.0	1,720.0
Utah	1,833.0	1,948.0	1,880.0	1,775.0	1,880.0	1,833.0	1,833.0	1,907.0	1,911.0	1,739.0	1,843.0	1,960.0
Washington	1,869.0	1,850.0	2,107.0	1,760.0	2,043.0	2,050.0	1,974.0	1,978.0	2,058.0	2,064.0	2,256.0	2,400.0
7 Western States	17,802.0	17,982.0	17,878.0	17,436.0	18,438.0	18,188.0	19,209.0	19,651.0	18,579.0	18,295.0	18,933.0	19,197.0

Source: National Agricultural Statistics Service, Crop Production, August issue

e=estimated

Table 6
Total Alfalfa Supply
Seven Western States, 1980-91

STATE	Total Supply Available											
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991e
-1,000 Tons-												
Arizona	1,232.0	1,145.0	1,277.0	1,392.0	1,153.0	1,297.0	1,233.0	1,273.0	1,229.0	1,167.0	1,330.0	1,303.0
California	7,212.0	7,157.0	6,903.0	6,417.0	7,100.0	6,906.0	7,528.0	8,050.0	7,600.5	7,007.0	7,252.0	7,157.0
Idaho	4,434.0	4,795.0	4,531.0	4,506.0	4,331.0	4,374.0	4,425.0	5,064.0	4,501.0	4,030.0	4,229.0	4,528.0
Nevada	969.0	910.0	858.0	1,022.0	1,135.0	1,071.0	1,114.0	1,235.0	1,232.0	1,145.0	1,072.0	1,049.0
Oregon	2,145.0	2,488.0	2,053.0	2,115.0	2,106.0	1,996.0	2,111.0	2,495.0	2,109.1	1,879.0	2,124.0	1,918.0
Utah	2,137.0	2,401.0	2,208.0	2,011.0	2,086.0	2,071.0	2,104.0	2,376.5	2,289.0	2,022.0	2,081.0	2,257.0
Washington	2,293.0	2,428.0	2,615.0	2,022.0	2,280.0	2,208.0	2,156.0	2,495.0	2,450.8	2,376.0	2,481.0	2,736.0
7 Western States	20,422.0	21,324.0	20,445.0	19,485.0	20,191.0	19,923.0	20,671.0	22,988.5	21,411.4	19,626.0	20,569.0	20,948.0
United States	113,225.0	109,221.0	116,668.0	111,264.0	110,575.0	111,911.0	18,250.0	16,972.0	96,657.0	94,877.0	110,644.0	113,383.0
Seven Western/ United States	.18	.20	.18	.18	.18	.18	.17	.20	.22	.21	.19	.18

Source: National Agricultural Statistics Service, Crop Production

e=estimated

