OUTLOOK FOR U.S. DAIRY

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2013 Recap

The U.S. dairy sector ended 2013 with favorable wholesale product, feed, and milk prices during the last quarter of 2013. These favorable prices are setting the stage for an expansionary period as producers respond by increasing cow numbers and improving rations. Overall, the milk-feed price ratio averaged 11.2 percent higher in 2013 than in 2012 due to lower feed and higher milk prices. Exports in 2013 set a record for the 4th year out of the past 5 years and helped support higher prices at the end of 2013., which have continued into the start of 2014. There was a slight decrease in the average number of cows in 2013 compared to 2012, but cow numbers moved above year-earlier in the last 4 months of the year.[1] An increase in average yield per cow led to higher 2013 milk production.

A decrease in domestic commercial disappearance on a fat basis of 0.7 billion pounds for 2013 was more than offset by an increase in fat basis exports of about 3.6 billion pounds. On a skim solids basis, domestic commercial disappearance fell by 3.5 billion pounds. This decrease was more than offset by a 5.3 billion pound increase in exports. In the first half of the year domestic commercial use on a fat and skim solids basis in 2013 was lower compared to 2012 by 1.1 and 2.7 billion pounds, respectively. The first half of 2013 did see a decline of 0.1 billion pounds in milk production compared to the same period of 2012. In the second half of 2013, fat basis domestic commercial use rose by 0.4 billion pounds over 2012; and while the skim solids basis domestic commercial use did still decline, it declined by only 0.8 billion pounds. However, not all products showed a decrease in domestic commercial disappearance. Domestic disappearance of American and other cheese[2] increased from 2012 by 1.4 percent and 0.7 percent, respectively. Domestic use of butter and nonfat dry milk decreased in by 0.4 percent for butter and 17.2 percent for nonfat dry milk (NDM). The decrease in both butter and nonfat dry milk domestic consumption may have reflected strong export demand. Butter exports as a share of production about doubled in 2013 and the export share of NDM production which was exported rose from 46 percent to 57 percent. Production of NDM (which is either exported or used domestically) was 16 percent lower in 2013, but production of skim milk powder which is almost exclusively exported was 66 percent higher.

[1] Due to sequestration, data on cow numbers and milk per cow are not available for March-June 2013
[2] Other cheese is defined as total natural cheese minus American cheese

Fluid milk sales declined 2.7 percent[3] for most of 2013 for conventional (non-organic) milk products. Fat-free milk (skim milk) had the largest decrease of around 8.7 percent from 2012 with flavored whole milk increasing around 9.3 percent. Organic milk fluid sales increased around 4 percent and show continued growth, but are a fraction of the conventional fluid milk sales. The trends in fluid milk sales are expected to continue.

International demand remained strong in 2013 with U.S. exports achieving another record. Most dairy products had double digit increases in exports with cheese increasing almost 22 percent, nonfat dry and skim milk powders increasing 25 percent, and butter increasing 87 percent. On a fat basis, exports increased by 3.6 billion pounds. Skim solids basis exports also grew in 2013 by 5.3 billion pounds. The growth in exports helped support the higher prices in 2013.

Ending stocks for 2013 decreased from 2012 on both a fat and skim solids basis. Fat basis ending stocks were 11.1 billion pounds of milk equivalent and ending stocks on a skim solids basis were 11.6 billion pounds of milk equivalent. The decline in stock levels at the end of 2013 was likely due to the increase in export demand. On a fat basis, commercial stocks decreased by 1.0 billion pounds from 2012; and on a skim solids basis commercial stocks decreased by 0.7 billion pounds from 2012. Except for other cheese, all major products ended 2013 with lower ending stock levels compared to 2012. Other cheese increased 2013 ending stocks by 2.7 million pounds. American cheese decreased 2013 ending stock levels by 16.8 million pounds. Butter and NDM both faced sharper annual ending stock decreases of 41.6 and 49.8 million pounds between 2012 and 2013. The first- half of the year's monthly ending stocks were some of the highest levels since the mid-1990s. The bulk of the monthly stock buildup was in butter where stocks increased by 75.7 million pounds from June of 2012. American cheese and other cheese had increases of 94.7 and 30.8 million pounds in from May of 2012. Nonfat dry milk stocks increased by 89.1 million pounds from August 2012. Most of the stock drawdown occurred in the second half of the year when export demand was strong.

With strong demand internationally for dairy products and a modest increase in milk production, 2013 average all-milk prices increased $1.48 to $20.01 from 2012. This was the second highest all-milk price annual average and was only 13 cents less than the record in 2011. During 2013 prices for the dairy products were highly volatile. Butter and cheese exhibited patterns that were contradictory to the usual seasonality associated with the respective products. Butter peaked around April at $1.68 after which prices fell until September averaging $1.43, after which butter prices started to rise again, averaging $1.63 in December. Cheese peaked in May at $1.83 after which cheese prices fell for a few months. After July, cheese prices started to increase steadily, averaging $1.88 in December. Nonfat prices were steady for the first quarter of 2013, after which they increased steadily until December, when they averaged $1.95. The tighter stocks in the second half of 2013, with only modest production increases, supported price increases for all products except whey. Whey prices fell from January until April, after which whey price remained relatively steady at $0.57 to $0.58 for the remainder of the year.

[3] The current public data for fluid milk sales is available only to November 2013. The data is available at http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5106241&acct=dmktord

Outlook for 2014: Lower Costs and Higher Supply

Milk production is forecast to increase a modest 4.5 billion pounds with the majority of the increase coming from more milk per cow growth of 1.9 percent. The number of cows is also forecast to increase about 0.3 percent. While the growth in milk production is a 3.6 billion pound increase over 2013 growth (which was 0.9 billion pounds), the projected growth in 2014is modest compared to the growth seen historically from the 2000s.

Herds in 2014 are primed to see an expansion with favorable prices and lower feed costs than in recent years. The January 2014 *Cattle* report indicates that there is virtually no change in the year-over-year percentage of 500 pound heifers for milk cow replacement; furthermore there is a 2.0 percent increase in number of heifers expected to calve in 2014. Prices for 500-600 pound replacement heifer prices are higher suggesting an increase in demand since year-over-year replacement heifer numbers are unchanged.

Feed prices are projected to be lower in 2014. Corn prices are projected average $4.20 to $4.80 for crop year 2013/14, with further declines likely late in 2014 as the 2014/15 crop becomes available. Soybean meal prices are expected to average $425 to $465 for crop year 2013/14. As with corn, late calendar year 2014 prices are expected to decline as the 2014/15 crop is harvested. The alfalfa outlook appears promising for 2014 with early 2014 farm prices averaging 15 percent below 2013.

International Demand Will Remain a Major Factor For US Markets in 2014

During 2013 the U.S. exports set a new record. During the last few years the world dairy market has seen exceptional demand from China and other countries. With international demand outstripping supplies of the traditional exporting countries the United States has become an important supplier to the world market. With both global populations and national incomes also projected to increase, international dairy demand is projected to grow as well. The U.S. is well positioned to play a major role in supplying international markets but expected increases in production by competing exporters is expected to intensify competition in the coming year.

During 2014, exports are projected to decrease from 2013. Exports on a fat solids basis are projected to decrease around 0.9 billion pounds and exports on a skim solids basis will decrease around 0.4 billion pounds. Exports in the first part of 2014 will continue to show the effects of strong international demand in the face of continued tight competitor supplies. These strong exports are projected to correspond with strong prices in the early part of the year. However, as the year progresses the European Union and Oceania will play a large part in the decrease of US exports as their production increases relative to the prior weather-affected year.

In 2014, an increase of 3.6 billion pounds in domestic commercial disappearance on both a fat and skim solids basis is projected. Increased economic growth in the U.S. will support greater domestic demand

while increased competition in export markets will pressure prices, providing support for domestic use, especially in the second half of the year.

Commercial Stocks Increase

Stock levels are expected to increase in 2014 on both a fat and a skim solids basis. The increase in stocks will likely be driven by the decrease in exports in 2014. Annual ending stocks in 2014 will increase by 0.8 billion pounds on a fat basis and by 0.4 billion pounds on a skim solids basis. The larger increase in fat stocks is due to the weaker cheese export forecast. Skim solids basis annual ending stocks will increase less due to the expected continued international demand in nonfat dry milk. Changes in international market demand will likely have a direct impact on the year-end stock levels.

Prices to Remain Strong in 2014

Wholesale prices began 2014 strong with cheese and nonfat dry milk in January averaging $2.08 and $2.03 per pound, respectively. Butter held steady in January from December, but whey increased. Prices have been boosted due to the international demand. Higher international prices have been reported by Dairy Market News as well as on the Global Dairy Trade (GDT) auction platform. The cheese at the Chicago Mercantile Exchange (CME) hit weekly record prices in the last week of January with prices of $2.34 for blocks and $2.30 for barrels before declining in early February. Butter was also historically high on the CME at $1.87. Product prices are projected to remain strong in the first quarter of 2014, and then slowly decline the rest of the year as increased foreign production competition pressures exports at the same time U.S. production is increasing. Cheese is projected to decrease the most from the early 2014 with butter and nonfat dry milk to decrease more moderately.

Pressure from the decrease in the cheese price is expected to encourage more milk to move to butter and nonfat dry milk production alleviating the pressure on cheese later in the year but pressuring butter and, to a lesser extent, nonfat dry milk prices. Even with the increased pressure on prices in the later part of 2014, most annual prices are projected to be average higher than 2013. Cheese is projected to average $1.815 to $1.885. Butter is projected to average $1.550 to $1.650, while nonfat dry milk is projected to average $1.785 to $1.845 for the year. The increase in prices is generally attributed to international demand which would allow the US to maintain strong exports. However, prices are forecast to slip from their early-year highs as production from the EU and Oceania increases and pressures on US exports and dairy prices. New Zealand continues to see production levels well above a year ago although production in Australia is currently down from a year ago and is plagued by extreme heat and dry weather. Whey is projected to average $0.560 to $0.590. Whey is not projected to experience higher prices in 2014 as whey exports and demand is not projected to remain as strong as in previous years.

The all-milk price is projected to increase in 2014 to average $20.85 and $21.55. Class III prices are projected to increase to an annual average of $18.35 and $19.05, while Class IV prices are projected to increase to average $19.80 and $20.60. The spread between Class III and IV is projected to widen to levels close to those seen in 2012.

Long-Term Outlook Projections: 2015 to 2023

In February, USDA recently published its long-term projections (baseline projections). The estimates in *USDA Agricultural Projections to 2023* were created using the November 2013 World Agricultural Supply and Demand Estimates (WASDE) report. USDA's current outlook numbers for 2013, as presented in the February 2014 WASDE report are somewhat different than shown in the USDA Agricultural Projections to 2023, due to more recent data being available since the long-term projections were derived.

Milk production from 2015 to 2023 is projected to increase at a decreasing rate year-over-year ranging 2.45 percent to 1.65 percent (excluding the extra day during leap years 2016 and 2020). The number of cows is projected to increase in 2016 and 2017 and then moderately decrease from 2018 to 2023 to fit the historical trend of technological advancement leading to more productive cows. Output per cow is projected to increase from 2015 to 2023 at an average rate of 2 percent per year.

Exports on a fat basis are projected to increase in 2016 and 2017 at a rate greater than 7 percent, after which exports will continue to increase, but at a moderate rate of greater than 3 percent. Skim solids basis exports will increase at a moderate average rate of greater than 2 percent from 2016 onwards as skim solids exports started from a larger base. As growth in international demand outstrips gains in foreign production, the U.S. dairy industry is set to play an ever larger role in supplying international demand for years to come. The US already is an established exporter to Mexico and is seeing strong growth in newer markets like Southeast Asia.

Domestic commercial use for both a fat and skim solid basis will increase at a lesser rate than exports throughout the long-term projections. Ending stocks for both fat and skim solids basis will hold rather steady from 2016 to 2023.

From 2016 to 2023 the all-milk price is projected to moderately increase in nominal terms at an average 0.8 percent per year. Butter and nonfat dry milk are also projected to increase their nominal prices at an average of 0.8 percent per year. Cheese prices will increase faster on average at a rate of about 1.1 percent per year. Whey prices show the lowest average growth rate of 0.7 percent. As these prices are in nominal terms, prices in real terms are projected to decline over time.

Additional information about the 2014 dairy forecasts is available at:

World Agricultural Supply and Demand Estimates
http://www.usda.gov/oce/commodity/wasde/index.htm

Milk Marketing Order Statistics
http://www.ams.usda.gov/AMSv1.0/DairyMarketStatistics

Dairy Market News
http://www.marketnews.usda.gov/portal/da

Livestock, Dairy, and Poultry Situation and Outlook
www.ers.usda.gov/publications/ldp/

Dairy: World Markets and Trade
http://www.fas.usda.gov/data/dairy-world-markets-and-trade