

## OUTLOOK FOR U.S. DAIRY

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The U.S. dairy sector enters 2008 in an expansionary mode as producers continue responding to generally favorable returns which occurred during much of 2007. Milk prices were a record, fueled by robust domestic and international demand for dairy products. Although faced with higher grain and hay prices, milk-feed ratios in 2007 exceeded those of 2006. In 2007 milk cow herds expanded for a fourth year, an expansionary run not seen since the early 1980's. However, tight supplies of good quality alfalfa hay and higher feed costs may have been partly responsible for gains in milk per cow that lagged the 5-year average.

With moderate gains in milk production and strong demand for dairy products, the all milk price in 2007 averaged a record \$19.13 per cwt, more than \$6.00 per cwt higher than 2006 and \$4.00 above the previous record set in 2005. Commercial disappearance on a fat solids basis increased just over 2 percent as disappearance of other than-American cheese increased almost 4 percent and butter increased almost 6 percent. However, commercial disappearance of American cheese fell fractionally due in part to lower production. Fat basis stocks were above year earlier levels during much of 2007 as higher prices for nonfat dry milk resulted in butter production outpacing demand. Butter stocks at the end of December were 43 percent above 2006. This was partly offset by lower stocks of cheese as growth in production of total cheese growth was moderated. Commercial disappearance on a skim solids basis lagged growth for fats slightly as the strong demand for nonfat dry milk earlier in the year dissipated and stocks built. Manufacturer's stocks of nonfat dry milk at the end of December 2007 were record high for the month but prices remained well above levels which would trigger CCC removals and, unlike previous years, government stocks were non-existent.

### **Outlook for 2008: Supply Pressure Meets Higher Costs.**

Milk production is forecast to increase just over 2.7 percent in 2008. While this growth is more rapid than that exhibited in 2007, the addition of a leap-day in 2008 adds additional production. The increase reflects both increased cow numbers and continued, albeit slower, growth in output per cow.

The relatively high milk prices of 2007 allowed many dairies to build capital and plan for expansion. Although higher feed and energy costs are likely dissipating some of the capital, the January *Cattle* report indicated that herds continue to expand. On January 1, the dairy cow herd was 1 percent higher and producers expect to add 3 percent more heifers to the dairy herd in

2008. The number of replacement heifers per 100 cows is a record yet dairy cow prices remain well above last year. Prices for dairy cows climbed steadily during 2007, reaching a record \$2,020 in late 2007 before declining to \$1,960 in January of this year. Some softening is expected but cow prices likely will remain high through much of 2008. Although prices for young dairy heifers have weakened in recent weeks, which may indicate concerns for late 2008 expansion, the milk cow herd during is expected to average about 1 percent above 2007. If realized, this year's expansion would represent the longest expansion since the 1940's.

Output per cow is forecast to increase about 1.7 percent in 2008 but this reflects the additional milking day in February. Adjusted for the leap day, output per cow is only 1.4 percent above 2007 which is less than both the 2007 rate and the average rate of growth for the past 5 years. The slower rate reflects expected high feed prices and tight availability of hay, at least through spring. Alfalfa hay prices were record high in 2007 and may remain above year earlier through the first half of the year. Although normal weather should boost yields, competition from other grains may require higher hay prices to keep land in production. Increased numbers of new heifers may also result in a slightly lower the rate of growth of milk yields.

### **Will Demand Keep Up with Supply Increases?**

Firm domestic and international demand easily absorbed the modest first-half 2007 production increase. Commercial use in the first half of 2007 increased about 3 percent on a fat basis and 2 percent for skim solids. However, as milk production increased in the second half of the year, production of some products began to outpace demand and stocks, particularly of butter and nonfat dry milk began to build. Large supplies of dairy products began to pressure prices. Lower prices were needed to clear markets. Total fluid milk use in 2007 was fractionally below 2006. Use was higher in the first half of 2007 but sharp declines in whole milk use in the second half more than offset increases in lower fat (reduced fat, low-fat, and fat-free) milk use. Organic milk use increased by almost one-third during the year but has been growing from a small base.

The prospects for continued increases in product use in 2008 are favorable but the demand picture likely will more closely resemble 2006 when price declines balanced markets rather than 2007 when prices rationed supplies. Economic concerns may affect consumer purchasing decisions and restaurant sales have been reportedly slower. As milk production increases, product production will increase as well. However, relative product prices may favor production of cheese (and whey) relative to butter and NDM to a greater extent than last year. Commercial use on a fat basis is expected to increase just over 3 percent in 2008, but a modest build up in fat basis stocks is expected. Growth of commercial use on a skim solids basis may lag fat basis use a bit, resulting in higher stocks during 2008. Given price forecasts well in excess of support, no sales to the CCC are forecast.

## **International Markets Remain Important Source of Demand**

Over the past several years, U.S. milk producers have seen international markets for U.S. dairy products become an increasingly important source of demand. The United States has benefited from continued tight world supplies of dairy products and a U.S. dollar that has remained relatively weak since 2002. Robust world demand and lingering concerns about the availability of supplies in major overseas markets helped drive skim milk powder (SMP) prices to previously unimagined levels. Prices in 2007 averaged almost \$4,400 per ton (\$2.00/lb), nearly double 2006. U.S. exports of NDM and SMP in 2007 were about 11 percent below 2006. Early in 2007, the United States faced tighter supplies of nonfat dry milk which limited exports and supported high prices early in the year but by mid-year supplies became more available from the European Union and New Zealand and buyers likely filled short term needs and then awaited price declines. Likewise, butter and cheese supplies were tight during 2007 and international prices rose dramatically, albeit less than that for SMP. U.S. exports of both cheese and butterfat were 40 and almost 300 percent higher in 2007 as international buyers turned to the United States as a supplier. U.S. imports of dairy products fell by about 7 percent on both a fats and skim solids basis in 2007. This primarily reflected declines in imports of licensed dairy products although there were declines in imports of non-quota cheeses and butter as well.

The outlook for 2008 is somewhat cloudy. Most major exporting countries are expected to increase milk production with relatively higher volumes of milk being channeled into cheese and whole milk powder compared to butter and skim milk powder. Milk production in Australia is forecast to be limited by the effects of a recent drought but the European Union is expected to increase milk production slightly during 2008. New Zealand is forecast to increase production 1 to 2 percent but recent dryness, if it continues, may hamper production. Global demand for dairy products has remained relatively firm, especially for oil exporting countries but increasing economic concerns may weigh on purchasing decisions by major importers. International prices have been weakening since late 2007 and could fall further as global supplies increase. However, there is likely considerable nervousness in the markets and supply shocks could trigger sharp price movements. In the absence of sharp movements, U.S. prices are expected to remain relatively competitive and exports strong.

## **Commercial Stocks Steady**

Commercial dairy product stocks increased slightly in 2007. As previously mentioned, to a large extent this reflected a build up of butter and nonfat dry milk beginning in mid year. Cheese exhibited the opposite behavior, averaging below year-earlier levels after mid-2007. On a fat basis, stocks at the end of 2007 were about 9 percent higher at 10.4 billion pounds, milk equivalent while on a skim solids basis, stocks were 8 percent higher at just over 9.8 billion pounds. CCC stocks were depleted in 2007 as high market prices discouraged sales to the government under the support purchase program.

Stock levels in 2008 are expected to rise a bit from those of 2007. Production may increase more rapidly than commercial use, but price declines are expected to balance markets. Weaker prices for butter and NDM relative to cheese may encourage milk to flow towards cheese vats and limit

growth in production of butter and nonfat dry milk, helping work down surpluses of those products. Continued strength of international markets may be a key determinant of stock levels. It is expected that relatively high product prices will discourage any sales of dairy products under surplus removal programs in 2008.

### **Prices to Move Lower in 2008**

Although wholesale dairy prices averaged well above 2006 levels, the movement for many products was like that of a roller-coaster, sharp increases in the early part of 2007 but declines in later part of the year. Butter prices increased 29 cents between January and the June peak of \$1.49 per pound but gave back 18 cents to average \$1.31 per pound in December. Likewise, nonfat dry milk gained about 99 cents between January and October when it peaked at \$2.06 per pound before falling 26 cents to average \$1.80 in December. The greatest movement occurred in whey; prices gained 36 cents between January and its June peak of 76 cents per pound but prices then declined by 31 cents to average 45 cents per pound in December. Monthly average cheddar cheese prices showed a slightly different pattern. Prices increased 76 cents per pound between January and December but experienced a decline in the October before rebounding to average almost \$2.10 in December.

As 2008 begins, wholesale product prices are under pressure from larger supplies and while above January 2007 levels, prices have continued to decline from the end of 2007. For butter and whey, price declines are expected through mid-year before the seasonal bump in second-half prices. Cheddar cheese prices are expected to decline through the year. Declines in butter and NDM prices relative to cheese in late 2007 and early 2008 may encourage relatively more milk to move into cheese production, pressuring cheese prices while alleviating pressure on both butter and nonfat dry milk prices. For 2008, cheese prices will average \$1.63 to \$1.71 per pound and butter will average \$1.19 to \$1.29 per pound.

Nonfat dry milk prices are expected to decline through the year as production increases and export prices soften. International demand will continue to generate commercial exports but it is likely that increased international supplies will pressure U.S. prices, at least through mid-year. Prices in the second half may depend on weather conditions in Oceania but, even with rain, it is uncertain as to how long it might take for pastures in Australia to improve and herds to increase. NDM prices are forecast to average \$1.38 to \$1.44 per pound, about 30 cents below the 2007 average. Whey prices are forecast to average 24 cents below 2007 at 33 to 37 cents per pound as stocks and production remain large.

In the face of generally weaker dairy markets, the 2008 all milk price is forecast to decline from its 2007 record of \$19.13 per cwt. For 2008 prices are expected to average \$16.85-\$17.55 per cwt, still the second highest price average on record. Class prices are also likely to decline by almost \$2-3 per cwt although more rapid declines in both butter and NDM prices may result in a larger absolute decline in Class IV prices. The Class III price is forecast to average \$15.45 to \$16.15 per cwt and the Class IV price is expected to average \$15.05 to \$15.85 per cwt.

Dairy retail prices likely will move lower in the second part of 2008 as milk and wholesale dairy product prices average lower. However, due to above year-earlier wholesale prices early in 2008, the dairy CPI may continue to move higher in the first part of the year. As a result, retail dairy prices will generally average above 2007 for the year.

Additional information about the 2008 dairy forecasts are available at:

World Agricultural Supply and Demand Estimates

<http://www.usda.gov/oce/commodity/wasde/index.htm>

Livestock, Dairy, and Poultry Situation and Outlook

[www.ers.usda.gov/publications/ldp/](http://www.ers.usda.gov/publications/ldp/)

Dairy: World Markets and Trade

<http://www.fas.usda.gov/dlp/dairy/dairy.asp>