HAY PRICES AND TRENDS IN WESTERN STATES

Seth Hoyt[1]

ABSTRACT

The alfalfa hay market in California and the west in 2004 followed the historical pattern of stronger prices after one to two years of declining markets. Tight supplies of Supreme quality milk cow hay the second half of the year pushed prices to record highs in some areas. Many industry sources believed high quality alfalfa hay prices could remain strong in 2005. Supplies of dry cow/feeder hay, while more plentiful in some areas of the West, were light in California. The market for this quality of hay could be firm the first half of the season in California and possibly for the entire season. A major factor in the rebound of the alfalfa hay market in 2004 was the remarkable financial recovery in the dairy industry, the main outlet for alfalfa hay. Milk prices in California set new record highs in May, 2004 after dropping to 25 year lows a year earlier. Unlike 2003, California alfalfa hay growers had very few disruptions from rain and, for the most part, had excellent harvest weather until late in the season. Unfortunately, their counterparts in many other western States were not so fortunate. Hay growers in Nevada, Utah, Idaho, Washington, and Oregon had challenges with rain early in the season. In some States, rain disruptions continued throughout the season. Surface irrigation water shortages were reported in some areas due to the lingering drought in the West. The Pacific Northwest continued to be the main area for alfalfa hay exports to the Pacific Rim. California's alfalfa hay exports represented only a small percent of the State's alfalfa hay production.

Key Words: alfalfa hay market, stronger prices, tight supplies, financial recovery, milk prices, rain, surface irrigation water, alfalfa hay for export

INTRODUCTION

Due to bearish alfalfa hay prices in 2003 and irrigation water uncertainties, alfalfa hay acres and production in the seven western States declined 3 percent in 2004. This, combined with lower milk production the second half of 2003 and early 2004, improved consumer demand for dairy products, and a return to strong expansion in cow numbers in California and Idaho made for the "perfect storm" of factors that were bullish to milk and alfalfa hay prices in 2004. Supply-demand dynamics with dairy products created, what appears to be the biggest year to year upward swing in milk prices in the history of the dairy industry. This was great news for alfalfa hay growers who had struggled through two disappointing years, particularly 2003 because of financial losses in the dairy industry. The revitalization of the dairy industry in the West in 2004 was a big boost to the many allied industries that support the dairy sector. Account receivables returned to the most current positions since 2001.

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RECAP OF THE 2004 ALFALFA HAY MARKETING SEASON

After a dismal year in 2003, alfalfa hay growers were in need of some good news in 2004. Positive developments began in the second half of 2003 with higher U.S. dairy cow slaughter, including 25,000 cows slaughtered in the CWT (Cooperatives Working Together) industry self-help program, and a resulting drop in milk production. Milk prices, after reaching 25 year lows the first half of 2003, began an upward move in the second half of the year. Additionally, Monsanto announced in early 2004 that supplies of BST (the growth stimulant that increases milk production) would be cut in half in 2004. This, along with improved consumer demand for dairy products (some of this can be attributed to high protein diets, such as Atkins) caused a bullish outlook for hay markets in 2004. As a result, demand and purchases of alfalfa hay by dairy hay buyers returned to more normal patterns, which was welcome news for hay growers.

Further positive's in 2004 included the reduction in alfalfa hay acres and production in the west, particularly the two major producing States of California and Idaho. In California, predictions of a significant amount of alfalfa hay that may convert to cotton in central California did not materialize. However, a drop in alfalfa hay acres in the southern California desert seemed to offset the smaller than expected conversion of alfalfa hay to cotton in the central valley. Some growers in the Imperial Valley were switching to other crops due to high overhead costs producing alfalfa hay. Furthermore, as dairy cows continued to move out of Chino (many going to the San Joaquin Valley), the freight disadvantage to ship hay to the San Joaquin Valley from the southern desert was a growing issue.

While the depressed alfalfa hay market in 2003 was a major reason for the lower alfalfa hay acres in the West in 2004, concern about irrigation water supplies was also a factor. Due to tight irrigation water and untimely rains during the season, alfalfa hay yields and production were down in some Western States. This also reduced the supplies of Premium and Supreme quality alfalfa hay in some areas. The exception was in California. Production of higher quality milk cow hay was up from 2003 due to excellent weather most of the season and better than expected quality tests in some central and northern valley areas. Consequently, there was a period in mid-summer when supplies of Premium and Supreme alfalfa hay in northern California were ample for demand. However, this situation reversed by September and the market firmed going into fall. Alfalfa yields in California were on a record pace the first half of the season. However, due to tight surface water supplies in the central valley, worm infestations, and whiteflies in the Imperial Valley, production tapered off in some areas after mid-summer.

Another plus for the alfalfa hay industry was the renewed growth in dairy cow numbers in California and Idaho. The number of dairy cows in Idaho has doubled since 1994. In California, the dairy cow inventory is up 39 percent since 1994. The average growth of 5,000 cows per month in California in 2001 fell to 2,200 cows per month in 2003. In January thru September 2004, dairy cow growth in California rebounded to 4,000 cows per month. Part of the surge in dairy cow growth was due to a decline in the dairy cow slaughter which fell 13 percent in California the first nine months of 2004. Dairy cow slaughter in May was down 27 percent from May 2003. The cull rate at dairies in California, which is normally 30 to 35 percent, fell to the low 20's in the spring and bottomed out at 19 percent in May.

The return to strong cow expansion pushed springer dairy heifer prices sharply higher. "Springer" prices in the West ranged from $2,000 to $2,500 per head in the spring of 2004 with some individuals at auctions even higher. Prices weakened to $1700 to $2100 in California by fall but were still above the ten year average. According to the California Department of Food and Agriculture's, Animal Health Branch, milk replacement heifers shipped into California in the January thru September 2004 period were up 38 percent from the same period the year before. After a summer slow-down in shipments, dairy heifer crossings into California in September surged 63 percent above the previous year due to continued tight supplies.

A good barometer for trends in the higher quality alfalfa hay market in the West is the Tulare-Visalia-Hanford, California delivered market. This is the leading dairy area in the nation. Alfalfa hay, mainly milk cow quality, ships from three to four and sometimes five other Western States into this area. In October 2004, Supreme quality alfalfa hay delivered into Tulare-Visalia-Hanford dairies for an average of $174.35 per ton, according to USDA Market News. This compares to $153.51 in October of 2003. The January thru October 2004 average was $169.49. The Fair quality hay market in Tulare is not always a good test of trends in the West. For example, sources report that in some areas of the West, such as Washington, there were ample supplies of dry cow (feeder) quality alfalfa hay in the fall of 2004 due to rains this year. This was not the case in California. Fair quality alfalfa hay delivered into Tulare-Visalia-Hanford in October 2004 brought $126.96 per ton, up $36.30 per ton from October 2003. The January thru October average was $120.58.

The strong alfalfa hay market in California in 2004 helped to draw a larger amount of hay from other Western States. According to border station reports, in the January thru September 2004 period, 527,596 tons of alfalfa hay shipped into California by truck, up 24 percent from the same period in 2003. Not only did this reverse a two year decline in shipments but it halted a drop in shipments that reached a ten year low in 2003. While volume was up from 2003 in the five main States that ship hay into California, none was comparable to the year to year increase from Utah. In January thru September 2004, Utah shipped 130,914 tons of alfalfa hay into California, up 77 percent from the same period in 2003. Hay stocks in Utah on May 1, 2004 were up 59 percent from the previous year and this along with the high hay prices in California were the major factors in the increased shipments. It was interesting that approximately 60 percent of the alfalfa hay from Utah was going to Tulare County, unlike heavier shipments to San Bernardino and Riverside counties in past years. While the next biggest year to year percent increase was Idaho, their volume was and normally is small, 9,281 tons the first nine months in 2004. Nevada was the next highest, up 19 percent at 194,192 tons, Oregon was up 15 percent at 38,760, and Arizona was up 3 percent at 154,111 tons.

On the negative side was the continued drought that impacted alfalfa hay growers in the west. While growers in some areas had ample water supplies and improved conditions from 2003, such was not the case in other areas. For example, in Idaho sources reported that tight surface water supplies resulted in some growers receiving a reduced amount of irrigation water and in some cases no water at all this year. Sources report that in Nevada wells were being drilled in some areas at a hefty expense in order to have sufficient water to irrigate alfalfa. Even California felt the sting of tight surface water supplies. Some growers in the central valley were

forced to reduce irrigations of alfalfa the second half of the season. The availability of irrigation water was a major issue in the west as growers looked ahead to 2005.

All baled hay exports from the west coast to Japan the first half of 2004 were down from 2003. Rain in the Pacific Northwest (PNW) reduced the amount of high quality alfalfa hay for export and held alfalfa hay exports below the previous year. Unlike Washington State where alfalfa hay exports represent approximately 20 percent of the State's production, California's alfalfa hay exports in 2003 were approximately 1 to 1 ½ percent of the total alfalfa hay production. Export demand has only minimal impact on the overall alfalfa hay market in California. However, there are times when export demand can influence a local hay market. Such was the case in the northern mountains of California this year where demand was very good from PNW export hay buyers looking for high quality, non-rain damaged alfalfa hay. Another reason for the decline in west coast baled hay exports in 2004 was the reduction in sudan hay exports from California. Lower acres and production pushed the sudan hay market in California up sharply with best demand for top quality offerings to ship to Japan. Exports of all hay from California in 2003 accounted for approximately 12 to 13 percent of the State's total hay production. Sudangrass, bermudagrass, kleingrass, and oat were the main other hay crops exported.

Demand from horse/retail buyers for hay was pretty constant in 2004 with a firming market in California in the fall. Sources indicate that the amount of alfalfa and other hay in barns in California in the fall of 2004 was down from the previous year. This could be bullish for the winter 2004/2005 barn hay market. I don't have a good handle on the horse/retail market in all of the West so I will talk about California. A growing number of horse owners in California are feeding alfalfa-grass mixtures or alfalfa one feeding and oat or grass hay the other feeding. While a substantial amount of alfalfa hay is still fed to horses, some horses that are worked lightly or not at all tend to put on more flesh (fat) on alfalfa hay. Some feed stores in northern California in the fall of 2004 were selling orchard grass hay and alfalfa-grass hay mixtures at higher prices than their number 1 alfalfa hay.

ALFALFA HAY OUTLOOK FOR 2005

The first place to start is with supplies of alfalfa hay in the West. It is pretty safe to say that high quality alfalfa hay supplies are tight throughout the west and the carryover will probably be down. Sources indicate that even though hay stocks on hand May 1, 2004 in the seven Western States were up 11 percent, the robust demand and market in 2004 combined with reduced production could mean a lower alfalfa hay carryover in the West going into 2005. Sources state that supplies of other hay could be down as well. The exception is in some areas of the West where rain boosted supplies of low quality (feeder) hay. In California, sources report that the excess hay supplies on hand in the southern desert and northern mountains on May 1, 2004 have dissipated. Some dairy hay buyers were not able to fill their needs for hay going into winter due to tight supplies. The light supplies of alfalfa hay in California in the fall of 2004 could bode well for growers on early cuttings of alfalfa hay in 2005. The National Agricultural Statistics Service (NASS) will publish the end of year hay stocks on January 12, 2005.

Historically, in a year such as 2004 when alfalfa hay prices were strong you could pretty much guarantee increased hay acres and production the following year. For example, after the record

high alfalfa hay prices in 1997, alfalfa hay acres jumped 100,000 in California the following year and 110,000 acres in Idaho. The same pattern occurred after the bullish alfalfa hay market in 2001 when acres jumped 130,000 the following year in each of these two States. In both of these instances, lower hay prices followed the next couple of years. There is one dynamic that wasn't as prevalent in these prior year examples –WATER.

Due to the devastating affects of a multi year drought, Idaho agriculture is facing some major issues on irrigation water. The huge aquifer in Idaho that supplies ground water to agriculture and cities is critically low. There is a threat that senior water rights holders will make water delivery calls, which means that some junior water rights holders (many in agriculture) will not be able to pump water for irrigation. This could idle approximately 350,000 acres of farm land. Around one million of Idaho's two million irrigated acres of farm land is watered by pumps, according to sources.

The Idaho Water Policy Group, representing growers and dairy producers, is trying to head off a major blow to the agricultural industry in Idaho. They are proposing several water conservation measures, including a proposal to enroll 100,000 acres of farm land in the Federal Conservation Reserve Program (CRP). While this is still a significant amount of land to take out of production, sources believe much of this will probably be lower producing land. Surface water supplies were very tight in Idaho this year and it will take a very wet winter with heavy snow to alleviate another year of shortages. There are mixed ideas what alfalfa hay acres may do in Idaho in 2005 but some think they could be unchanged to lower because of the water uncertainties. Some predict that the higher quality alfalfa hay market in Idaho could be strong throughout 2005

While irrigation water supplies will be a big factor in the amount of new alfalfa hay acres planted in California in 2005, it seems to be having the biggest impact in central and southern California. Central California, particularly the central and southern San Joaquin Valley has become the biggest area for alfalfa hay production in California, surpassing the southern desert. Some growers in this area have indicated they will not expand alfalfa acres until the outlook for irrigation water improves.

One development that could hold alfalfa hay acres in California higher than some predictions is what has occurred in the southern California desert. In the Palo Verde Valley, the 24,000 acres of farm land (earlier it was reported at 26,000 acres) that was to be dried down in the water deal between the Palo Verde Irrigation District and Metropolitan Water District has been delayed into the first half of 2005. Sources now say that 20,000 of the 24,000 acres is alfalfa hay that growers will harvest around 3 to 4 cuttings from in 2005 before they take it out of production. Those 20,000 acres will count as harvested alfalfa hay acres in 2005 but due to fewer cuttings, production will be down from the previous year. Additionally, growers in the Imperial Valley increased planting of alfalfa hay this fall. Alfalfa hay acres in the Imperial in mid-November totaled 137,000, according to the Imperial Irrigation District. While this is down 10,000 acres from the same period in 2003, it is less than the 18,000 to 20,000 acre year to year reduction that has occurred in the Imperial through much of 2004.

In discussions with seed company representatives is much different than in the fall of 2001. In 2001, it was unanimous that alfalfa acres were going up in 2002 and the question was how much. Some seed representatives in California predict alfalfa acres won't change much in their areas in 2005. Some felt acres may be up a little. One rep. predicted a 10 percent increase in alfalfa acres in his area. Grower predictions in California were also mixed with a few thinking acres could even be down in their areas. It appears that if alfalfa acres are higher in California in 2005, it will be due to above normal spring planting and higher fall planting in a few areas where the water outlook is more favorable. Market impact from spring planted alfalfa should not be as great as fall planted hay due to less production for the season. Some in industry believe a 5 percent increase in California alfalfa acres in 2005 will have no negative market impact due to depleted hay inventories and renewed dairy cow growth. In other Western States, some have said acreage may not change much from 2004 due to water uncertainty. However, in areas where the irrigation water outlook is more positive, growers may follow the normal tendency to plant more alfalfa hay acres after a profitable year.

In California, sources indicated that alfalfa hay acres will be up in the Stockton Delta area in 2005 due to losses with processed tomatoes this year. Alfalfa hay acres in the Sacramento Valley could be up slightly in 2005, according to sources. Cotton industry sources do not believe there will be much conversion of cotton to alfalfa hay in the central valley in 2005. With uncertainty of irrigation water supplies along with the three year commitment with alfalfa hay, many growers in California may stay with cotton and use the Government Loan program if cotton markets remain depressed.

On the demand side, the dairy industry had a very good year in 2004. Overall, most dairies are going into 2005 in much better financial health than a year ago. In spite of higher input costs, a sharp decline in grain prices since spring was a big boost, although some dairymen were locked into higher priced grain from earlier contracts. The lower corn market is significant because nearly half of a dairy producer's cost of production in California is feed costs. Some, if not many California dairies will need high quality alfalfa hay by early spring and this could be bullish for early season Premium and Supreme alfalfa hay prices. If there is minimal rain damaged hay on early cuttings in 2005, the market on early summer hay could be good as supplies of dry cow hay will be depleted at some dairies.

There is a possibility that pounds of concentrate may increase in milk cow rations in 2005. Feed corn prices are projected to be down in 2005, compared to 2004 due to a record 11.7 billion bushel U.S. corn harvest and large world coarse grain supplies If hay prices are bullish in 2005, we may see pounds of concentrate fed to milk cows go higher. In a scenario that concentrate per cow in California rises to the level of 2001 (29.6 pounds per day) and there is a resulting drop of one pound of alfalfa hay in rations, this would total roughly 275,000 tons of hay per year (based on one pound less hay for 1.5 million cows being milked per day). This is just over 3.5 percent of California's alfalfa hay production in 2004. It's difficult to determine the impact but, according to sources, with such tight supplies of milk cow quality alfalfa hay in the West, this may not be much of a factor in the alfalfa hay market. However, if alfalfa hay production is higher than predicted for 2005, it could have more impact. It is unlikely that concentrate fed to milk cows will increase substantially due to the limit on the amount of concentrate in rations in order to maintain cow health and milk production.

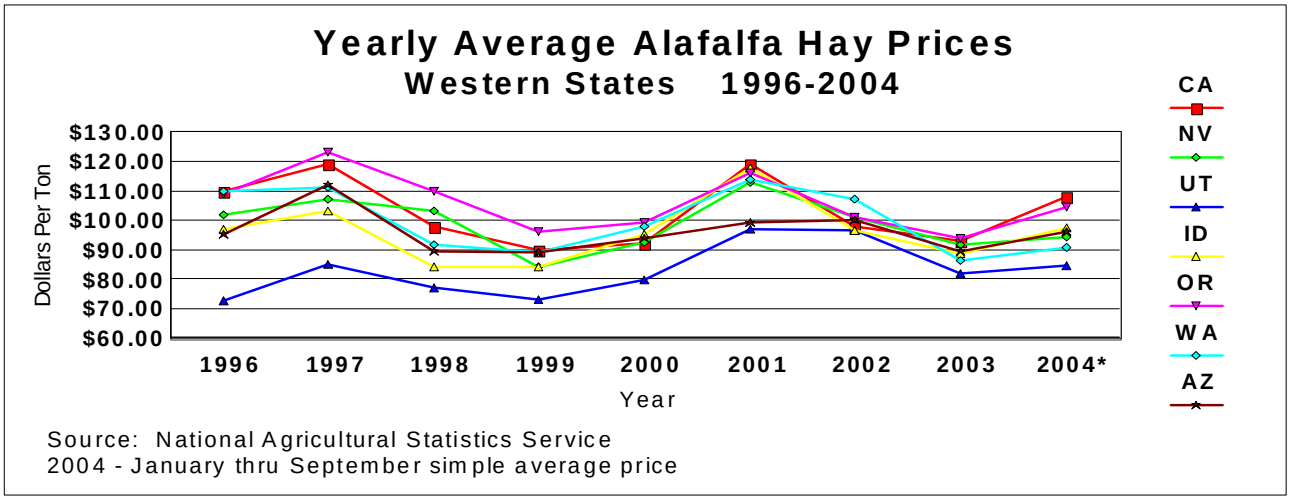
A side note, one thing to watch in the next few years is the amount of the U.S. feed corn crop that is purchased by the ethanol industry. Currently, about 10 percent of the U.S. corn crop goes to ethanol production and this adds about 20 to 40 cents per bushel ($7.00 to $14.00 per ton) on corn prices. There are currently 81 ethanol plants in the Midwest (73 that process corn) with 12 plants under construction and 60 plants that are planned to be built in the next 3 to 5 years. The ethanol industry could have a greater impact on the feed corn market in coming years.

While milk price projections for 2005 are below this year, they are much better than the early predictions for 2003. The alfalfa hay industry is hopeful that profitability will continue in the dairy industry. On November 10, 2004 milk futures prices on the Chicago Board of Trade for 2005 ranged from $12.10 to $13.82 per hundredweight. Prices in the first quarter ranged from $12.80 to $13.82. While these prices are much better than the $9.25 to $9.75 prices the first half of 2003, they are lower than some months in 2004. Dairy industry sources believe that with the drop in grain and protein feed prices the more efficient dairy producers can still be profitable with $12.00 milk. The bottom line is that dairymen will probably be a little more vigilant in trying to hold feed costs down if profit margins narrow in 2005.

Volume of alfalfa hay exports could return to normal in the PNW in 2005, but it appears that alfalfa hay exports from California may be lower. This is due to export companies that have either scaled back or have gone out of business the past couple of years. Sources indicate there are fewer export companies handling alfalfa hay in California. It's hard to figure what sudan hay exports may do and will depend on sudan hay acres in the Imperial Valley. With stiff competition from Australia and Canada, California exporters will continue to fight for market share. Additionally, it doesn't appear that there will be many changes in demand in the retail/horse hay market in the West. Market prices will depend on total supplies of hay, particularly middle quality alfalfa hay and grass-alfalfa mixes and grass hay in California.

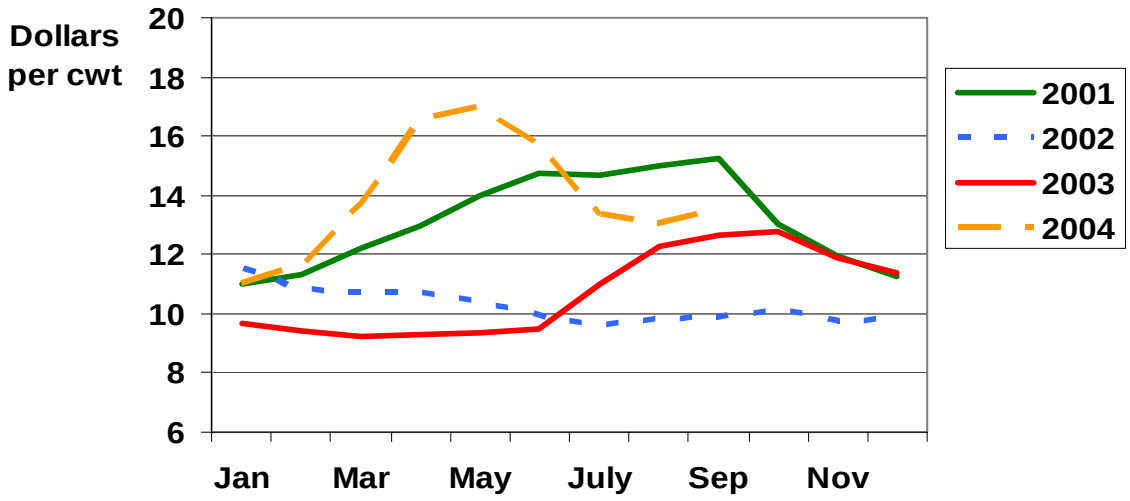
CONCLUSION

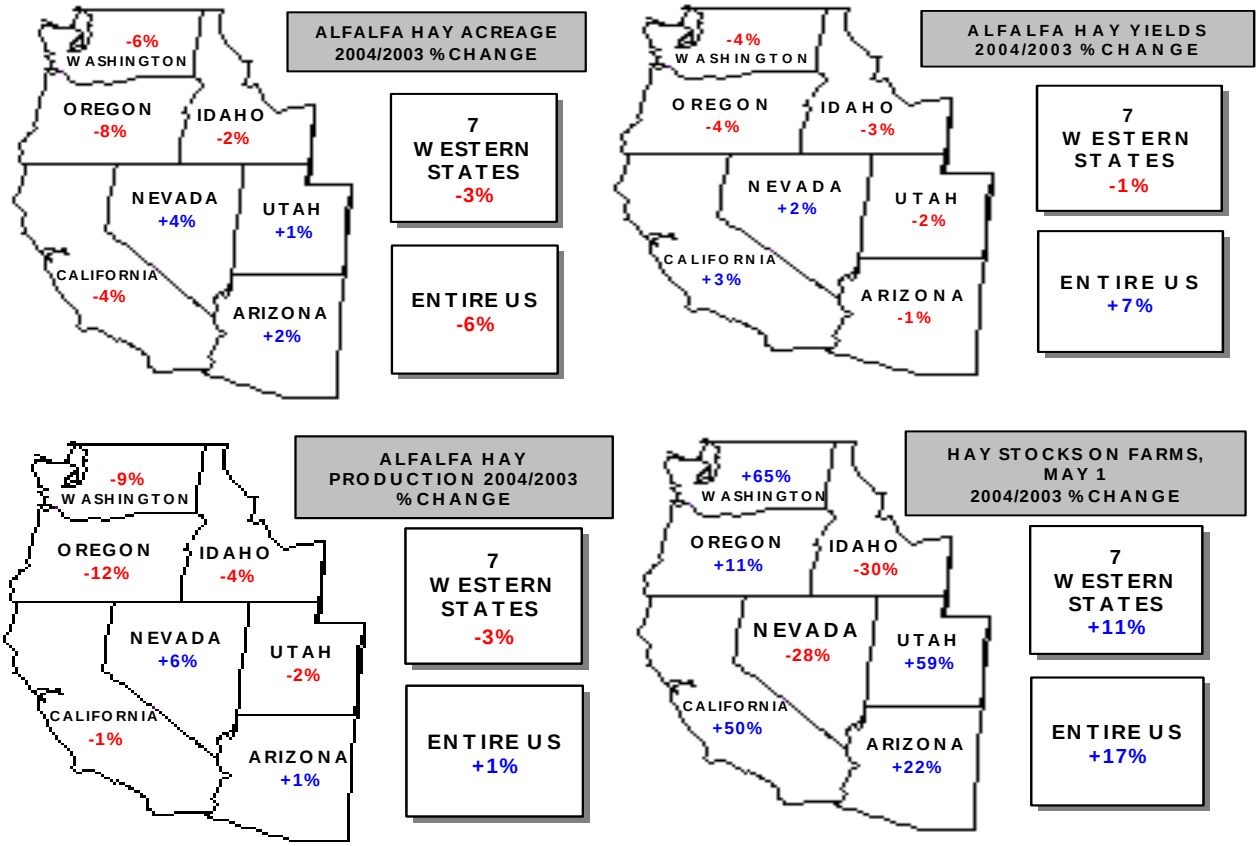
Tight carryover supplies of high quality alfalfa hay combined with the possibility of limited increases in production, expanding dairy cow numbers, and a return to more normal alfalfa hay exports in the PNW could be positive for Premium and Supreme alfalfa hay prices in many western States in 2005. While the overall market in some areas may not be higher than in 2004, the historical trend of lower prices in the year following a strong market year may not occur. Prices on other qualities of alfalfa hay in the West may be mixed in 2005. In California, prices on Fair and Good quality alfalfa hay could be strong through mid summer and possibly all year, depending on weather and production the second half of the season. Even if spring alfalfa hay planting is above normal it is questionable if the added production will be sufficient to fill the void in depleted hay inventories. Usage of carryover supplies of lower quality feeder hay will be key as to what Fair quality alfalfa hay prices do in 2005 in other Western States. Unlike higher quality alfalfa hay, lower quality hay does not normally ship as far from the production point, so local demand may be a big factor. Water for irrigation and profitability in the dairy industry will be two of the leading factors affecting the alfalfa hay market in the West in 2005.

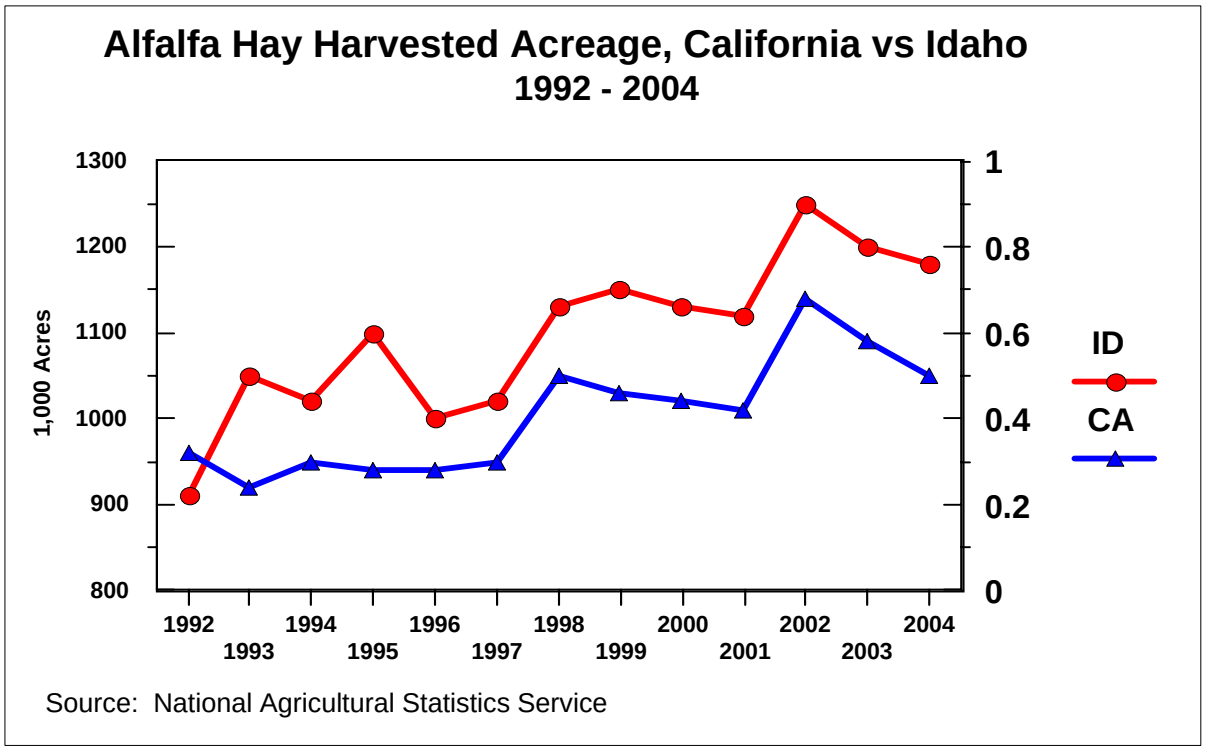


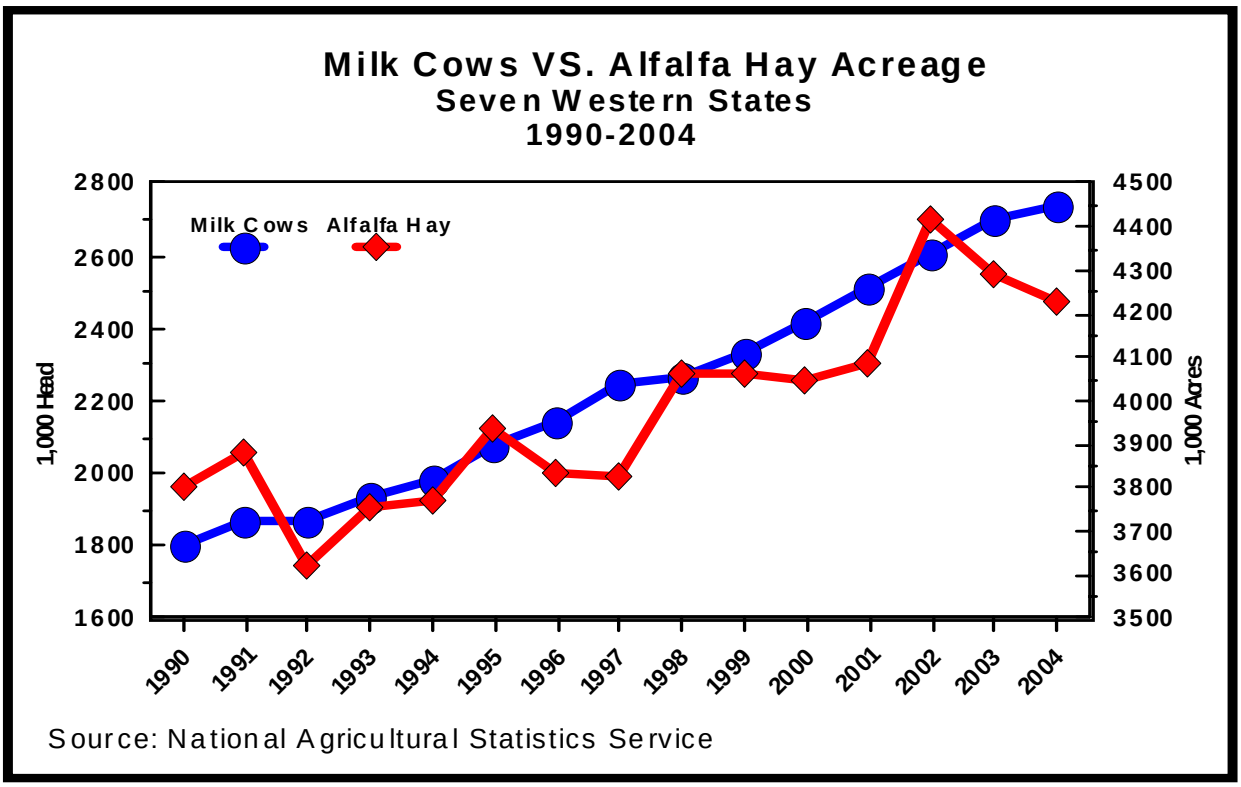
California Milk Prices (2001-2004)

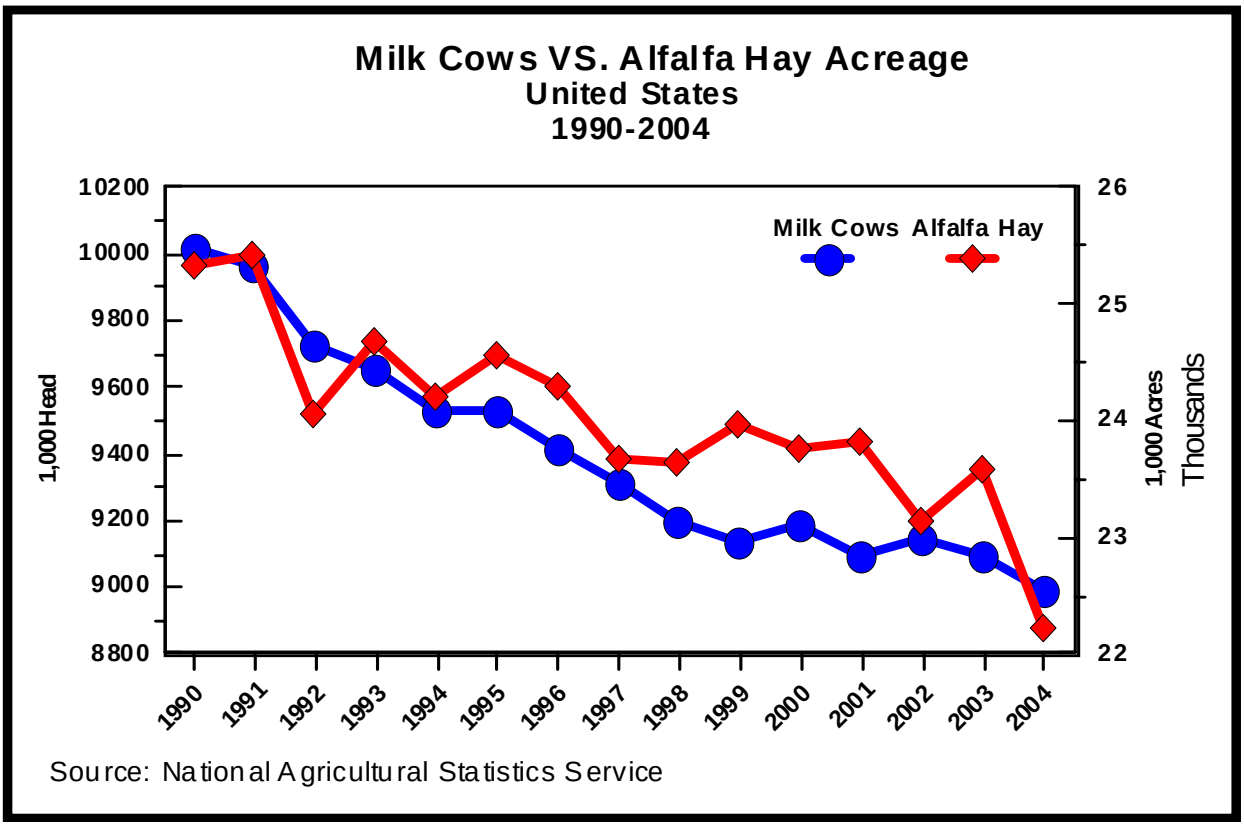
Milk Pooling - Statewide Overbase



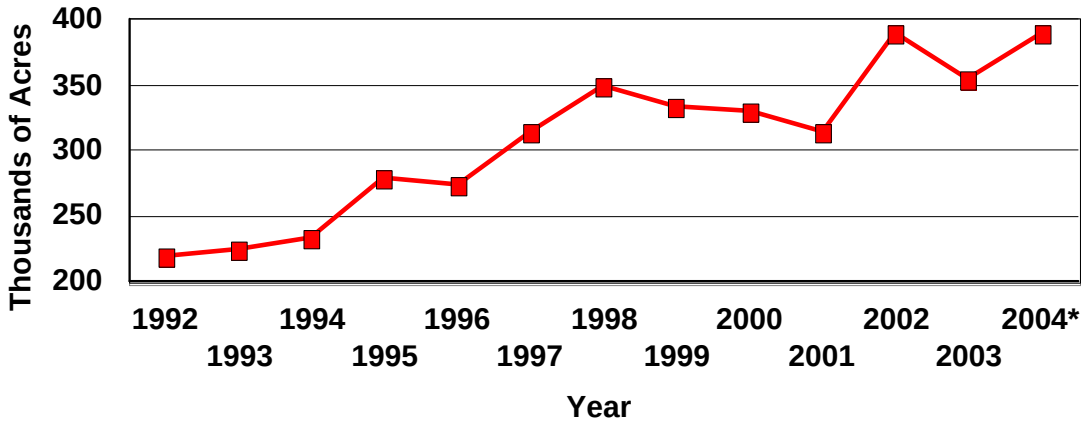

ALFALFA HAY ACREAGE
2004/2003 % CHANGE
WASHINGTON -6%
OREGON -8%
IDAHO -2%
NEVADA +4%
UTAH +1%
CALIFORNIA -4%
ARIZONA +2%
7 WESTERN STATES -3%
ENTIRE US -6%
ALFALFA HAY YIELDS
2004/2003 % CHANGE
WASHINGTON -4%
OREGON -4%
IDAHO -3%
NEVADA +2%
UTAH -2%
CALIFORNIA +3%
ARIZONA -1%
7 WESTERN STATES -1%
ENTIRE US +7%
ALFALFA HAY PRODUCTION 2004/2003 % CHANGE
WASHINGTON -9%
OREGON -12%
IDAHO -4%
NEVADA +6%
UTAH -2%
CALIFORNIA -1%
ARIZONA +1%
7 WESTERN STATES -3%
ENTIRE US +1%
HAY STOCKS ON FARMS, MAY 1
2004/2003 % CHANGE
WASHINGTON +65%
OREGON +11%
IDAHO -30%
NEVADA -28%
UTAH +59%
CALIFORNIA +50%
ARIZONA +22%
7 WESTERN STATES +11%
ENTIRE US +17%


Alfalfa Hay Harvested Acreage, California vs Idaho
1992 - 2004
1,000 Acres
1300
1200
1100
1000
900
800
1
0.8
0.6
0.4
0.2
0
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
ID
CA
Source: National Agricultural Statistics Service


Milk Cows VS. Alfalfa Hay Acreage
Seven Western States
1990-2004
Milk Cows
Alfalfa Hay
1,000 Head
1,000 Acres
2800
2600
2400
2200
2000
1800
1600
4500
4400
4300
4200
4100
4000
3900
3800
3700
3600
3500
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
Source: National Agricultural Statistics Service

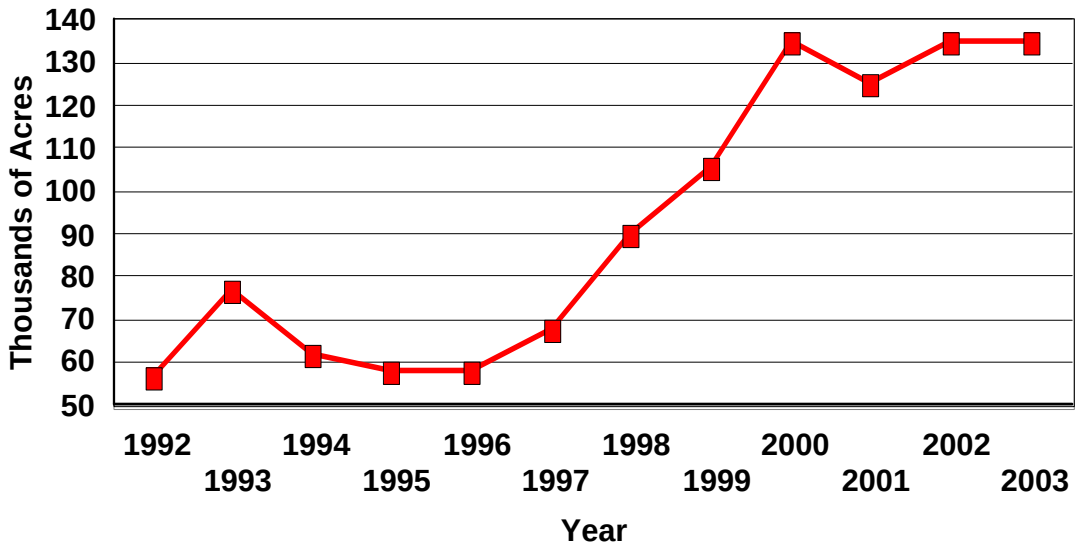

Milk Cows VS. Alfalfa Hay Acreage
United States
1990-2004
Milk Cows
Alfalfa Hay
1,000 Head
1,000 Acres
Thousands
10200
10000
9800
9600
9400
9200
9000
8800
26
25
24
23
22
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
Source: National Agricultural Statistics Service

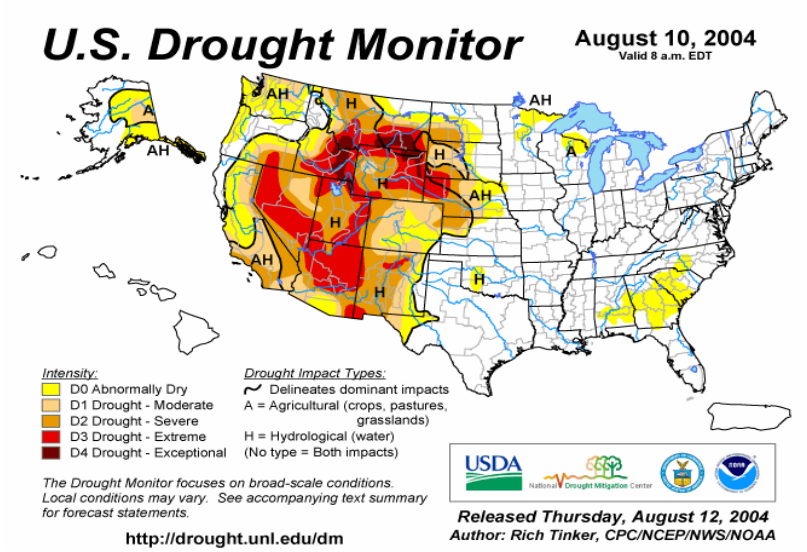
Corn For Silage Acres, California
1992 - 2004

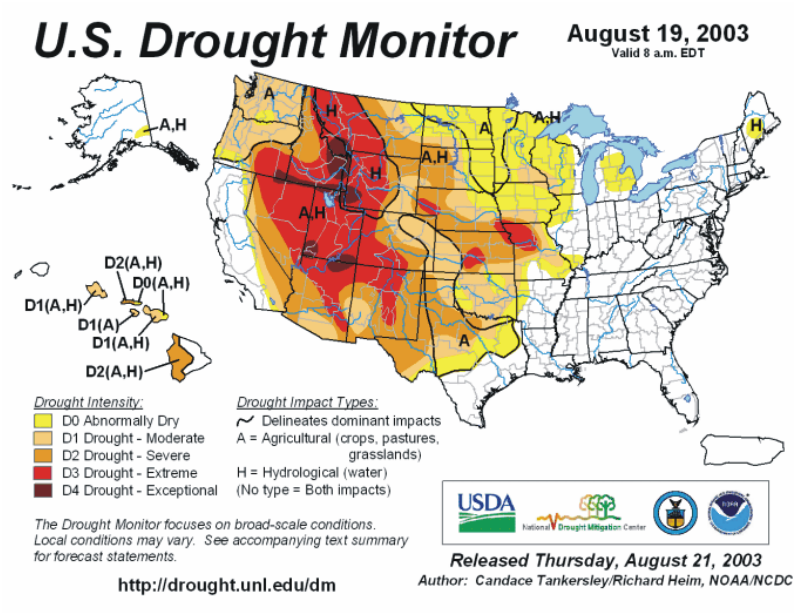


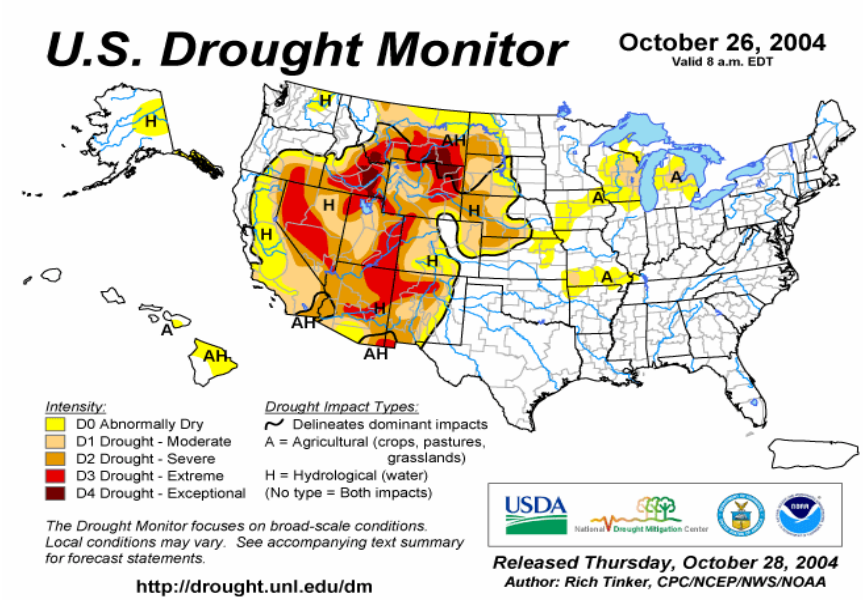
2004 - Corn acres planted minus corn acres harvested for grain
Source: California Agricultural Statistics Service

Corn For Silage Acres, Idaho
1992 - 2004

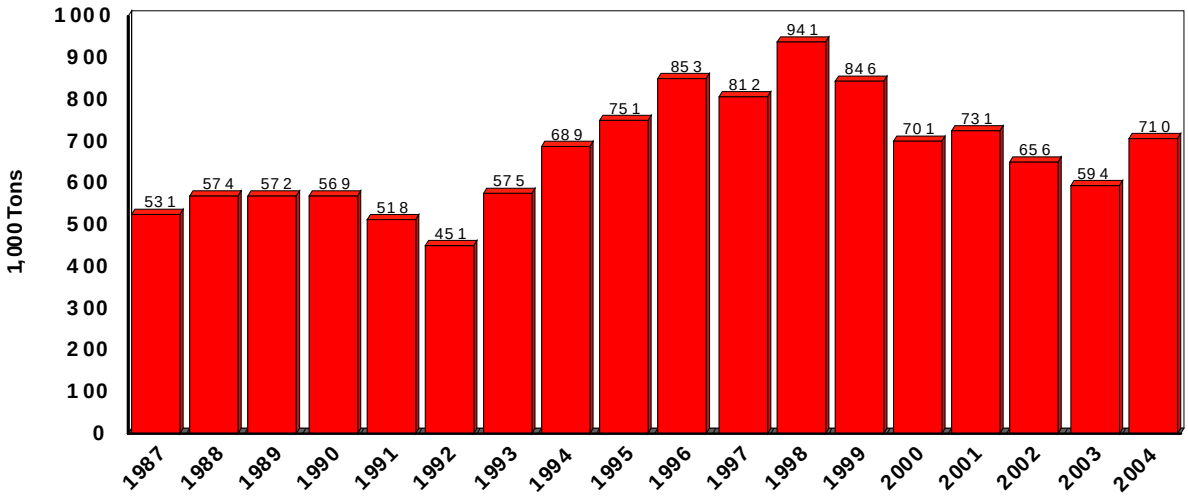



U.S. Drought Monitor
August 10, 2004
Valid 8 a.m. EDT
Intensity:
D0 Abnormally Dry
D1 Drought - Moderate
D2 Drought - Severe
D3 Drought - Extreme
D4 Drought - Exceptional
Drought Impact Types:
Delineates dominant impacts
A = Agricultural (crops, pastures, grasslands)
H = Hydrological (water)
(No type = Both impacts)
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
http://drought.unl.edu/dm
Released Thursday, August 12, 2004
Author: Rich Tinker, CPC/NCEP/NWS/NOAA


U.S. Drought Monitor
August 19, 2003
Valid 8 a.m. EDT
D2(A,H)
D0(A,H)
D1(A,H)
D1(A)
D1(A,H)
D2(A,H)
Drought Intensity:
D0 Abnormally Dry
D1 Drought - Moderate
D2 Drought - Severe
D3 Drought - Extreme
D4 Drought - Exceptional
Drought Impact Types:
Delineates dominant impacts
A = Agricultural (crops, pastures, grasslands)
H = Hydrological (water)
(No type = Both impacts)
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
http://drought.unl.edu/dm
Released Thursday, August 21, 2003
Author: Candace Tankersley/Richard Heim, NOAA/NCDC

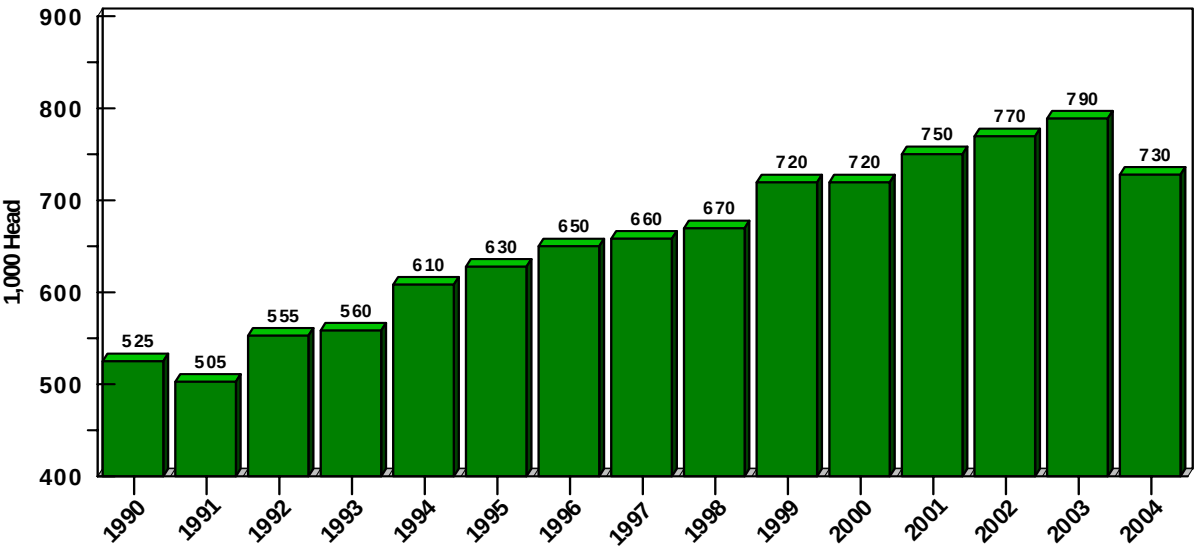

U.S. Drought Monitor
October 26, 2004
Valid 8 a.m. EDT
Intensity:
D0 Abnormally Dry
D1 Drought - Moderate
D2 Drought - Severe
D3 Drought - Extreme
D4 Drought - Exceptional
Drought Impact Types:
Delineates dominant impacts
A = Agricultural (crops, pastures, grasslands)
H = Hydrological (water)
(No type = Both impacts)
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
http://drought.unl.edu/dm
Released Thursday, October 28, 2004
Author: Rich Tinker, CPC/NCEP/NWS/NOAA

Alfalfa Hay Trucked Into California
1987-2004



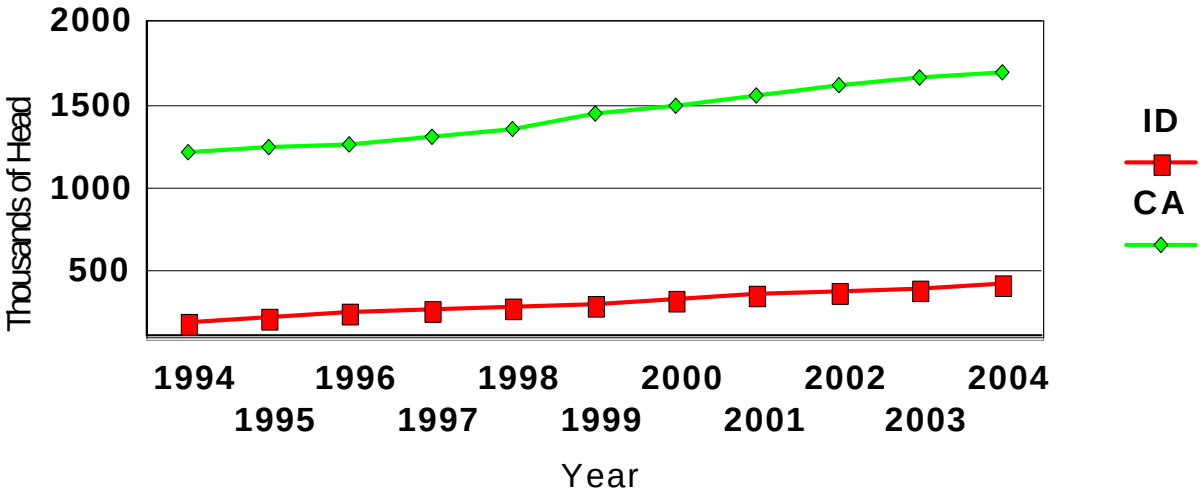
Source: CDFA Border Stations & USDA Livestock and Grain Market News
2004 - October thru December projected

Milk Replacement Heifers, California
500 Pounds And Over
January 1, 1990-2004



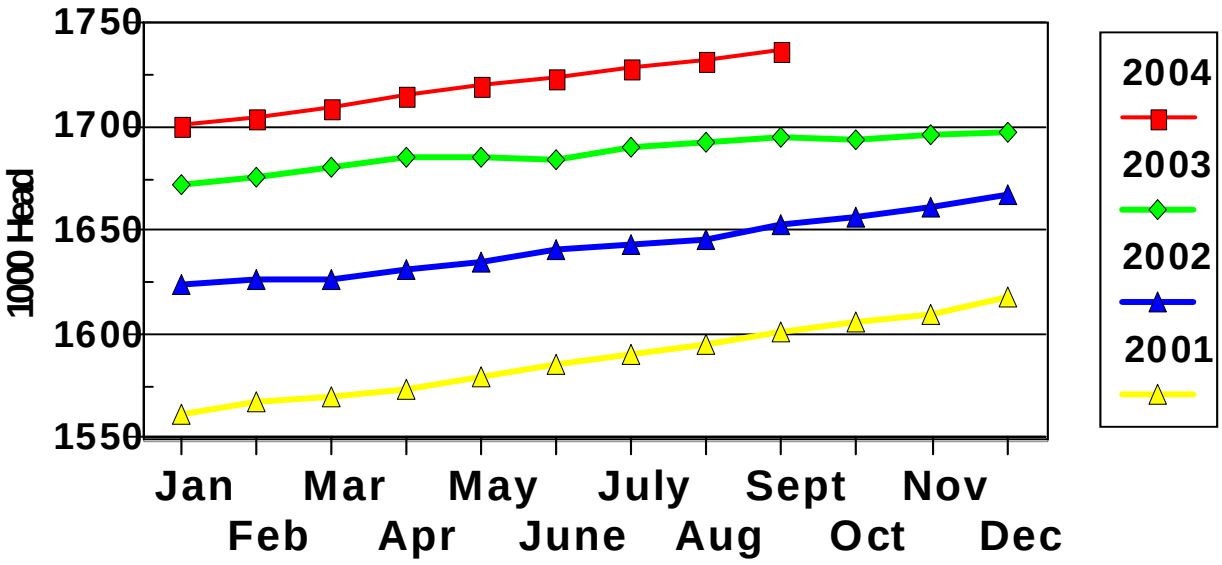
Source: California Agricultural Statistics Service

Dairy Cow Inventory - CA and Idaho
January 1, 1994-2004



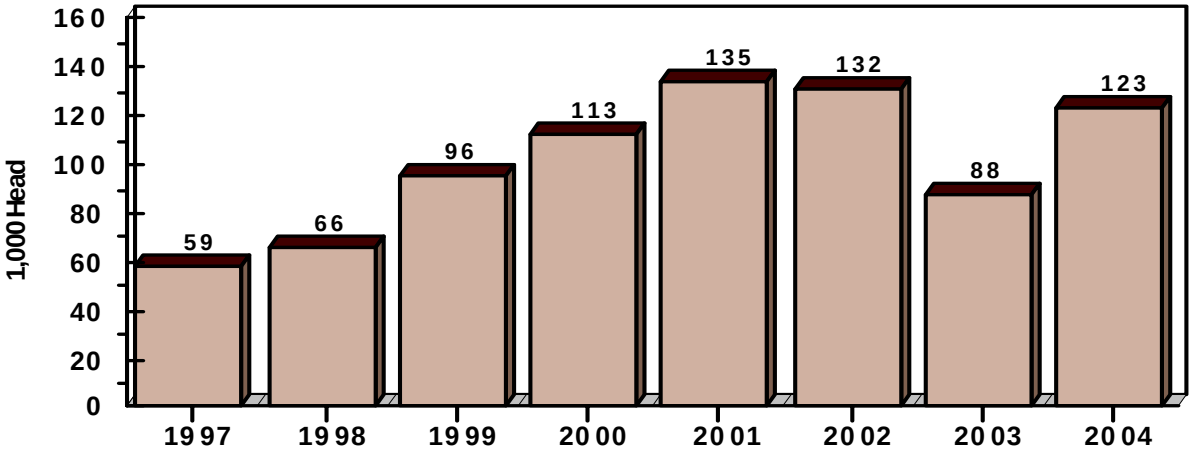
Source: National Agricultural Statistics Service

Dairy Cow Inventory, California
2001 - 2004



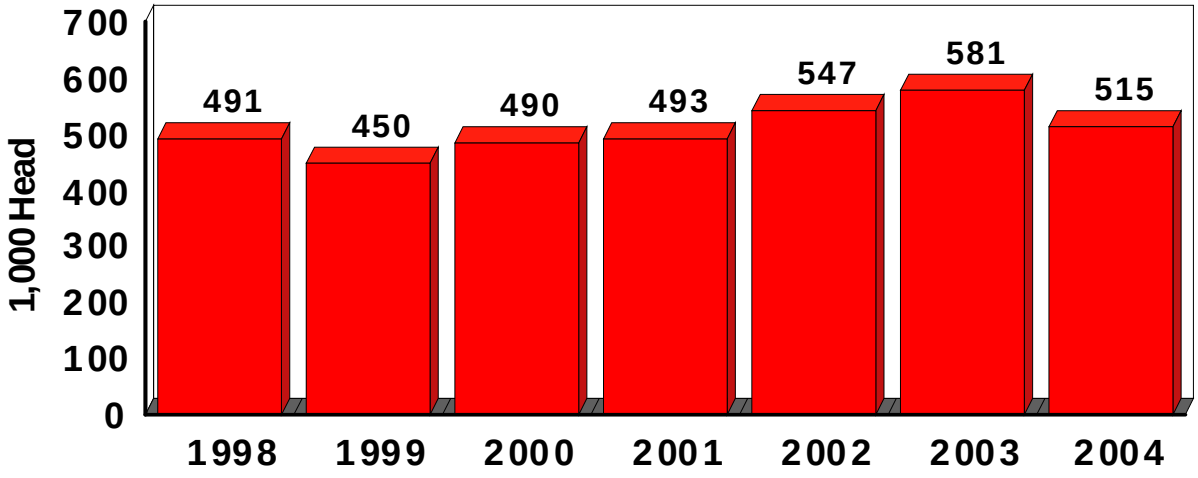
Source: California Agricultural Statistics Service

Incoming Dairy Replacement Heifers
Springers and Open Heifers
January-October 1996-2004

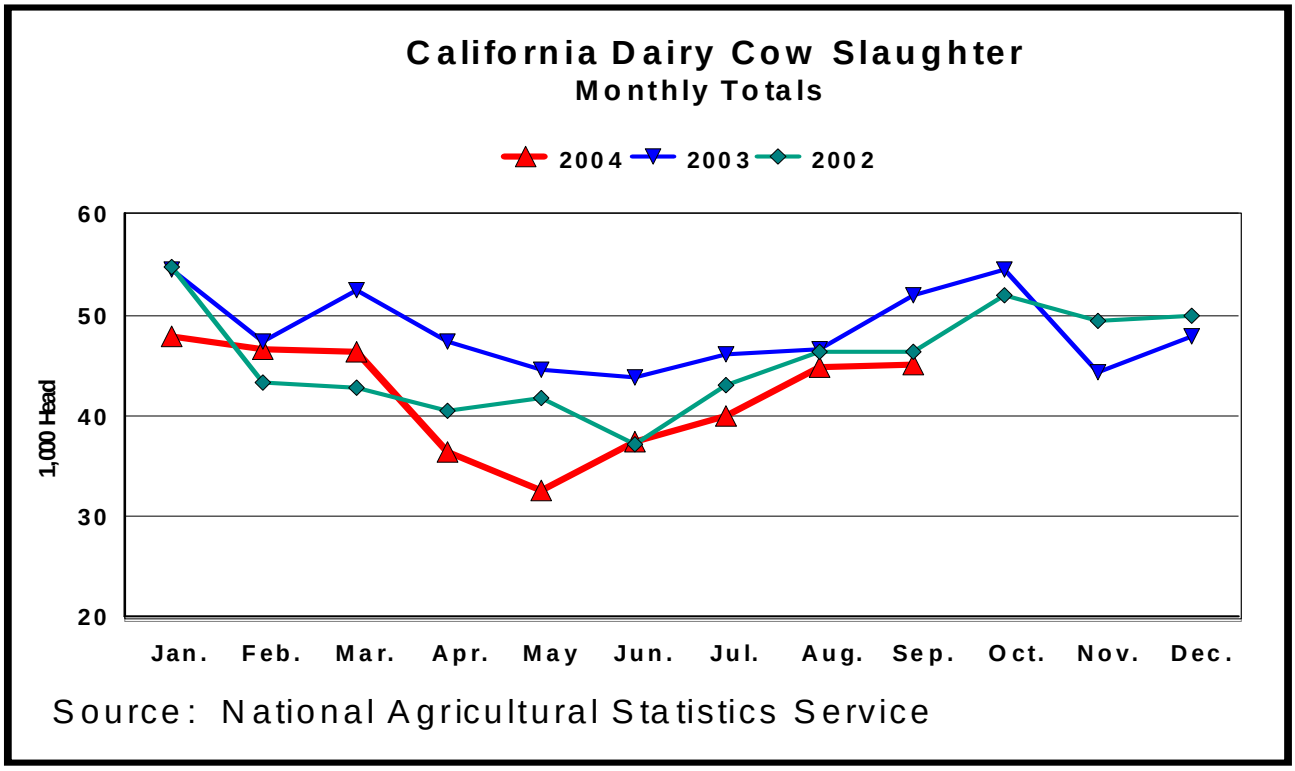


Source: CDFA Animal Health Branch
2004 - October shipments projected

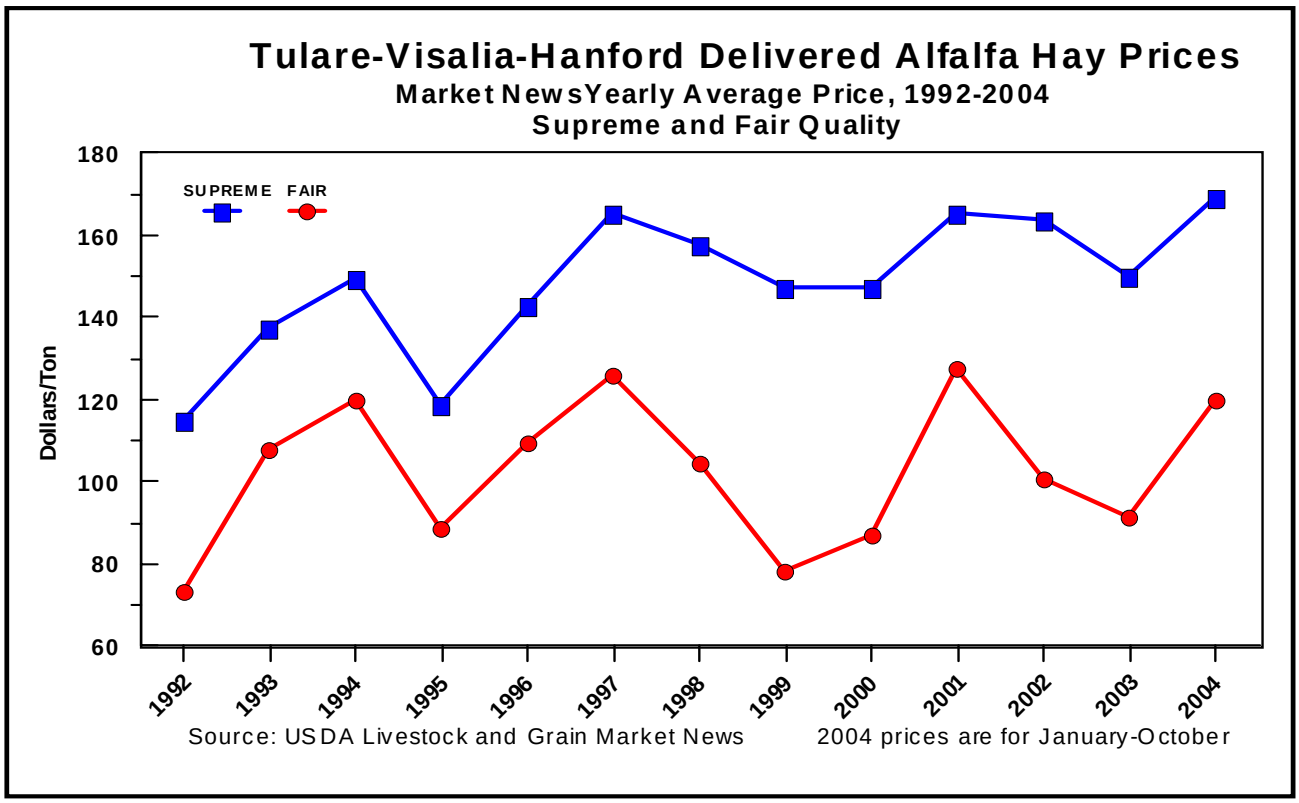
Dairy Cow Slaughter, California
1998-2004



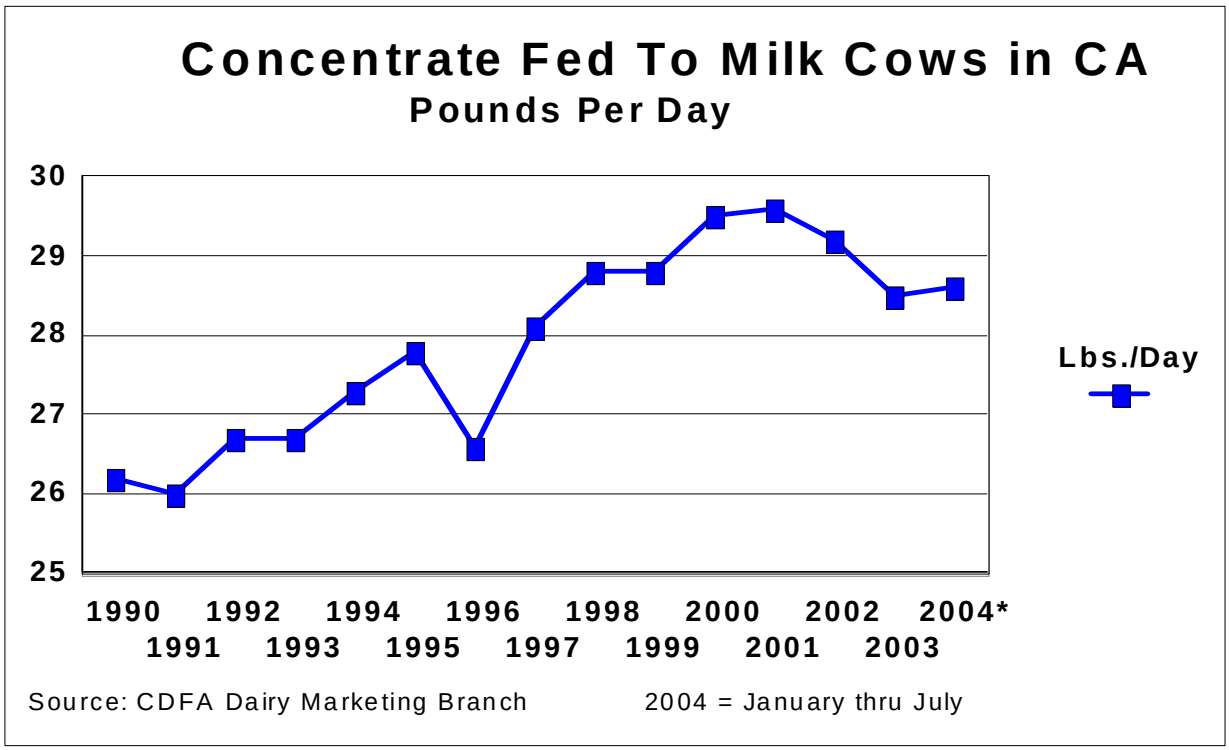
Source: California Agricultural Statistics Service
2004 - October thru December slaughter was projected

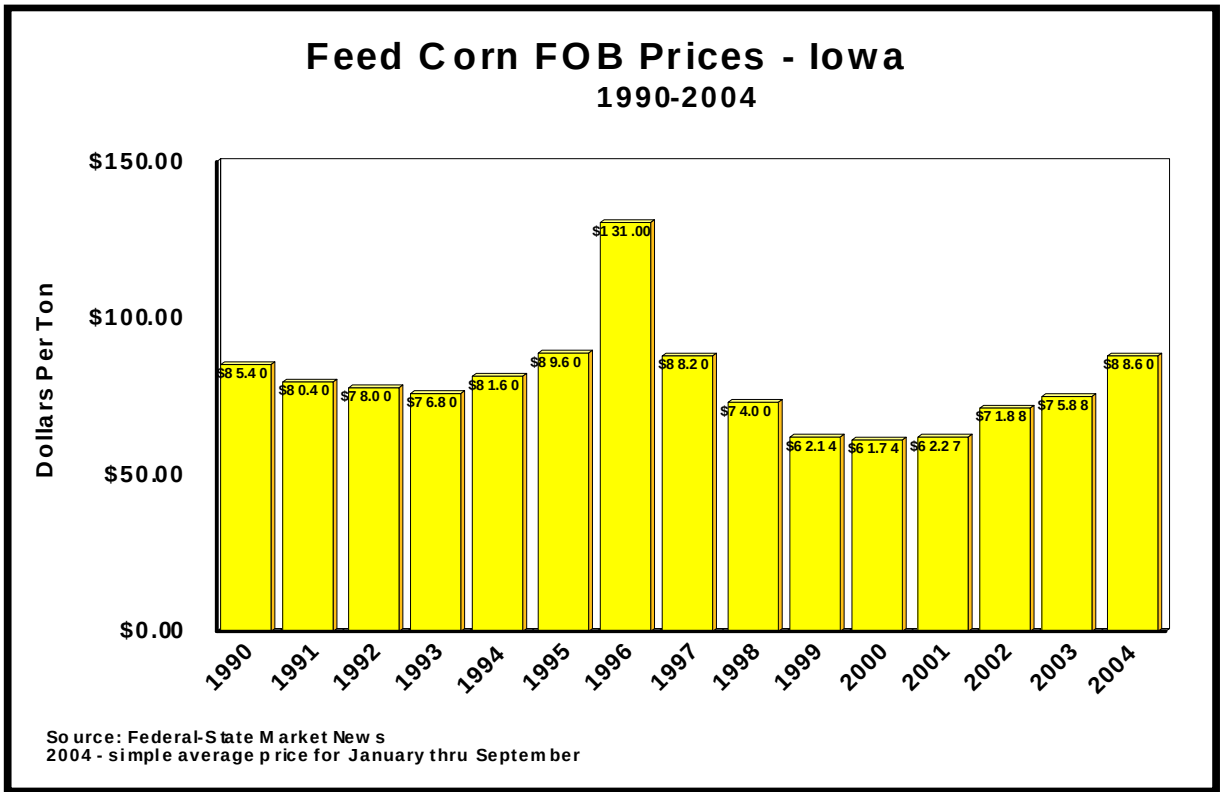


Source: National Agricultural Statistics Service

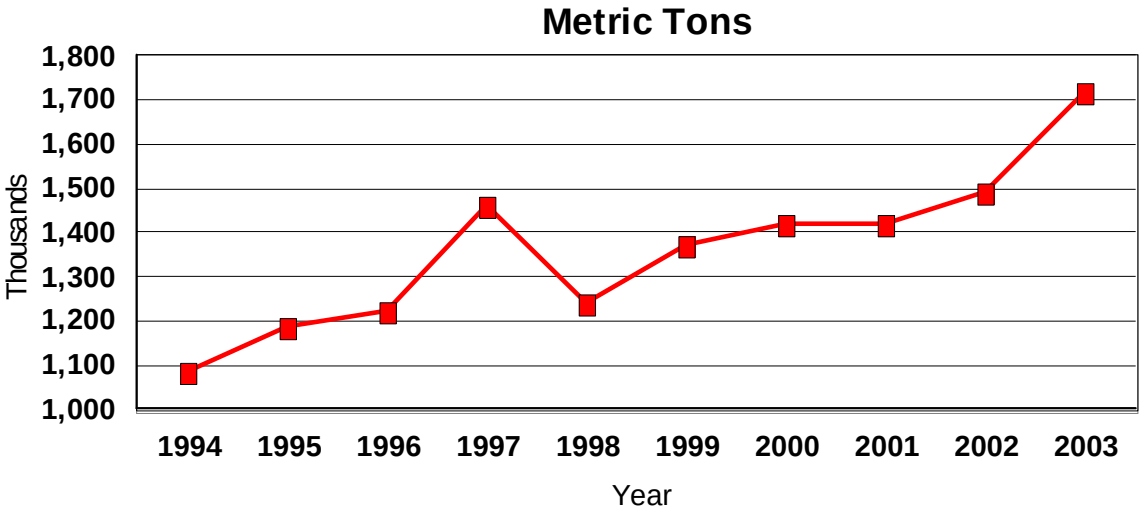


Source: USDA Livestock and Grain Market News 2004 prices are for January-October


Concentrate Fed To Milk Cows in CA
Pounds Per Day
30
29
28
27
26
25
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004*
Lbs./Day
Source: CDFA Dairy Marketing Branch
2004 = January thru July

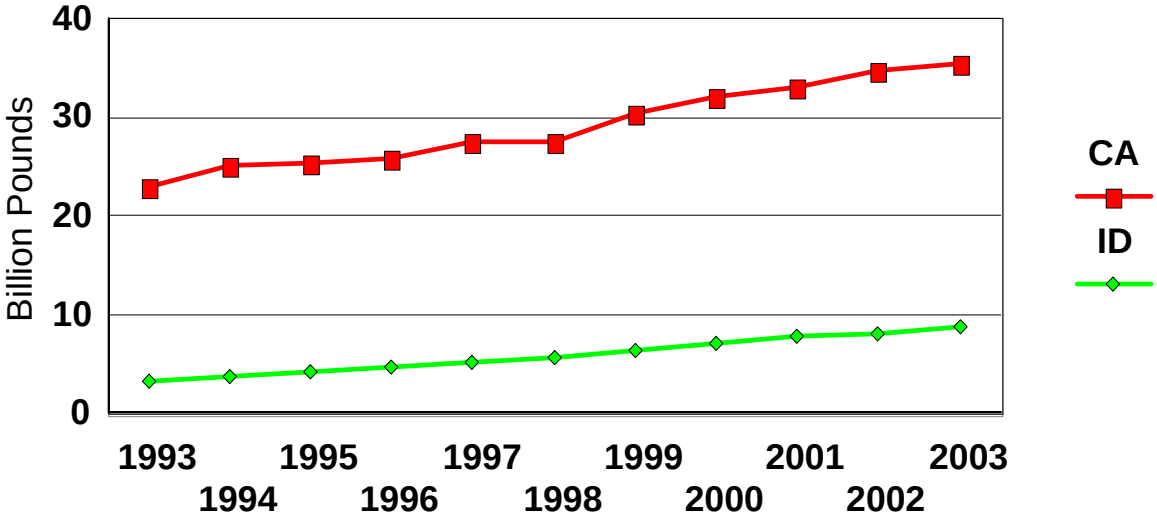

Feed Corn FOB Prices - Iowa
1990-2004
Dollars Per Ton
$150.00
$100.00
$50.00
$0.00
$8 5.4 0
$8 0.4 0
$7 8.0 0
$7 6.8 0
$8 1.6 0
$8 9.6 0
$1 31 .00
$8 8.2 0
$7 4.0 0
$6 2.1 4
$6 1.7 4
$6 2.2 7
$7 1.8 8
$7 5.8 8
$8 8.6 0
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
Source: Federal-State Market News
2004 - simple average price for January thru September

U.S. Baled Hay Exports to Japan
1994-2003



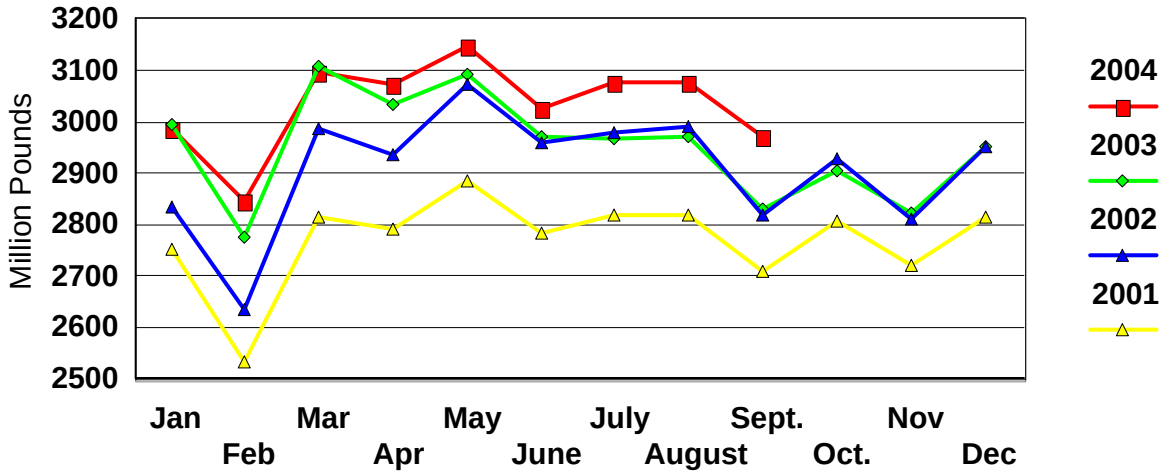
Source: Washington State University Extension

Annual Milk Production - CA and Idaho
1993 - 2003



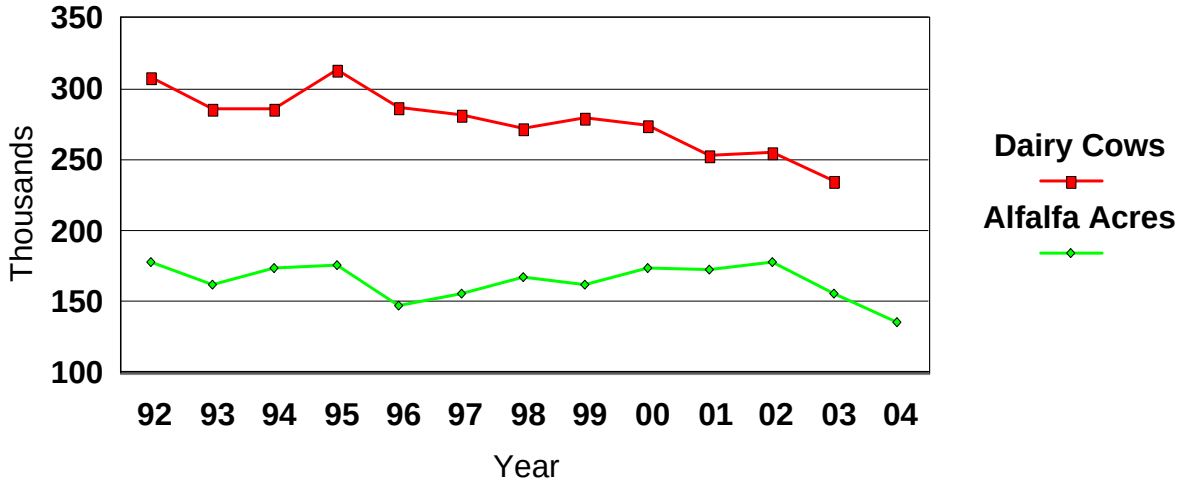
Source: National Agricultural Statistics Service

Monthly Milk Production, California
2001 - 2004



Source: California Agricultural Statistics Service

Imperial Valley Alfalfa Hay Acres**
VS Dairy Cows in Chino Area
1992-2004



Source: Imperial Irrigation District **June Acres
Source: CDFA Dairy Marketing Branch