

## DAIRY OUTLOOK 2007

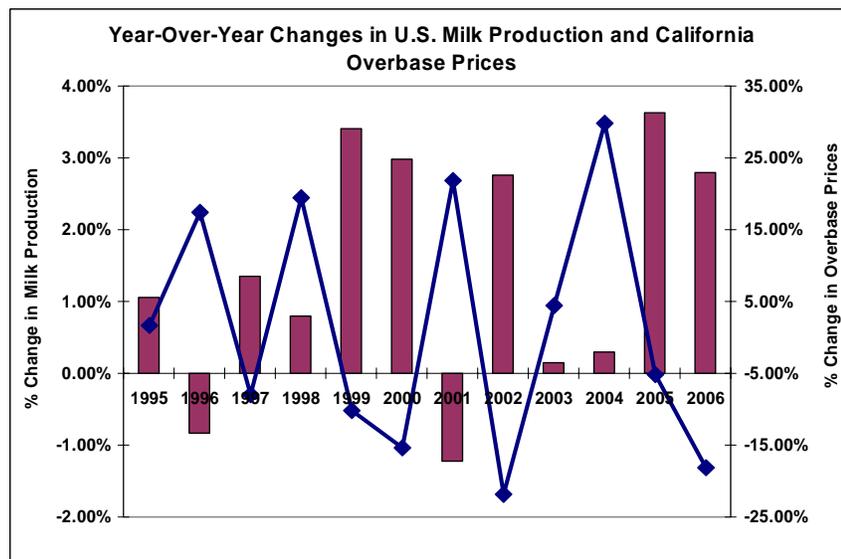
Mike Marsh<sup>1</sup>

### MILK PRODUCTION

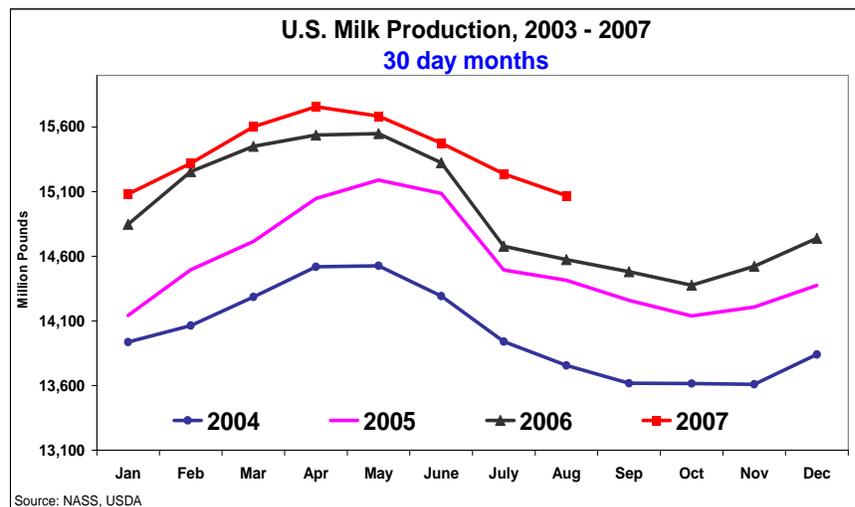
2006 U.S. milk production began with a bang as an early spring flush resulted in large year-over-year increases. A slight slowdown in year-over-year increases in production was witnessed beginning in June 2006 as

the increase slowed to 1.5%. Heat played a major role in reversing the increasing milk per cow figures as California (the number one milk producing state) suffered from a two week period of record breaking temperatures the last two weeks of July. In fact, in California, milk per cow was down 0.83% and 1.12% in June and July 2006, respectively.

California experienced a 0.1% year-over-year decline in milk production in July 2006; this was the first decline all year and followed 5% to 6% increases experienced in the beginning of the year.



2007 production growth was moderate through June 2007, posting monthly year-over-year gains ranging from 0.4% to 1.6%. The U.S. started 2007 with 49,000 additional milking cows in the herd compared to 2006. Cow numbers generally declined through May 2007 ending the month with 2,000 fewer animals than in May 2006. Cow numbers, however, began to climb again in June and, by August, the herd was up 54,000 milking cows over the same period in 2006. Milk-

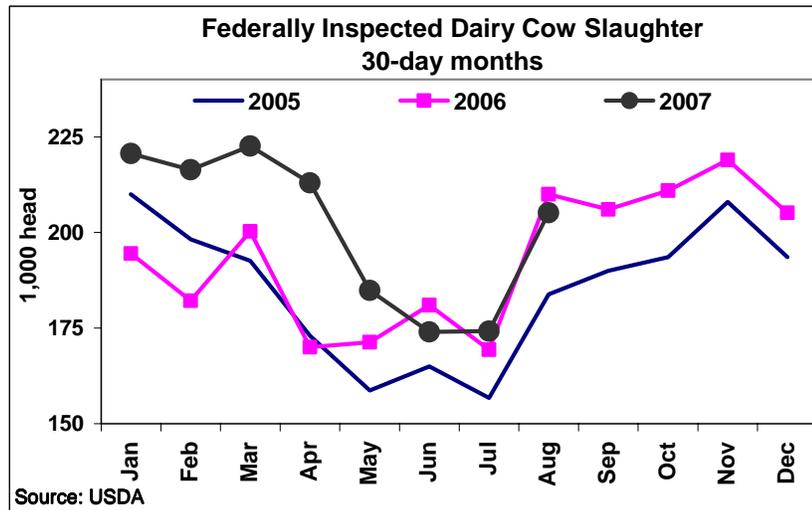


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per-cow figures were similar, with negligible year-over-year increases through June 2007.

By July and August, however, milk per cow posted growth rates of 3.43% and 2.78%, respectively. As a result, total milk production gains picked up pace in July 2007, posting a 3.8% year-over-year gain (on a 30-day month), followed by a 3.4% gain in August.

Likely a result of depressed prices in 2006 and the heat taking a toll on cows, dairy culling increased precipitously mid-year 2006. Heavy culling continued through May 2007, impacting the national herd figures mentioned above. At the peak in March, 223,000 dairy cows were culled from the nation's herd; this was an increase of 22,000 from March 2006. Culling moderated beginning in June and August 2007 posted a 5,000 head decline in culling rates over the prior year. Even so, year to date, 1.6 million dairy cows have been sent to slaughter, an increase of 132,000 or 8.8% over 2006.



### COST OF PRODUCTION AND PRODUCER PRICES

(per hundredweight)	CA Mailbox Price	CA Statewide Cost of Production	Margin
2001	13.89	12.24	1.65
2002	10.98	12.61	-1.63
2003	11.49	12.44	-0.95
2004	14.76	12.75	2.01
2005	13.82	13.43	0.39
2006	11.28	14.18	-2.90
2007 YTD	15.04	15.06	-0.02

Producer prices improved significantly through summer 2007, posting an overbase price of \$20.04 per hundredweight in August 2007 compared to only \$10.43 per hundredweight the prior August. However, current producer prices are a welcomed sight after nearly 16 months of devastating economic conditions for dairy producers in California. 2006 marked a year of declining producer prices coupled with escalating production costs and dairy producers lost money on nearly every gallon of milk sold. Though 2006 prices were at levels witnessed in 2003, statewide average production costs increased nearly 14% from 2003 to 2006, resulting in a negative margin of nearly \$3 for every 100 pounds of milk produced. Producers were forced to acquire debt or go out of

business. Just in the last several months producers have been able to recoup at least a portion of their losses. Unfortunately, given the cyclical nature of dairy commodity prices, these current prices will not last forever.

\* The "mailbox price" is the net price received by dairy producers for milk sold. It includes all payments received for milk sold and deductions for milk marketing costs.

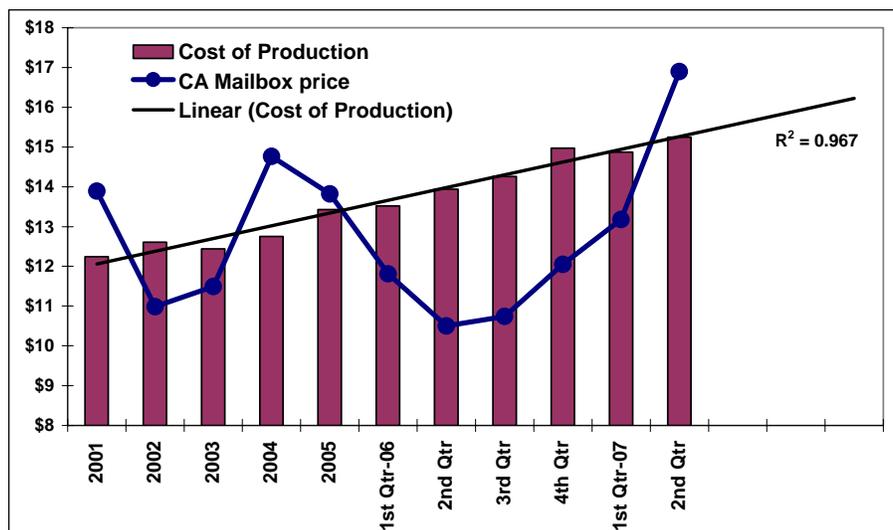
A comparison of CA mailbox prices to the average cost of production in California since 2001 reveals the conundrum faced by producers. Production costs are on a steady upward trend, and at the same time, prices have not only been volatile but far below costs in many months. The upward trend in production costs shows no sign of relief in the near future. To make matters worse, production costs do not reflect environmental mitigation or environmental regulatory costs (discussed more later).

### DAIRY PRODUCT PRODUCTION, DEMAND AND INVENTORIES

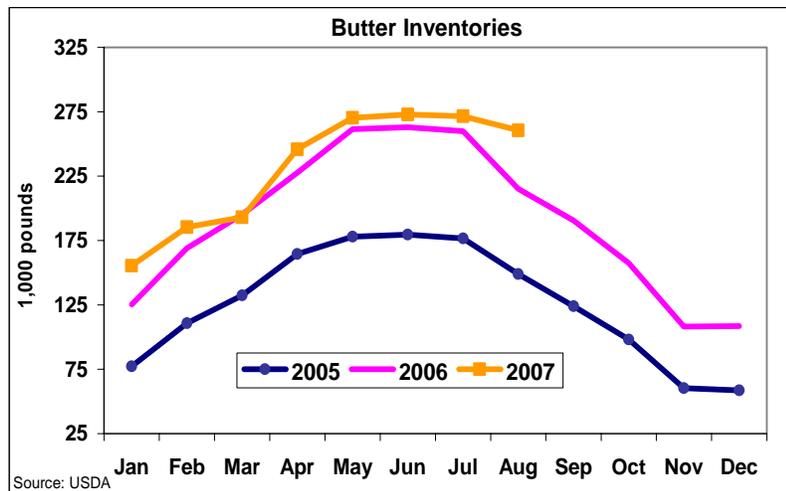
Heavy 2005 and 2006 milk production led to increased production of commodities such as cheese, butter and nonfat dry milk. The large output in milk, especially

during the first quarter of 2006 resulted in large volumes of milk clearing into manufactured product channels. Through December 2006 total cheese production was up 3.6%, butter production was up 7.2% and nonfat dry milk was up 3.5% from a year earlier. The moderation in milk production growth through the first half of 2007 led to decreased availability of dairy products compared to 2006. Production of American cheese, though registering year-over-year increases in the first quarter of 2007, posted declines in production in the months following. The latest report shows August 2007 production of American cheese down 1.8% from August 2006. Butter production followed production patterns established in 2006 until a breakout in July 2007, when production rose nearly 22% above July 2006. August butter production showed similar increases with a 23.6% increase over August 2006. Similarly, August production of nonfat dry milk soared, posting a 40.7% increase over the same period last year.

Coinciding with a surge in 2005 and 2006 milk production was robust domestic and international demand for dairy products. The demand patterns established in these years has continued relatively unaltered in 2007, with the exception of fluid milk posting a slight reduction in consumption. Demand for U.S. milk powders was fueled significantly by the standardization of nonfat dry milk down to 34% protein in order to meet international standards. This demand has led to enhanced nonfat dry milk prices and few government purchases of powder.



Despite recent strengths in milk production, inventory levels for most commodities have remained in balance for most of 2007. American cheese inventories have run below 2006 levels for much of the year with the most recent report noting a 3% year-over-year decline in August stocks. Butter inventories ran relatively in check with 2006 levels until production soared and August stocks registered a 21% increase over 2006 and posted a counter-seasonal increase in inventories.



## INTERNATIONAL MARKETS

A bright spot for the U.S. dairy industry continues to be tight world supplies of dairy products coupled with a relatively weak U.S. dollar. Decreased available local milk supply in key dairy exporting regions (Australia, New Zealand and the European Union) provided enhanced export opportunities for the U.S. beginning in 2006. The reduction in European Union subsidies has also been helpful in elevating the competitiveness of the U.S. World demand has been growing with the improving economies of the Pacific Rim. Strong international demand for dairy protein such as nonfat dry milk and dry whey helped buoy prices despite increased production. The continued weakness in the dollar has worked to keep U.S. products affordable for the expanding middle class populations in countries such as China. Added to the increase in world demand, supply has been constrained by fewer U.S. dairy farms and the depletion of dairy surpluses in the United States and Europe, which historically have suppressed milk prices.

### Current Prices and 2008 Forecast

Milk production is estimated to be 184.9 billion pounds this year, 1.7 percent more than in 2006. Production in 2008 is forecast to increase 2.6 percent to 189.7 billion pounds. Substantial increases in milk production for July and August compared to a year ago were reported with increases in both cow numbers and production per cow. Analysts say high prices for dairy cows and replacement heifers indicate plans to expand dairy herds.

Globally, milk supplies are projected to remain tight into 2008. Domestic and international product demand is expected to keep prices high for the balance of 2007 and into 2008. Although a modest reduction in prices is expected in 2008, prices are forecast to remain above levels of recent low price years. USDA projects cheese prices to average \$1.73 to \$1.75 per pound in 2007 and \$1.60 to \$1.70 in 2008. Butter is expected to average \$1.36 to \$1.40 per pound this year and drop to \$1.29 to \$1.42 per pound next year. The nonfat dry milk price is projected to average \$1.72 to \$1.74 per pound this year and decline slightly in 2008 to average \$1.635 to \$1.705 per pound. Finally, dry whey prices are expected to average 61.5 to 63.5 cents per pound in 2007 and 53 to 56 cents per pound in 2008.

Aside from dairy commodity markets, the result of a pricing hearing held October 10, 2007 will influence California producer prices in 2008. Specifically, it will determine if producers will continue to share in revenues extracted for dry whey, a byproduct of cheese making and a current

component in the California Class 4b formula. According to analysis prepared by the California Department of Food and Agriculture (CDFA), California's cheese milk price was 52 cents per hundredweight below federal order prices for the 2006-2007 period. This means that California cheese processors enjoyed a cost advantage over their federal order counterparts of more than fifty cents on every hundred pounds of milk they processed. Proposals submitted at the hearing which requested the elimination of the dry whey component in the California Class 4b (cheese milk) price as well as other adjustments would have increased this 52-cent cost advantage to \$2.55 per hundredweight. Adjustments made as the result of a 2006 hearing to the whey make allowance removed \$80 million from producer revenue, and the current petition would transfer an additional \$400 million from producers to processors. That equates to nearly a quarter of a million dollars per dairy in California. WUD, in conjunction with the Milk Producers Council and the Alliance of Western Milk Producers, presented an alternative proposal that would provide relief to cheese makers who do not process whey, while retaining the pool value on the remainder of milk used for manufacturing cheese. CDFA has 62 days to implement any changes that come as a result of this hearing.

### **COOPERATIVES WORKING TOGETHER (CWT)**

Cooperatives Working Together (CWT) received commitments from its members to renew the program in 2008 at the current 10-cent assessment level. Current membership includes cooperatives and farmers producing 69.1 percent of the nation's milk supply. Earlier this year, the fourth CWT herd retirement program removed 53,000 cows, representing one billion pounds of milk production. In the first half of 2007, the ongoing CWT export assistance program has facilitated the sales of 930 million pounds milk equivalent products consisting of butter, milkfat, and cheese. CWT has raised its target price benchmarks from \$14 to \$16 per hundredweight, in light of the ongoing challenge that farmers face with higher costs of production from feed and fuel. That farm-level price benchmark is a key determinant as to when the CWT governing board decides to conduct activities that tighten up supply.

#### **2007 Farm Bill**

As of this writing, the house version has passed out and the U.S. Senate has yet to schedule floor time to debate the bill. The House version contains a number of significant flaws for Western dairy producers that we hope to correct either in the Senate version or in conference. Interested parties can monitor WUD's website for updated information on the progress of negotiations.

### **OTHER FEDERAL ISSUES**

President George Bush signed the Iraq supplemental appropriations bill that included a \$3-billion, ag-disaster assistance program. That program includes provisions sought and written by Western United Dairymen to aid California dairy families who suffered losses during last summer's heat wave and due to extraordinary feed costs. The main financial aid components promoted by Western United Dairymen in Washington were:

A Livestock Compensation Program (LCP) which compensates livestock producers for feed losses occurring between January 1, 2005, and February 28, 2007, due to a natural disaster

A Livestock Indemnity Program (LIP) which compensates livestock owners for livestock losses between January 1, 2005 and February 28, 2007 that resulted from natural disasters, including last summer's heat wave that killed thousands of dairy cows in California.

The Dairy Assistance Program, funded at \$16 million, will offer financial aid to producers who suffered milk losses from the extreme temperatures.

## **AGJOBS**

The need to maintain a well-trained, stable workforce 365 days a year continues to be a top priority for the dairy industry. WUD's message continues to reflect the need for an enforceable law that provides a workable solution to this problem this year. Nothing less than the food security of this nation and the economic health of rural communities are at stake. Three key principles that must be included in a legislative solution: 1) an affordable and efficient guest worker program that ensures the continued availability of immigrant labor for all of agriculture, including dairies; 2) a provision that allows those currently employed or with recent employment history in the U.S. to earn the right to work here legally, regardless of their current legal status; and 3) a provision that specifies the responsibility for ultimate verification of the legal status of a worker lies with the government, not with employers.

Western United Dairymen supports a grassroots campaign to support AgJOBS. Western United Dairymen was the first dairy organization in the nation to sign on in support of AgJOBS nearly four years ago.

## **RENEWABLE ENERGY**

Additional methane digester pilot projects funded through Western United Resource Development, Inc. (WURD), and using funds allocated by the California legislature to the California Energy Commission, came on line in 2006. These projects are attempting to reduce costs on California dairies by offsetting as much of the farm's electrical needs as possible. To date, 10 methane digester projects have been installed on California dairies as a result of this program with an estimated generating capacity of 2.5 megawatts. Eight more methane digester construction projects have recently been approved under the California Dairy Power Production Program (DPPP), which is administered by WURD. The projects range from Marin County in Northern California to Imperial County in Southern California. It is estimated these newest projects will have a generating capacity of nearly 1.2 megawatts when completed by March 31, 2008.

However, a number of significant impediments continue to make broader expansion of and future investment in these projects in California problematic.

The biggest impediment is financial. Dairy producers, like other businesses involved in production agriculture, face the challenge of having price swings dictated by the marketplace. Volatile dairy markets likely discourage extended outlays in renewable energy. Further, our experience has been that producers who might have determined that investing in renewable energy technologies fit within their dairy management scheme were turned off by the fact that they could never get paid for any power they would produce.

For instance, a 1000 cow dairy could likely produce enough electricity to cover all of the farm's needs and have power to spare. Unfortunately for the farmer, the additional electrons that he or she sends out to the grid to electrify homes, businesses, schools, etc, have not generated the producer any revenue. The utility has received the excess power for free.

Record fossil fuel prices may well spur further development of renewable energy from dairies. If methane digesters are ever to become an attractive investment for manure management on California dairies and widely implemented, a market for the power that they are able to generate

must be developed. Additionally, credits for environmental attributes associated with producing renewable energy and offsetting fossil fuel use need to be maintained by the dairy owner in order to improve the financial feasibility of such projects.

## **ENVIRONMENTAL ISSUES**

Western United Dairymen has for years been recognized for its leadership on environmental issues within California. Our expertise is also now sought at the national level due to our reputation for seeking common sense solutions to complex problems.

How dairy producers in California address an ever more complicated rural/suburban interface is an issue that will not soon diminish. Environmental regulations, workers compensation costs and the desire to capture ever more evasive economies of scale in a global marketplace have driven the trend to ever-larger dairy farm facilities.

In 1998, an innovative environmental certification partnership was undertaken in California that joined regulators with the regulated and environmental interests to protect California's resources. Western United Dairymen was one of the first signors to this partnership agreement that is now being used as a template for environmental enhancement across the United States. A majority of California's dairy producers have now completed the educational components of this program and are advancing toward independent third-party certification of dairy compliance with all federal and state environmental regulation.

At the same time that these stewardship efforts on California dairies are underway and having a positive impact on air and water quality, additional scientific research is needed to identify and quantify potential dairy sources of environmental concern.

On August 1, 2005, the Air Pollution Control Officer of the San Joaquin Valley Air Pollution Control District issued a report finding that air emissions of smog forming gasses from dairy cows exceed similar emissions from all of the planes, trains, trucks and automobiles that crisscross the Valley each day. This report, labeled as an inaccurate overestimation by the international scientific community, highlights the need for additional research into the issue.

Governor Schwarzenegger signed into law AB32 following last year's legislative session, which regulates greenhouse gases in the State of California. Methane gas is a major concern as far as global warming is concerned. It is not yet clear how dairies will be impacted by this legislation. No economic impact analysis on how this will affect California agriculture was performed by the legislature prior to the bill's passage.

Unfortunately, given the environmental climate in the state, expanding milk production may not be as easy as in the past. A few examples illustrate the point.

Recently, the Regional Water Board established new, complicated Waste Discharge Requirements (WDRs) for Central Valley dairy producers. The WDR will impose hefty compliance costs as it relates to monitoring. Additionally, the cost of compliance for improvements required to the dairy infrastructure will be steep. For some dairies, the required changes will not allow the dairy to be economically viable and they will shut down. Finally, under the WDR requirements, expansions of existing dairies will be more difficult and costly than in the past. The Water Board estimated that

the compliance costs to dairy producers would be \$45,000 to \$60,000 in the first year, and \$35,000 to \$40,000 for each subsequent year. The directors of Western United Dairymen voted to establish a separate organization to help Central Valley dairy producers with the new WDRs. The new organization, Western United Environmental Services (WUES), will offer top-notch expertise while at the same time easing the financial burden for dairy producers. WUES formed agreements with some of the industry's best engineering firms with the goal of reducing costs for members.

On the air quality side, an authority to construct is required for permitted dairies to expand or construct almost anything on their facilities. This currently applies to dairies with more than 1000 milking cows, but that number will fall to 500 cows in the near future. This makes expansions more costly than in the past, but it also can limit growth as some producers will be granted permits for far fewer animals than requested.

## **SUMMARY**

California's dairy families provide consumers with an abundant and wholesome supply of milk and nutritious dairy products every day. The marketplace for dairy products is becoming increasingly more global, more competitive, and more volatile. The California dairy industry generated about \$4.5 billion in farmgate revenue in 2006 and generated an estimated \$47 billion in economic activity within the state.

California's dairy regions have a great deal to offer: the synergy generated by a large number of producers, a skilled labor market, a nearby supply of quality feeds, processing power, a beneficial climate, and an ever-increasing supply of consumers. California's dairy industry, and the 450,000 jobs that depend on our industry, needs a business climate that encourages them to stay and to be an important part of our state's future.