BUTTERFAT CONTENT IMPACTS MILK PRICES

A report from the Livestock Marketing Information Center came across my desk this week. The document reported a significant decrease in butterfat content from US dairy cows. This summer was the lowest July butterfat test since 1995 and the lowest August since 1998. The butterfat test for 2010 is not a record low, but it is certainly the lowest in over a decade.

Dairy producers know that the largest butterfat influences for an individual animal are stage of lactation, breed, and genetics within breeds. Different fatty acids exhibit different traits as cows move through lactation, but overall butterfat content increases as lactation continues. In general, milk fat components vary inversely with milk production. Season affects butterfat to a degree, but is fairly consistent throughout the year. Milk fat is also impacted through a dairy cow's diet. Seasonally, cream supplies usually tighten in the summer due to the influx in ice cream production. Butter prices are normally fairly flat throughout the year, with only slightly higher butter prices in the fourth quarter due to the holiday season. However, this year butter jumped over 80 cents per pound in between January and September, indicating something different.

Dairy products are largely sold based on butterfat content. Whole milk typically contains at least 3.25%, while lower fat milk is marketed as 1% or 2%, and skim contains less than 0.5%. Creams vary depending on category, anywhere from 10.5% to 40%. Ice cream has a minimum requirement of 10%, while premium ice creams are generally higher. Cheeses range from 0% in nonfat cottage cheeses to 50% in items like cheddar. Butter must be at least 80% butterfat.

Federal milk marketing classes also reflect the use of butterfat to categorize prices. Class I milk is sold for fluid use and contains the least amount of butterfat. Class II is sold for creams, ice cream and other soft dairy products. Class III milk is sold for the use of cheese manufacturing, while Class IV is sold for butter making and powder (Nonfat Dry Milk). Depending on the class and use, the price of butterfat is more heavily weighted.

Experts have identified feed and dairy profitability as the key factors affecting the 2010 decline in butterfat. The dairy sector has had a rough couple of years battling feed costs and profitability. The milk-feed ratio as an indicator of dairy farm earnings is calculated using corn, soybean meal, and hay prices to make up a dairy ration of 16% crude protein to produce one pound of milk. Although the ratio has its flaws, it does describe feed costs relative to milk prices. Additional costs in dairy production require the milk feed ratio to be above three for a positive return. July 2007 was the last time the milk feed ratio was over three. One of the worst years was 2009, having the lowest milk feed ratio on record at 1.47. A recession, coupled with a few very low profit years created large setbacks financially for many dairy farmers. Financial deficits and stricter banks created tight cash flows. In some cases dairy farmers did not have the cash to put up front to buy feed, which left them few options in 2010.

Corn silage and corn based grains are primary feeds in the dairy industry. The wet conditions and late harvest in 2009 led to severe quality struggles. Kernel quality was poor and grain was expensive. The higher level in moisture likely increased the presence of mycotoxins and mold in corn silage. Dairy farmers simply had difficulties buying quality feed. High cost of corn grain also had an impact, leading to substitution of cheaper grains such as distiller's grains which are highly variable in feed value.

Another twist is the percentage of young animals in the milking herd. The January cattle inventory report released by USDA reported 32,000 more heifers were expected to calve this year than last year. Heifers, because they are still growing have different energy needs than older lactating animals. They also have different milk component levels. First lactation is usually the worst lactation because the animal has not matured. More energy is diverted to growth, reducing the energy available for milk production thereby affecting components.

The 2010 corn crop is a dramatic improvement from last year, and butterfat tests are already showing improvements as 2010 feed is replacing 2009 feed. Corn prices, however, are climbing again, and feed prices are expected to rise for hay, corn and soybeans in 2011. Milk prices are also expected to rise, but will not be high enough compared to the relative high values of feed costs to turn dairies back in the black. Outlooks for 2011 are marked by another year of just getting by. Dairy farmers have a long road ahead before equity is restored, which will in turn keep operating loans tight and continue caution from bankers.

This is not yet a happy time to be a dairy farmer. As consumers, we can help by drinking lots of egg nog and chocolate milk during the holidays. Also remember to leave an extra large glass of milk and a plate of cookies for Santa on Christmas Eve.