

HAY PRICES AND TRENDS IN WESTERN STATES

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ABSTRACT

Alfalfa hay markets in Western States generally follow similar trends. NOT IN 2006!! Markets in California, the leading alfalfa hay producing State in the nation, and Nevada where much of the alfalfa hay is shipped to California were down \$15.00 to \$30.00 per ton from 2005. Conversely, in many of the other nine Western States alfalfa hay prices were steady to \$20.00 per ton higher than last year. Why the divergent trends? Part of this is due to the unprecedented upward surge in Alfalfa hay prices in California in 2005 and the downward correction in 2006 as a result of economic hard times at dairies. Due to drought conditions and growing dairy cow numbers in some of the eleven Western States in 2006, alfalfa hay supplies were tight, particularly supplies of higher quality milk cow hay. This pushed alfalfa hay prices higher in States like New Mexico and Idaho. While milk prices were lower than last year, the lack of profitability was more evident in California where dairy producers held a hard line on the price they would pay for hay. Many dairies in California reduced the amount of alfalfa hay in rations or substituted with other types of hay, such as grain hay. The outlook improved for milk prices in early November 2006 as the Class 3 milk futures prices made an upward move. However, price volatility on cheese caused underlying caution in the milk market. With the dramatic upward surge in grain prices, particularly feed corn prices that began in mid-October of this year and with uncertainties of irrigation water supplies in some Western States in 2007, growers could plant less than expected alfalfa acres in some areas of the West next year.

Key Words: Alfalfa hay supplies, divergent trends, drought, milk prices, upsurge in grain prices, alfalfa hay acres

2006 RECAP - PROFITABILITY PICTURE MIXED ON ALFALFA HAY

If you asked alfalfa hay growers in central California what kind of year they had in 2006 you would probably get a negative response. Between lower yields due to weather and lower prices than a year ago, you wouldn't hear anything close to the response they gave about 2005. However, if you asked an alfalfa grower in Idaho about 2006, particularly a grower in the southern area near the large dairy populations, the response would probably be favorable. While overall alfalfa hay supplies were down in the West, some areas were tight on supplies which resulted in higher markets. Drought contributed to this in States such as Colorado and New Mexico. While drought conditions subsided in these two States in the fall of 2006, Wyoming and Montana were gripped in very dry conditions. Hay supplies in the fall in California were below a year ago, according to sources, particularly higher quality alfalfa hay. The ample supplies of low to middle quality alfalfa hay from earlier in the season had declined by the fourth quarter. Consequently, hay supplies were tightening in California in the fall and the market was firming.

¹Seth Hoyt, Senior Agricultural Economist, California Agricultural Statistics Service, CDFA-USDA, 650 Capitol Mall, Suite 6-100, Sacramento, CA 95814; Email: Seth_Hoyt@nass.usda.gov. In Proceedings, Western Alfalfa Symposium, 12-14 December, 2006, Reno, NV. UC Coop. Ext. Univ. Calif. Davis, 95616. (See <http://alfalfa.ucdavis.edu> for this and other proceedings.)

Along with higher costs for fertilizer and fuel, another big negative for growers in central California is historically higher costs for irrigation water. This is the area where there has been alfalfa acreage converted to permanent crops in recent years, such as almonds, where drip irrigation significantly reduces water costs. The central and northern valley of California could also see increased alfalfa hay acres converted to feed corn and wheat acres in 2007 due to the very strong grain prices in October and November. In Idaho, \$120.00 to \$145.00 dollars per ton on higher quality alfalfa hay and \$80.00 to \$100.00 per ton low to middle quality alfalfa in 2006 returned more profits to growers than those prices would return to California growers.

CALIFORNIA NOT THE HAY PRICE LEADER IN 2006

California, which normally leads the nation in alfalfa hay prices, found itself not in the top position in 2006. For prices in New Mexico, Idaho, and Oregon were at times higher than California on various qualities of alfalfa hay. California dairies were taking drastic measures to try and survive with low milk prices. In an effort to reduce feed costs, low producing cows were culled which drove dairy cow slaughter up 12 percent above 2005. Many dairies in California reduced the amount of alfalfa hay in milk cow rations. Some were substituting grain hay for alfalfa hay in rations for lower producing cows and dry cows and using canola meal or other protein feeds in the ration. Some dairies began these practices in 2005 during record high alfalfa hay prices and this continued into 2006 due to tight supplies of higher testing alfalfa hay and low milk prices. The amount of concentrate in milk cow rations in California reached record highs in 2006 but this could change in the months ahead with the upsurge in grain prices. However, a positive for dairy producers will be the availability of distillers dried grains, a high protein feed by-product from ethanol production. Silage usage was higher in California in 2006 with prices in the low \$20's per ton compared to \$28.00 to \$30.00 per ton last year. Heavy silage use was also seen in Idaho. It will be interesting to see if corn for silage acres drop in 2007 due to the strong corn for grain market.

Premium and Supreme alfalfa hay delivered to dairies in the Tulare, Hanford, and Bakersfield California areas in September averaged \$177.00 per ton, compared to \$201.00 in September of 2005, according to Market News. Fair quality, dry cow alfalfa hay in September delivered to dairies in the same area for \$117.00 per ton, compared to \$147.00 the same month last year.

DAIRY COW GROWTH IN THE WEST

Year to year growth in dairy cow numbers in California the second half of 2006 slipped to the lowest point in many years. Two big factors were the large cow death loss during a record heat wave in July and higher dairy cow slaughter as dairies were culling lower producing cows. In September, the dairy cow inventory in California was only 10,000 head above the previous year or an average monthly growth of less than a 1,000 head. Conversely, dairy cow numbers in New Mexico in September were up 27,000 head from September of 2005 or an average monthly growth of 2,250 head. Idaho dairy cow numbers in September grew 28,000 head while the Texas dairy cow inventory was up 18,000 head from last year. New cheese plants in New Mexico and the Texas Panhandle are driving the higher dairy cow population in that region.

To further slow dairy cow growth in California was a dramatic drop in shipments of open and springer dairy heifers into the State in 2006. Heifer shipments from January thru September 2006 were 60,512 head, down 35 percent from the same period in 2005. With higher freight costs, California dairy heifer buyers found themselves at a competitive disadvantage to buyers in other States. Some California dairies were barely hanging on financially in the fourth quarter of 2006. They were hoping for better milk prices the first half of 2007 and the chance that there would be another CWT. herd retirement program in the first half of next year.

ALFALFA HAY ACRES, PRODUCTION, AND MOVEMENT

While alfalfa hay acres in the eleven Western States were unchanged from 2005, but production was down 2 percent. Alfalfa hay production in the U.S. was down 6 percent from last year. Fewer supplies of alfalfa and other hay nationwide resulted in strong markets in many States. In some States, such as New Mexico, dairy hay buyers were purchasing alfalfa hay in areas of the West where they had never gone before. Hay was moving longer distances. For example, a feed store buyer from Texas bought several hundred tons of alfalfa hay in central Nevada. Sources said they saw California hay trucks hauling hay into New Mexico. There were reports that alfalfa hay from the southern California desert moved into Texas and Oklahoma earlier in the season.

It was ironic that while alfalfa hay movement increased into some States in the West, Shipments into California were down 13 percent compared to 2005. Alfalfa hay crossings from Arizona to California were down dramatically as more hay stayed in Arizona due to a growing dairy industry and fewer alfalfa hay acres. Also, it is possible there may have been increased shipments of Arizona hay to points east. Movement of alfalfa hay from Utah into California January through September was down 7 percent and Oregon crossings were down slightly from a year ago. Alfalfa hay shipments from Nevada to California were up 10 percent from last year.

One interesting observation was the number of alfalfa hay acres in New Mexico. The dairy cow inventory in New Mexico has increased 85 percent in the last ten years and in September 2006 numbered 360,000 head. Alfalfa hay acres in New Mexico in 2006 numbered 220,000, compared to 255,000 in 1996. This is not a fair comparison because the State has experienced droughts the past few years. However, in the past ten years the highest alfalfa hay acreage in New Mexico in non-drought years was 290,000, up 14 percent from 1996. Sources indicate that given the amount of irrigation water available for alfalfa hay on a non-drought year that acres would likely top out at 270,000 or 280,000. It was no wonder that dairy hay buyers from New Mexico purchased an increased amount of alfalfa hay in other Western States in 2006.

CONSISTENT HAY MARKET IN THE WEST

Hay growers that produced alfalfa-grass mixes hay such as orchard grass and alfalfa hay or straight grass hays such as orchard grass and timothy hay found strong demand throughout 2006 from horse and feed store buyers. Growers in northern California and Nevada reported the market on this type of hay was higher than in 2005. There has been a growing number of horse owners that are feeding grass hays with alfalfa with some preferring the grass-alfalfa mix. While

demand for light three string alfalfa hay bales for feed stores was weak early in the season in California, the market was moving higher in the fall under good demand.

Another market that saw improved movement from 2005 was alfalfa hay for export. Due to lower prices in California on alfalfa hay in 2006, an increased volume of alfalfa hay was purchased by export buyers, particularly in the southern desert and northern California.

ALFALFA HAY OUTLOOK FOR 2007

With tight alfalfa hay supplies in many Western States, demand and prices could be strong in 2007 or at least for the first half of the season. It is questionable if production in the second half of the 2007 season will be sufficient to force prices lower. The steady to higher prices in several Western States in 2006 would normally trigger more acres and production the following year. However, between the uncertainty of irrigation water supplies in some areas and very strong grain prices, the alfalfa hay acre and production picture is not clear in some States. The State with the biggest chance to decline in alfalfa hay acres is California.

CROP OPTIONS

California alfalfa hay growers, for the first time in many years have several options of what they may plant in 2007. With the sharp rise in grain prices some growers were contacting Hard Red Winter wheat at \$170 to \$180 per ton for 2007. Durum wheat acres could be up in the Imperial Valley which could displace some alfalfa. Feed corn contracts in central and northern California in early November were reported in the \$135 to \$146 per ton range with some higher. The outlook was bullish for grain prices with some predicting that the market had not yet peaked. With the outlook for very strong prices on processed tomatoes in California, some alfalfa hay ground could convert to tomatoes in 2007. Raw equivalent tomato stocks are at a 15 year low and sources believe contract prices on processed tomatoes in 2007 could be in the mid \$60's per ton range which would be a record high. Additionally, alfalfa hay acres continue to be converted to permanent crops, such as almonds in central California. Thanks to exports, the almond market continues to be strong in spite of a substantial increase in acres the past few years. Other crops that California growers mentioned that have more profit potential included garlic, carrots, and onions. Due to strong markets and demand, sources believe Pima cotton acres should continue to move higher in California. However, many think that Alcala (Upland) acres, which dropped to the lowest level since the mid 1940's, will keep falling. While some Alcala cotton ground may convert to alfalfa hay, sources don't believe this will be significant.

Higher grain prices will also give hay growers in other States additional options, particularly in areas where water supplies could be tight. Lower U.S. corn stocks combined with strong demand from ethanol producers and exporters caused a very bullish outlook for feed corn prices. World wheat stocks were at the lowest level in 25 years and Australia, a major wheat producer was experiencing one of the worst droughts in their history.

HAY STOCKS

Due to drought conditions in some Western States along with production in California below

expectations, alfalfa hay stocks could be down on December 1, 2006 in the West. This should also translate to lower alfalfa hay stocks on May 1, 2007. This could create strong demand for early new crop alfalfa hay in 2007. In some areas of the West there are ample supplies of meadow grass/pasture hay for beef cows. This was a major factor in the large hay stocks in Nevada and Montana on May 1, 2006. A normal winter should draw down these stocks substantially. Hay stocks nationally should be down due to lower production in 2006.

DAIRY OUTLOOK

Some believe milk prices will improve in 2007. On November 8, 2006 the Class 3 milk futures prices on the Chicago Mercantile Exchange (CME) in the January thru October 2007 period ranged from \$13.77 to \$14.60 cwt. This compares to \$12.43 to \$13.13 for the same months on the CME close on August 4, 2006. USDA is projecting the ALL Milk price in the U.S. in 2007 will average about \$1.00 cwt. higher than 2006. One concern is the volatility in the cheese market which saw prices very erratic in late October and early November. If milk prices do improve and dairies, particularly in California, return to profitability this will be a big boost to the alfalfa hay industry in 2007. A financially strong dairy industry in California also benefits other States in the West that export alfalfa hay to California. One only needs to look at the difference in 2006 versus 2005 in alfalfa hay trucked into California to see the impact.

With the highest grain prices in 10 years, dairies may reduce the amount of concentrate fed to milk cows next year. The last time there was a significant drop in concentrate fed to milk cows was in 1996 when corn prices reached record highs. However, milk prices that year were at profitable levels and hay prices were not as high as they were this year. The strong grain markets could benefit the alfalfa hay industry in the West as dairies may be forced to reduce the amount of grain in rations. In California, alfalfa growers could especially benefit from this as many dairies reduced the amount of alfalfa hay in dairy rations in 2005 and 2006. Corn silage could increase in rations if there is a larger amount of corn silage available. If profitability returns to the dairy industry in 2007 it could boost alfalfa hay consumption in California.

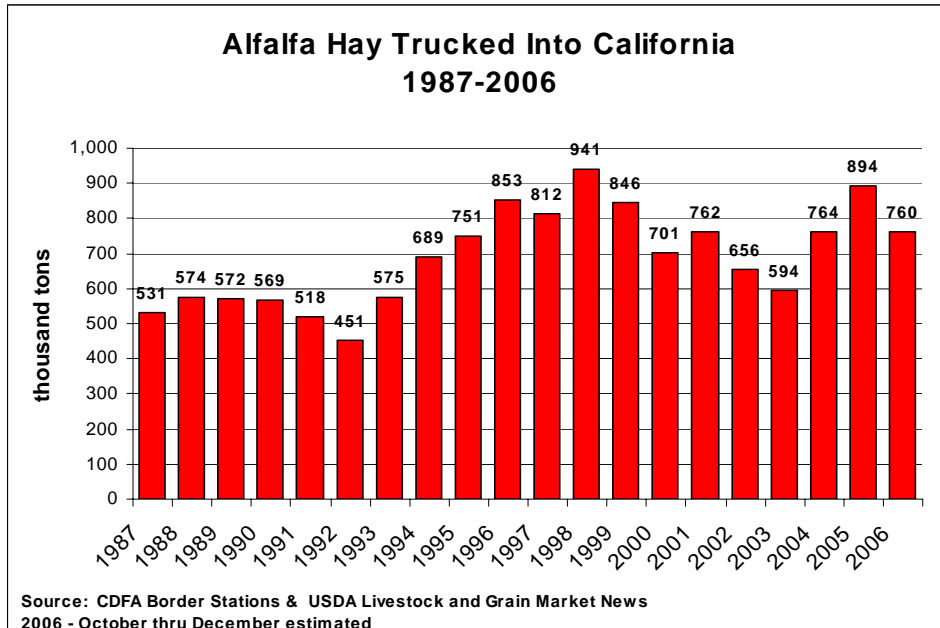
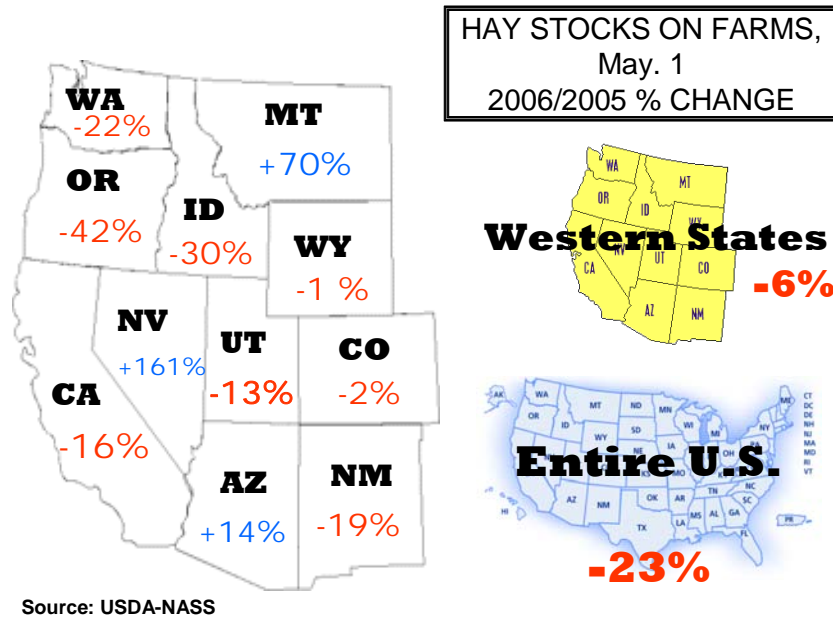
Dairy cow growth should continue to be strong in Idaho, New Mexico and Texas in 2007. However, in California where year to year growth slowed considerably the second half of 2006, it may remain slow until dairies return to black ink. With the sharp drop in dairy heifer shipments into California in 2006 combined with a larger dairy cow slaughter than 2005, dairy cow expansion is at the slowest pace in many years. Additionally, California dairies face some of the biggest challenges in the West with air, water, and other environmental regulations and stiff resistance in building new dairies in some counties.

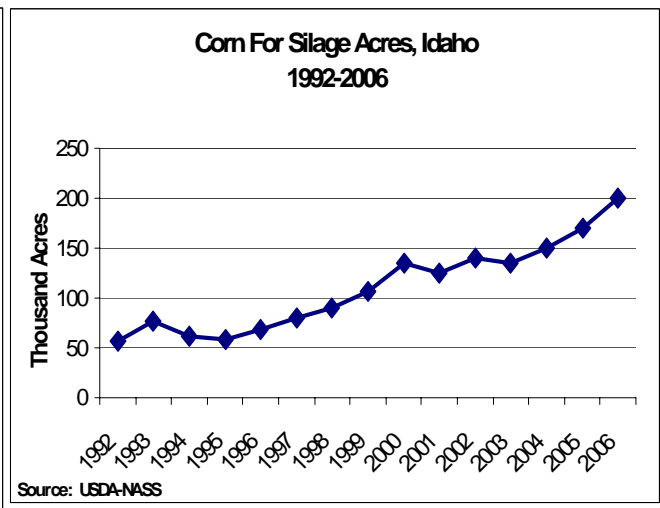
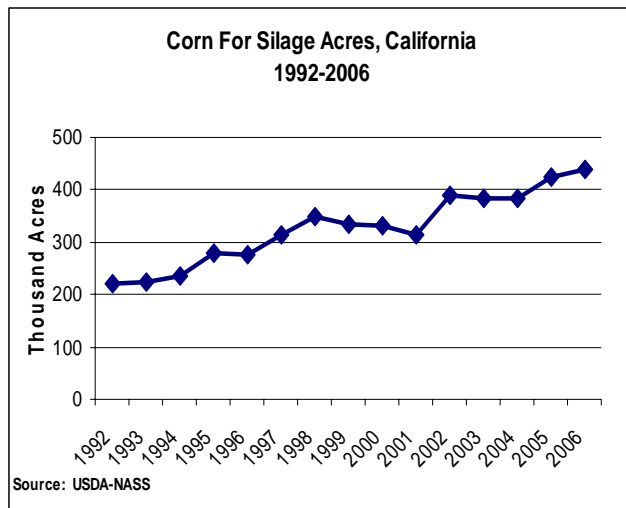
HORSE/RETAIL HAY MARKET

The market on alfalfa-grass hay, orchard grass, and timothy hay for the horse market could remain strong in 2007 given the excellent demand this year. Prices were strong on this hay in 2006 in areas of California and Nevada where the alfalfa hay market was soft compared to the previous year. The horse/retail market on alfalfa is firm going into the winter and this could be positive for the early market next year, especially for light bales for feed stores.

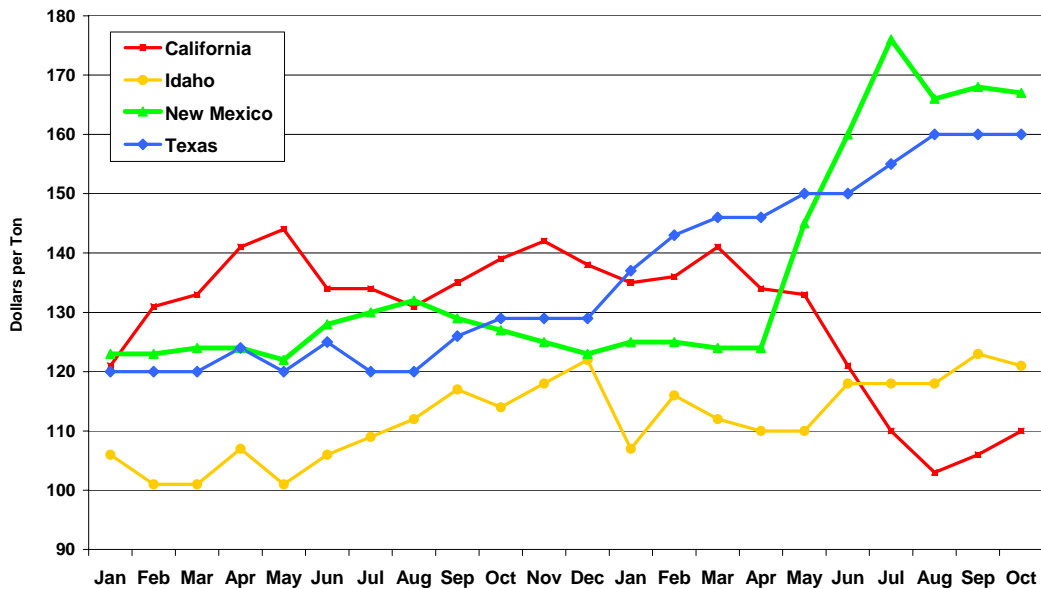
CONCLUSIONS

Alfalfa hay supplies in the West should be lower going into 2007. Demand could be good early next season as many dairies will be in need of hay. The outlook for alfalfa hay acres and production in the West next year is mixed. Much will depend on irrigation water supplies and the number of acres converted to other crops. California growers, after a disappointing year in 2006 have the most crop options for 2007 and may not follow the same year to year trend on alfalfa acres and production as some other States in the West. If alfalfa hay production is lower in California next year, alfalfa shipments from out-of-state may move higher, particularly if fuel prices hold at moderate levels and if dairies return to profitability. Milk prices may move higher in 2007 which would be very positive for the alfalfa hay industry. This would especially benefit alfalfa hay growers in California who have struggled in 2006 marketing hay to financially strapped dairies.

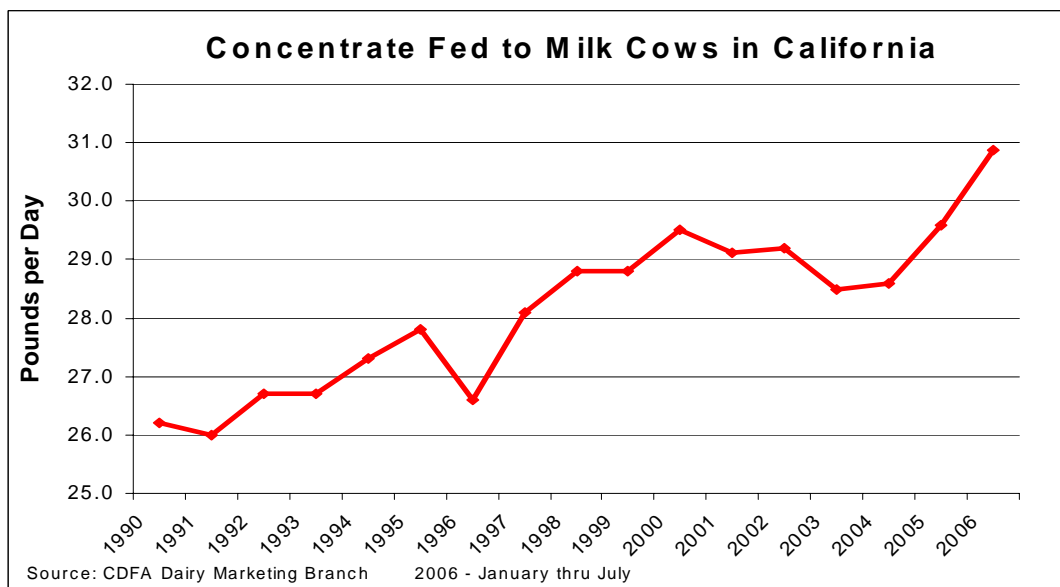




NASS Monthly Avg. Alfalfa Hay Prices, CA, ID, NM, TX January 2005 - September 2006

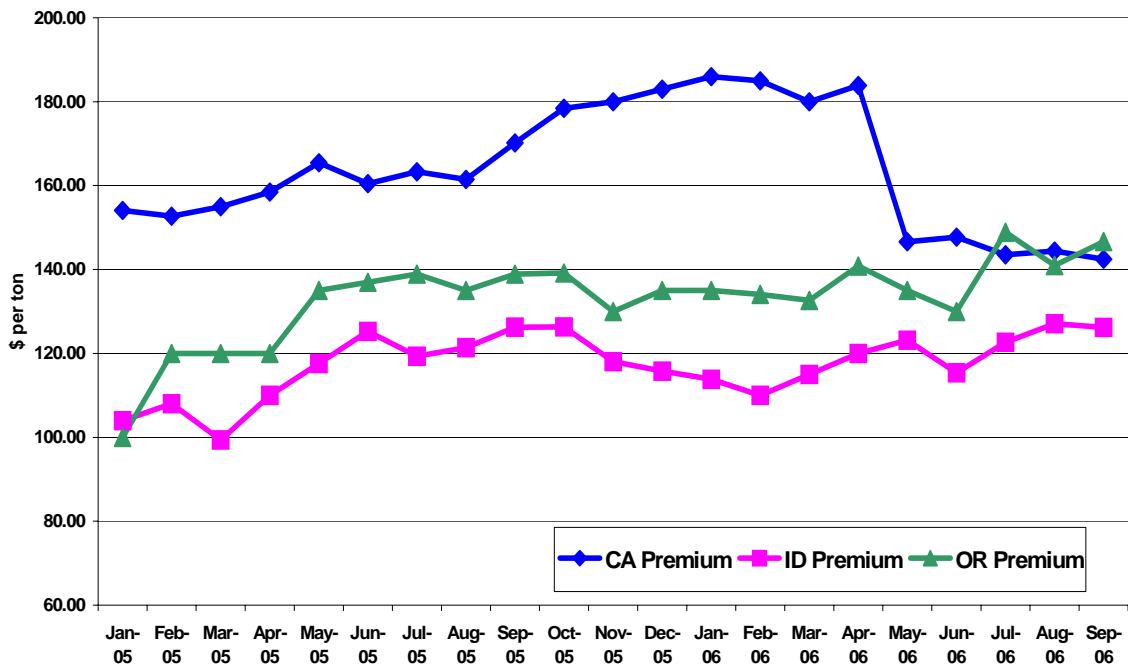


Source: USDA-NASS



Premium Alfalfa Hay Prices - CA, ID, OR (FOB)

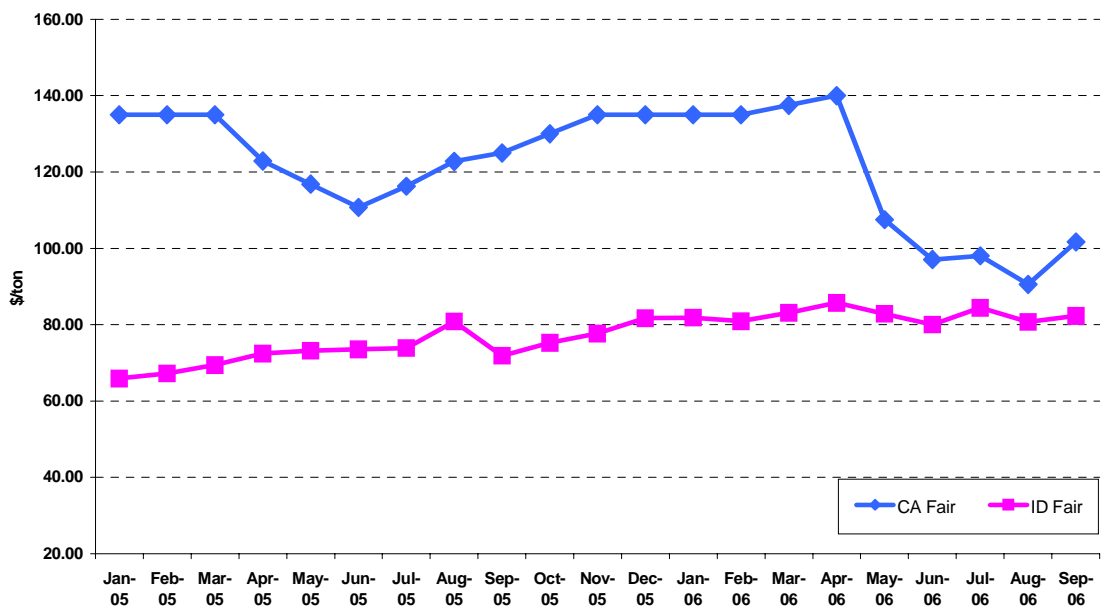
January 2005 - September 2006
(CA -Tracy-Patterson-Stockton; OR - Lake County)



Source: USDA Livestock and Grain Market News

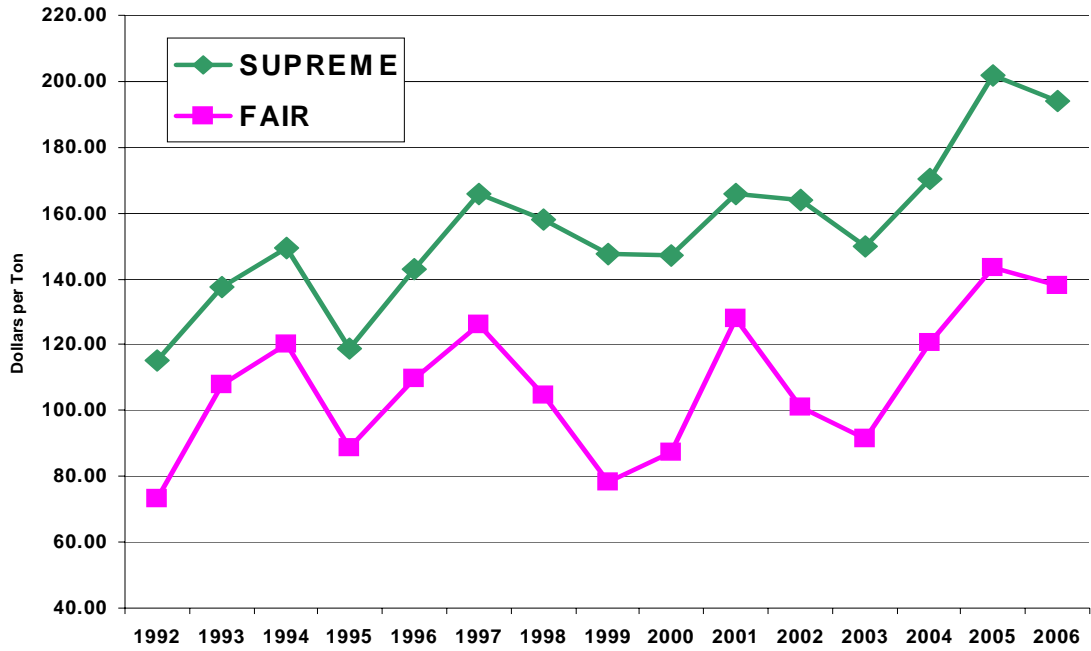
Fair Alfalfa Hay Prices, California, Idaho (FOB)

January 2005 - September 2006
(CA -Tracy-Patterson-Stockton)



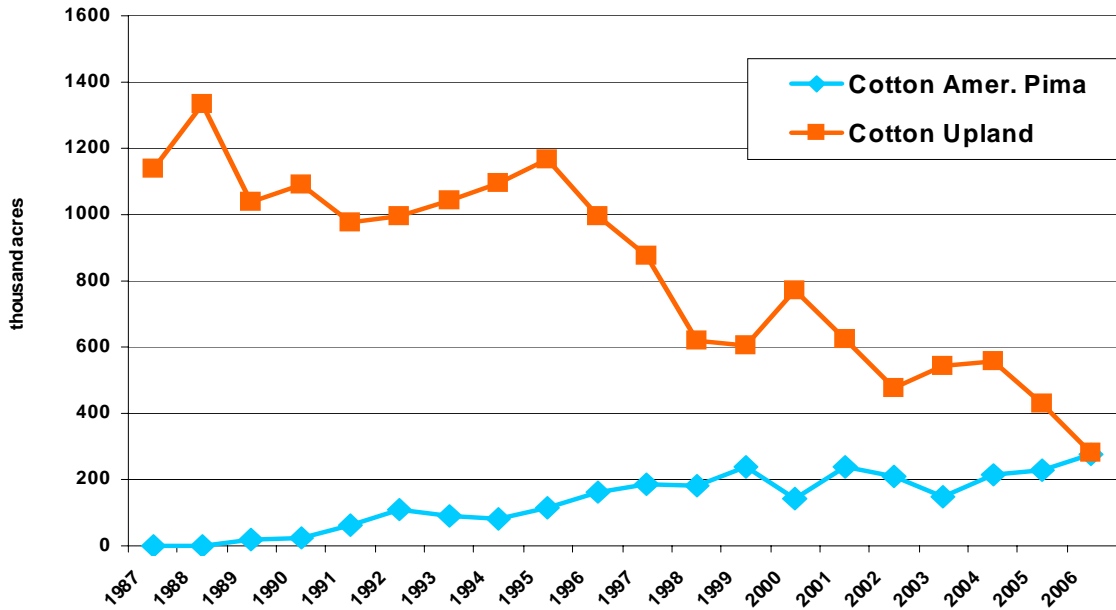
Source: USDA Livestock and Grain Market News

Tulare-Visalia-Hanford-Bakersfield Delivered Alfalfa Hay Prices
Market News Yearly Average Price, 1992-2006
Supreme and Fair Quality



Source: USDA livestock and grain Market News 2006 - Simple Average January thru September

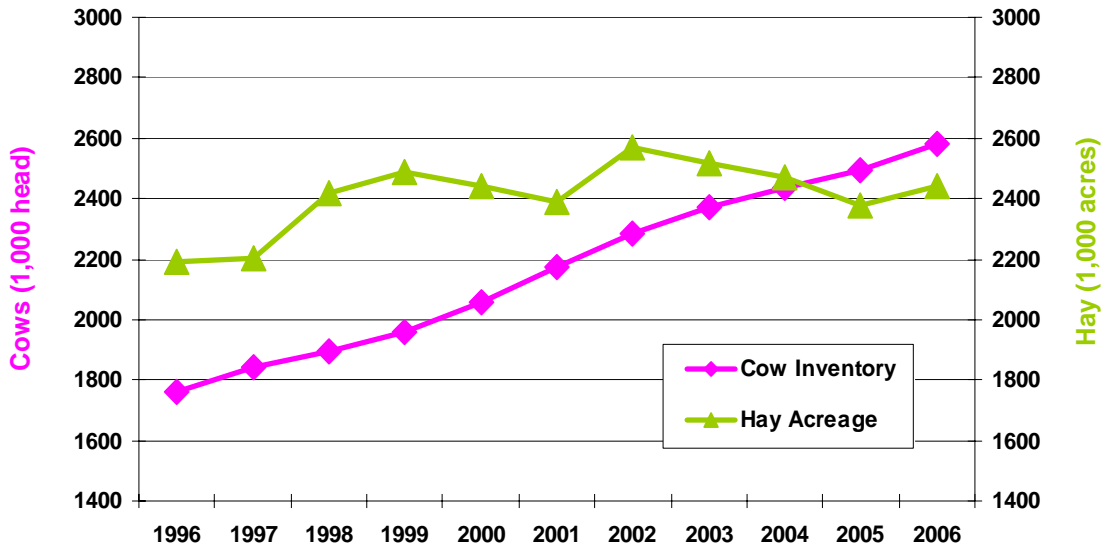
California Cotton Acreage - American Pima vs Upland
1987-2006



Source: USDA-NASS

Milk Cows vs. Alfalfa Hay Acreage

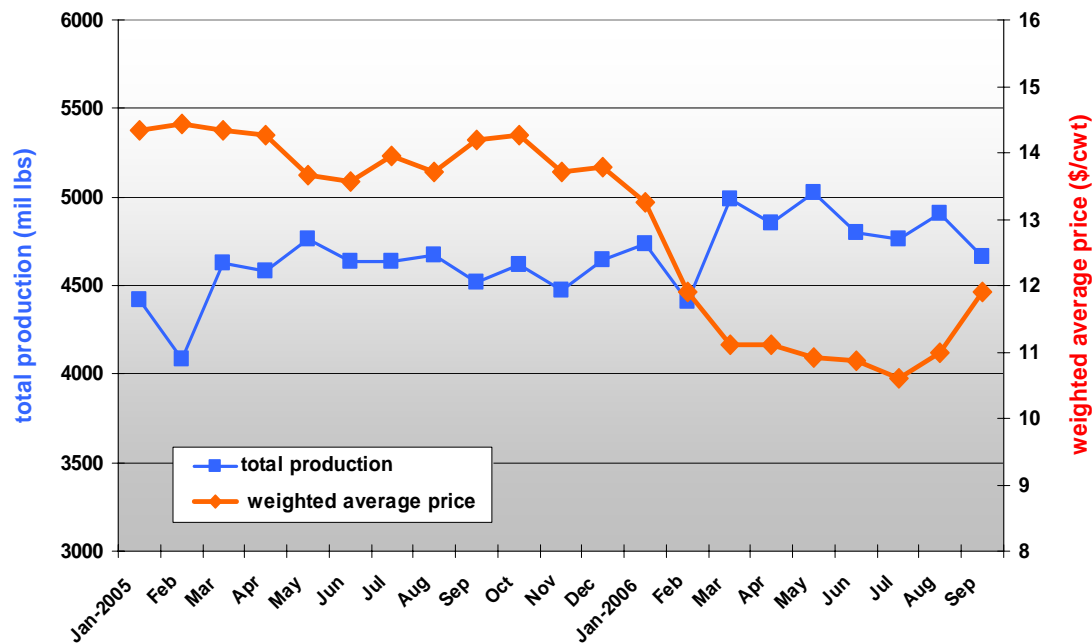
California, Idaho, New Mexico
1996-2006



Source: USDA-NASS

Monthly Milk Production and Prices

California, Idaho, New Mexico
2005-2006 Total Production and Weighted Average Price

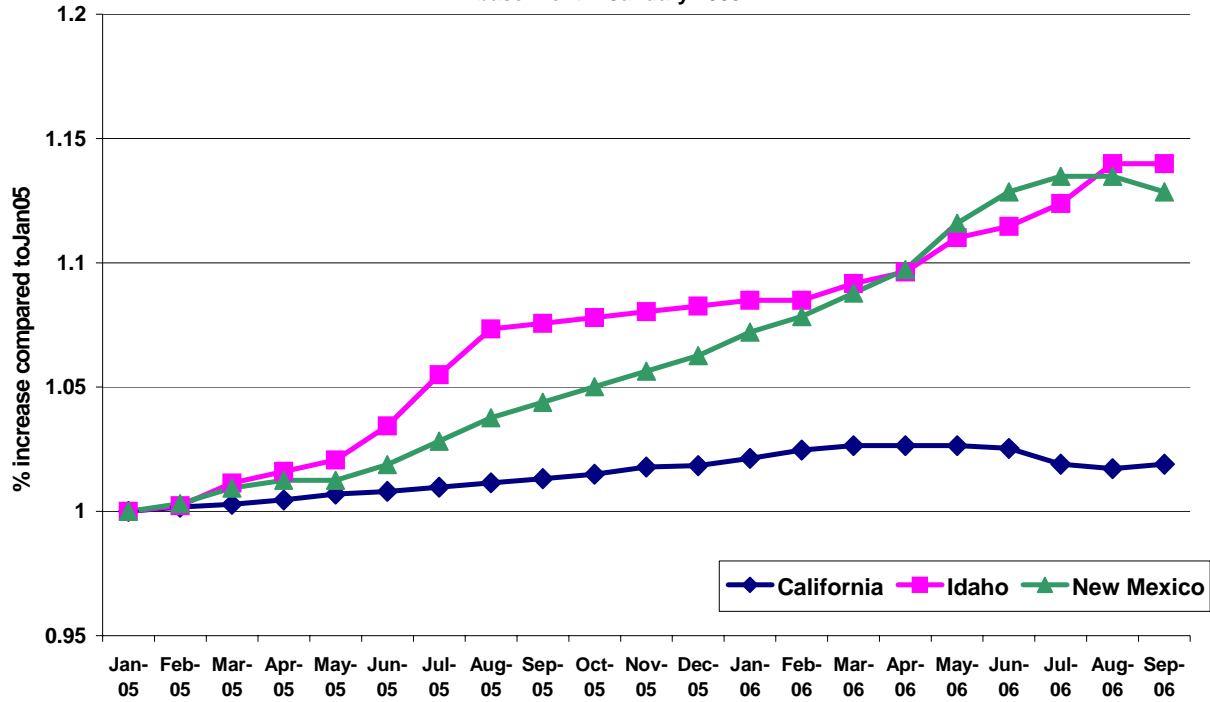


Source: USDA-NASS

Milk Cow Inventory Index - California, Idaho, New Mexico

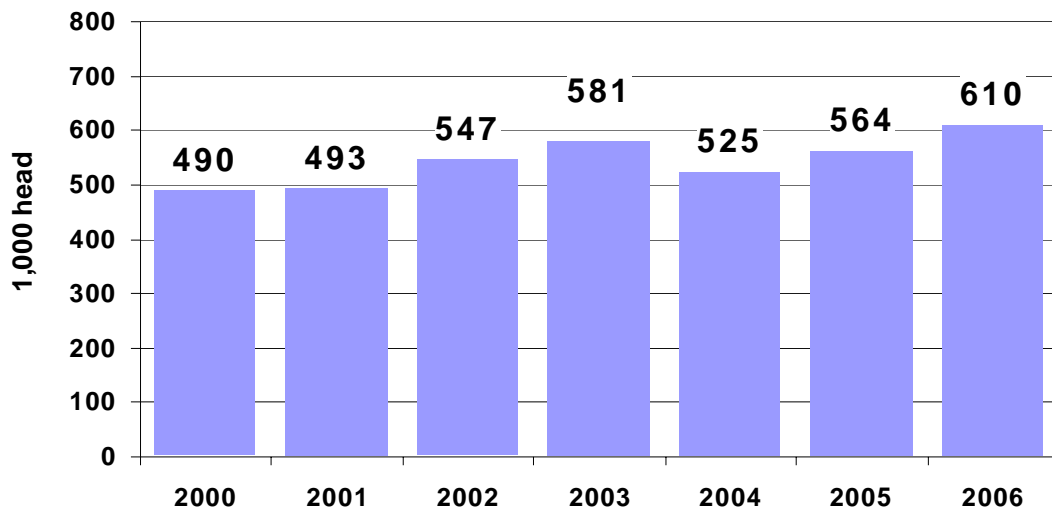
January 2005 - September 2006

base month: January 2005



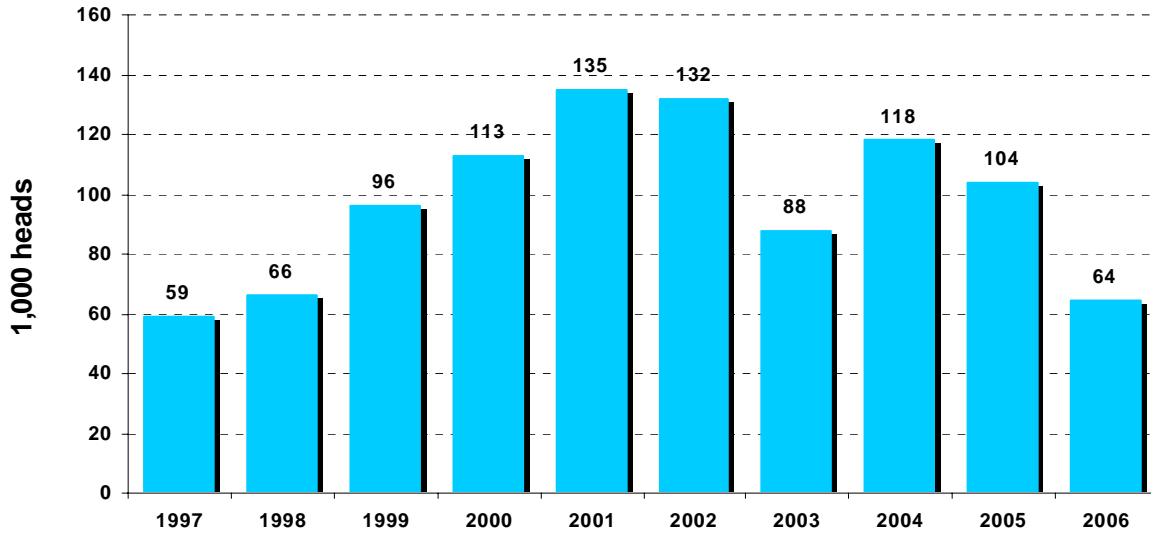
Source: USDA-NASS

California Dairy Cow Slaughter 2000-2006



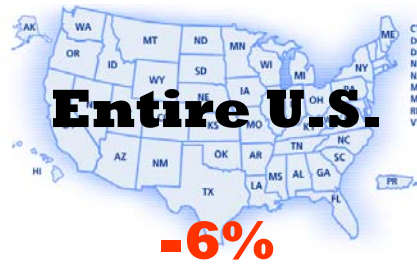
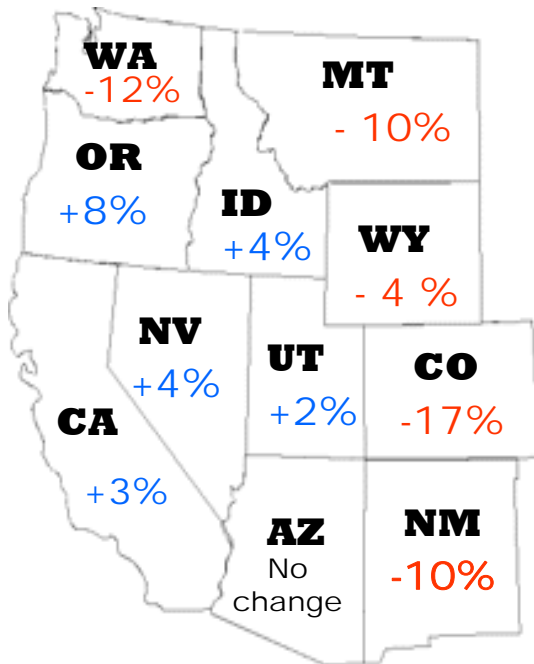
Source: USDA-NASS 2006 - October-December estimated

Incoming Dairy Replacements Heifers Springers and Open Heifers Jan-Oct 1997-2006



Source: CDFA Animal Health Branch

Alfalfa hay production 2006/2005 % CHANGE



Source: USDA-NASS