What's Ahead For Jerseys In The Dairy Business

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It is now apparent that 1999 will be another year with strong dairy prices. The current demand boom is supporting milk prices, despite the 3.5% milk production increase for the first six months of 1999. The strength of current demand was underscored this summer, with cheese prices sailing past last year's record price levels by mid-August.

There is really no surprise as to what is causing the growth in dairy demand. Cheese remains the key to dairy industry growth. So far, 1999 cheese consumption is up 3.5% over last year. Consumer demand for pizza and burgers continues to be translated into increasing demand for American and Mozzarella cheese varieties. 1999 is also bringing a modest rebounding of fluid milk sales. Fluid milk sales are up 1.1% for the year to date.

While not reaching the record prices of 1998, producer butterfat prices are averaging close to $1.40 per pound. The relatively strong butterfat price is not the result of growth in butter sales. In fact, year-to-date butter sales are down 5%. It is the demand for butterfat in other dairy products, especially cheese, that is keeping 1999 butter prices stronger than for most of the 1990s. The unusual heat wave that impacted most of the United States during July has helped spark prices for cheese, and could make 1999 average producer milk prices the second highest ever.

Over the past three decades, cheese has been the engine for increased demand for dairy products (Figure 1). Since 1975, per capita consumption of cheese has grown by 62.5%. Whey, a by-product of cheese industry growth, has also enjoyed increased consumption. However, fluid milk consumption has experienced a 16.5% *decline* during the same period of time. Per capita consumption of butter and condensed milk has also declined.

All signs indicate that cheese will continue to become a more prominent part of the American consumer's diet. Based on the trends of the past 10 years (see Figure 2 on next page), projections show that by 2005, the average American may get over 16 pounds of dairy fat and protein from cheese, compared to under 10 pounds from fluid milk products.

Cheese companies are following milk west, and most Western cheese companies are adding capacity to their current locations—as Avonmore is doing at this processing plant in Gooding, Idaho—or building new plants.

Answering The Question, "What's Ahead?"

Most dairy producers have benefited from high milk prices and low feed costs over the past year. What lies ahead for the progressive Jersey dairy producer? How will Federal and State Order reforms impact producer prices? Will growth in western dairy production impact other regions? What will dairy markets do in the next few years? While almost everyone expects the current high cheese prices to soften in the near future, it is often more difficult to estimate milk prices over the next six to 12 months than over the next five years.

Based on our experience of the past 10 years, several general observations can be made about dairy markets over the next few years.

Milk prices, over time, will follow costs. Big margin years for producers are balanced against years with low net returns. This was true in 1990-91, when prices crashed following the previous record prices enjoyed during 1989-90. The poor margins of 1995 and 1997 were countered with much higher returns during 1996, 1998 and most likely in 1999. The big difference compared to previous decades is that prices and returns are more variable on a short-term basis than in past years.

Figure 3 compares the U.S. support milk price, the U.S. all-milk price, milk production per cow and total milk revenues per cow since 1980. Although the

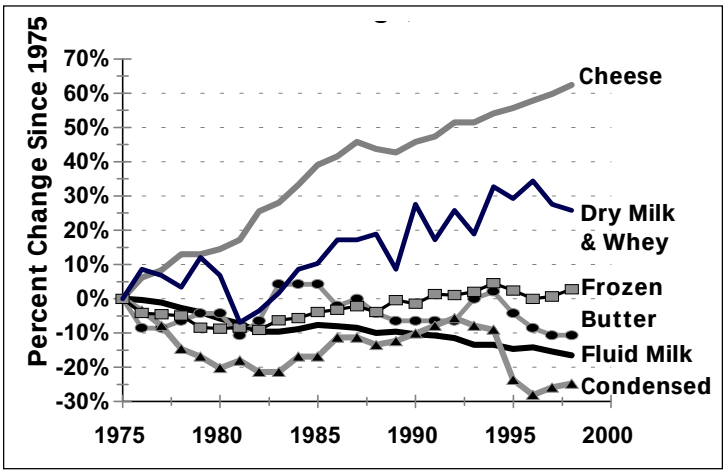

Figure 1. Dairy product consumption trends, 1975–1998 (percent change).

support price has changed little since 1990, on average, modest milk price increases, combined with great improvements in milk output per cow, have dramatically increased total milk revenues per cow.

Milk supply will always adjust to meet demand. Since the 1980s, U.S. dairy price support levels have been well below the cost of producing milk for most dairy producers. While some dairy products have been sold to USDA on occasion, support prices are not as important to the producer milk price as they were during the 1980s. Because the support price has not supported profitable milk production for the vast majority of producers for the past 10 years, total milk output will not stray very far from commercial demand for an extended period of time. In fact, under current law, dairy supports will end December 31 of this year.

Very high or very low milk prices relative to cost of production indicate that milk supply is not in balance with demand. When this happens, dairy milk output and commercial use of dairy products will adjust until prices fall or rise to a more moderate level. As a result, these unusually high or low prices do not last very long.

Production efficiency gains will continue to push real milk prices lower. We don't always consider efficiency, but how many Jersey cows produced 20 times their body weight in milk in 1959? 1979? 1999? Real costs of producing milk in the U.S. have declined over time due to the incredible gains in productivity at the farm level. These gains have come through both improved milk and milk output per cow, as well as gains in labor, capital and other efficiencies, often through herd expansion.

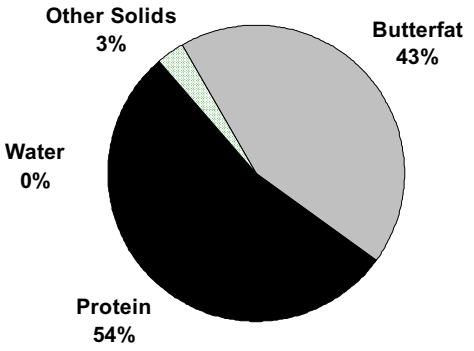

Figure 4. Class III component values per hundredweight at BFP test under Federal Order Reform Final Rule multiple component pricing (MCP). Based on USDA price data from January, 1996 through March, 1999. Sources: AMS, USDA and National All-Jersey Inc.

Cows are moving west, and the cheese industry is following them. Farm management surveys consistently reveal that the Western states have an advantage in total economic costs of producing milk. The Western dairy herd continues to grow in both cow numbers and milk output, despite lower milk prices than the rest of the U.S. Cheese companies are following the milk west, and most cheese companies are either adding capacity to their current locations in the Western states, or building new plants.

Of course, this does not mean there be no dairy business in the East. But current cost structure and the dry climate does favor the West, especially during those periods when feed costs are low. While smaller, family-operated farms can continue to be profitable in all regions, the statistics indicate this type of dairy is less likely to be operated by the next generation. The average herd size is growing in all markets.

Making Rational Decisions In The Evolving National Marketplace

The dairy business will not become less complicated, nor will it become less competitive. The growing ability to move milk and dairy products long distances truly makes the dairy market a national one. Regardless of cow color, producers who manage to maximize the production of the milk components most demanded by consumers will reap benefits.

Such a perspective helps us identify several factors that should affect the individual decisions made on thousands of dairy farms. Many of them work to the advantage of the Jersey.

Regulated milk pricing is moving its emphasis from water to protein. Federal Order reform may be controversial, but it generally works in favor of high-protein cows like Jerseys. Changes or delays to the USDA's proposed MCP program may still be made through Congress or through additional Federal Order hearings. However, there is little argument against the general framework for component-based pricing adopted by USDA.

Under USDA's proposal for Federal Order reform, the producer component formulas for fat and protein are based on the cheese yield formulas similar to those used by many cheese plants around the country. The value of butterfat is based on the price of butter, while the milk protein price is based both on

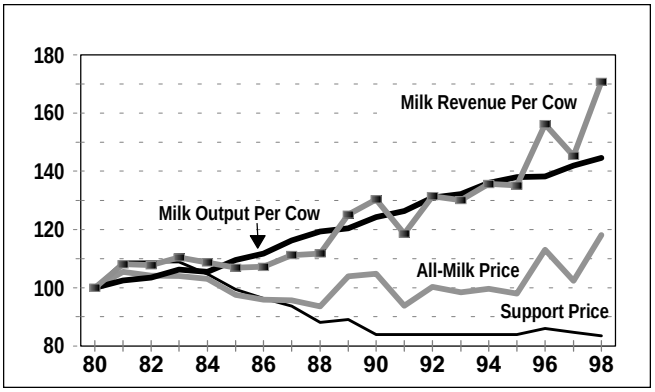

Figure 2. Per capita consumption of dairy fat and protein through cheese and fluid milk, 1975-1998 (actual) and 2005 (projected).

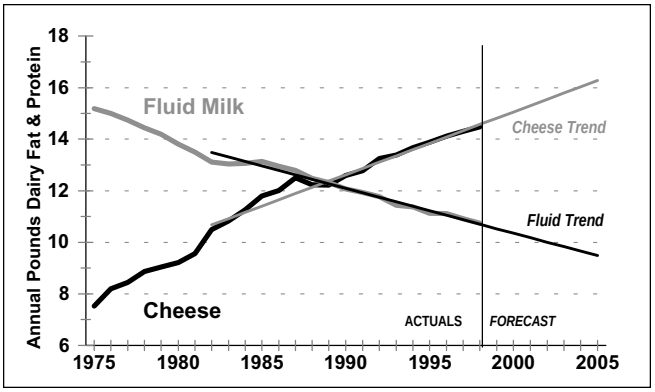

Figure 3. U.S. milk prices, milk production and income as percentage of 1980 levels.

the value of protein in cheese, as well as the value protein adds to butterfat used in cheese.

Based on these formulas, milk protein would have made up over half the producer component value during the period from January of 1996 to March of this year (see Figure 4). Fat would have comprised 43% of the total value; the other solids portion (lactose and ash) would equal only 3%.

Under the Federal Order reforms proposed by USDA, 85% of Federal Order milk will be priced using these component prices for milkfat, protein and other solids. Currently, 53% of Federal Order milk is priced under MCP regulations, and the protein price for most of that milk is lower than the protein price USDA is now proposing. The relatively high protein price and the expansion of producer MCP to 85% of Federal Order milk both work to the advantage of Jersey breeders.

All levels will see continued improvements in efficiency and performance. Jersey cows convert feed into cheese components more efficiently than other breeds. They also make more cheese components per pound of body size than cows of other breeds. While that does not necessarily mean that Jerseys are always more profitable, their feed efficiency is a considerable advantage compared to other breeds. This advantage is the most marked in the cheese producing regions of the Midwest and West. It is not surprising that the already strong demand for Jerseys continues to grow in these areas of the country.

Environmental management will become more important. Just as Jerseys eat less, they produce less manure per cow and less waste per pound of cheese yield. USDA research funded in part by the AJCC Research Foundation showed this to be true, and some regulatory agencies now consider a Jersey cow to be only 70% the animal unit of a large-breed dairy cow. The value of this "waste efficiency" will only increase as the Environmental Protection Agency (EPA) toughens its regulations governing all livestock operations across the U.S. What might be the overall effect of this situation? If we look at the European countries with very tough environmental regulations, such as Holland, we see that Jersey genetics have been adopted to gain both the nutrition and environmental efficiencies.

Conclusions

The gradual but steady shift in consumer dairy product demand from fluid milk to cheese has helped move milk pricing to both government-regulated and industry-based component pricing programs. On both an economic and environmental basis, the modern Jersey cow possesses the ability to very efficiently produce a large quantity of the milk components that consumers demand. It may be impossible to predict the milk price or the alfalfa cost for any given month. However, both the short- and long-term future is indeed bright for a cow that efficiently produces the milk components that consumers want, for a milk market that fairly values high-protein, high quality milk.