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After watching the support price increase rapidly during the 1970's, plateau at $13.10 during the early 1980's, then gradually decrease to $11.35 on January 1 of 1987, many are beginning to wonder whether the price support program still works, particularly in view of the fact that while the support price has fallen in recent years, there has still been a tendency for milk production to continue to increase (Figure 1).

HOW SUPPORT PRICES ARE SET

The price support program supports the milk price received by farmers through government purchases of butter, nonfat dry milk, and American cheese. Government purchase prices are set at levels designed to enable manufacturers to pay farmers the announced support price for milk during surplus production periods.

In accordance with the provisions of the Food Security Act of 1985, the current support price is $11.35 per hundredweight of manufacturing grade milk at average test, which is 3.67 percent milkfat (Figure 2). After adjusting for fat, using a butterfat differential of $1.65 per pound of fat, the current support price for milk testing 3.50 percent is $11.07. Supporting the price of manufacturing grade milk supports the price of
FIG. 2. SUPPORT PRICE, MILKFAT ADJUSTMENT

Support Price, cwt of Mfg Milk:
At 3.67 percent milkfat $11.35
At 3.50 percent milkfat $11.07

Butterfat differential = $1.65

Butterfat adjustment:
3.67 - 3.50 times $1.65 = $0.28

Cheese yield per cwt of milk:
At average milkfat test, lbs 10.1
Grade A milk because the Class III price paid for grade A milk pooled in federal milk marketing orders is based on the price received by producers for manufacturing grade milk in the Minnesota-Wisconsin area.

In converting the support price for milk to a buying price for cheese, as an example of one of the products the government buys, the USDA uses a cheese yield of 10.1 pounds per hundredweight of milk. To the support price of $11.35, the USDA adds an allowance of $1.37 per hundredweight to cover the cost of making cheese (Figure 3). This is designed to provide cheese manufacturers a minimum value of $12.72 for the cheese and whey they derive from a hundredweight of milk, or after deducting $0.34 for the value of the fat in whey, $12.38 for the cheese they can make from 100 pounds of milk. Dividing this value by 10.1 pounds of cheese results in a buying price of $1.225 per pound of cheese.

By standing ready to buy cheese at $1.225 per pound, the USDA supports the price of manufacturing grade milk at $11.35 per hundredweight. Individual producers may not receive this price because of variations in milkfat and quality of milk delivered, plant location, product manufactured, plant operating efficiency, and local competition.

TRENDS IN PRODUCTION, GOVERNMENT REMOVALS AND EXPENDITURES

Some would blame the over supply and economic problems we have been experiencing in agriculture and in the dairy industry on factors outside the dairy industry, factors beyond our control, and/or point to the oversupply problem as evidence that the dairy price support program no longer works. And indeed outside forces were a factor during the first half of the 1980s, such as the worldwide recession, high interest rates, a strong American dollar in relation to other currencies, lower exports of farm commodities, reduced profitability of farming alternatives, and lower feed costs.
FIG. 3. SUPPORT PRICE FOR CHEESE

Support price, cwt of 3.67 milk $11.35
Plus CCC manufacturing allowance 1.37
Cheese/whey value per cwt of milk 12.72

Less value of .25 lbs of whey fat 0.34
Value of cheese per cwt of milk 12.38

Support price per pound of cheese:
$12.38 divided by 10.1 pounds
of cheese per cwt of milk = 1.225
Others would say that our over supply in the dairy industry is not so much the result of outside factors and the failure of the price support program, as our misuse of the price support program for short run price enhancement, rather than long run price stability.

For many years, such as the period between 1965 and 1979, the support price was set using the parity concept, at a level between 75 and 90 percent of parity, on a flexible basis in accordance with market conditions at the discretion of the Secretary of Agriculture. During much of this period the market price was above the support price, especially during the short-supply season of the year. When needed, however, during temporary periods of over supply, the support program kept the market price from crashing downward.

Improved management and technology were causing a steady increase in milk per cow, cow numbers were falling, and while milk production varied from year to year, there was no pronounced upward trend in total milk production in the U.S. (Figure 4). Then in November of 1979, the minimum support price was raised to 80 percent of parity. This increase, coupled with the semiannual adjustments mandated by Congress in 1977, rapidly propelled the support price to $13.10 by the fall of 1980. As we moved on into the 1980s, milk per cow continued to increase, cow numbers began increasing after a long period of decline, and total milk production began increasing rapidly.

Despite the successful efforts of the National Dairy Promotion and Research Board in recent years to increase commercial use of milk and dairy products, milk marketings have greatly exceeded commercial use since 1979 (Figure 5). The result has been a significant increase in government price support removals (Figure 6) and in government expenditures on dairy price support (Figure 7).
FIG. 4. MILK COWS, MILK PER COW, PRODUCTION

Source: AMS & ERS, USDA
FIG. 5. MARKETINGS AND COMMERCIAL USE

Source: AMS & ERS, USDA
FIG. 6. PRICE SUPPORT REMOVALS
Milk Equivalent, 1985 - 1986

Source: AMS & ERS, USDA
FIG. 7. GOV'T. EXPENDITURES ON PRICE SUPPORT
Billion Dollars, 1985 - 1985

Source: AMS & ERS, USDA
CHANGES IN SUPPORT PROGRAM TO LIMIT PRODUCTION

In their efforts to stem the tide of increased milk production, Congress first rescinded the semiannual increases in support price. Then later in successive steps they froze the support price, initiated deductions from producer milk checks to help cover program costs, implemented the milk diversion program, initiated deductions from producer paychecks to finance a national dairy research and promotion program, changed to setting support prices in fixed dollar terms rather than as a percent of parity, made future support prices flexible by providing for increases and decreases to be triggered by anticipated government removals, and implemented the dairy termination program.

Under current law, the support price is due to drop $0.25 per hundredweight on October 1, 1987. This decrease will be offset, however, by a phaseout of the current producer assessment of $0.25 per hundredweight. The current law also calls for further reductions in the support price of $0.50 per hundredweight on January 1 of each of the next three years if it is anticipated that government removals will exceed 5 billion pounds of surplus dairy products, milk equivalent, during the coming year.

WHY HAVEN'T LOWER SUPPORT PRICES CURTAILED PRODUCTION

The current dairy termination program was designed to eliminate sufficient milk from the market to bring supplies into reasonable balance with demand. Dairymen who had a short or long run income or cash flow problem should have used the dairy termination program to exit dairying. Why then, despite the decreases that have already occurred in the support price, and the efforts of the dairy termination program, is there concern and some evidence that milk supplies may continue to be excessive?
The answer can be partly found in trends in milk prices, feed costs, and the milk/feed price ratio. The price received for all milk in the U.S. has increased more since 1979 than the cost of 16 percent dairy ration (Figure 8). The milk/feed price ratio in recent years has remained well above the level of the mid 1970s (Figure 9).

Many consider a milk/feed ratio of 3.5 or above favorable to increased milk production. Based on this criteria, the milk/feed price ratio has been favorable since 1979, and was as favorable in 1986 at 1.56 (based on 16 percent protein dairy ration) as it has been since 1978 (Figure 10).

It would appear that the current dairy termination and price support programs are driving the dairy industry like the driver of an automobile with one foot on the brake and one foot on the gas pedal. With the one foot we are trying to brake milk production, while with the other we are encouraging increased milk production. With all of the effort to put the brakes on milk production through the dairy termination program, we reduced milk production during the latter part of 1986. Once this program is over, however, and we let our foot off the brake, milk production will likely increase again if the milk/feed price ratio remains as favorable as it is today.

While some would say that the milk/feed price ratio is not high enough, one does not have to look far to find operators of efficient, well managed herds, who are expanding their production because it is profitable to do so.

EFFECT OF NATIONAL PROGRAMS ON UTAH DAIRY INDUSTRY

Is the current dairy program working, and what affect is it having on our Utah dairy industry? Milk production in Utah has trended upward since 1965, except for 1984 during the milk diversion program (Figure 11). Milk cows remained near or below their numbers in 1965, until the build up during
FIG. 8. TRENDS IN PRICE OF MILK AND DAIRY RATION
U.S., 1965 - 1986

Source: AMS & ERS, USDA
FIG. 9. MILK PRODUCTION & MILK/FEED PRICE RATIO
(16 Percent Protein Ration) U.S., 1965-1986

Source: ERS, USDA
FIG. 10. TRENDS IN MILK/FEED RATIO & PRODUCTION
(16 Percent Protein Ration) U.S., 1973-1986

Source: ERS, USDA
FIG. 11. MILK COWS and MILK PRODUCTION
UTAH. 1965 -1986

Source: SRS, Utah
the early 1980s. Class I sales in the Great Basin area have experienced a long upward trend (Figure 12). Milk production has trended upward, and beginning in 1970, more milk began to be used for making cheese than for fluid. However, with increased fluid milk sales and a reduction in milk production because of the milk diversion and dairy termination programs, milk used for making cheese in 1986 dropped to about the level as milk used for fluid (Figure 12).

Monthly milk cow numbers increased in Utah in 1985 after the termination of the milk diversion program in March, but by the end of 1986 cow numbers had decreased to their lowest level in three years because of the dairy termination program (Figure 13). For the year, milk cow numbers were down 4 percent during 1986 compared with 1985, and for the last quarter they were down 7 percent, to 77,000. Milk production per cow decreased in 1984 during the milk diversion program, increased in 1985, and then increased even further in 1986, to about 13,340 pounds (Figure 14). Total milk production increased in 1985 after the milk diversion program, and increased further during the first half of 1986. Production decreased during the last half of 1986 as the dairy termination program got under way (Figure 15). For the year, milk production amounted to about 1.2 billion pounds in 1986, up 4 percent from the year before, but down 3 percent during the last quarter.

Class I sales in the Great Basin federal milk marketing area increased each month during the past three years over the year before (Figure 16). Monthly cheese production decreased dramatically during 1986 as dairy herds went out of production under the dairy termination program (Figure 17). While this has a very negative impact on cheese plant operations, nationally we cannot continue to produce as much cheese as we have in recent years if
FIG. 12. MILK USED FOR CLASS I AND CHEESE
UTAH, 1965 - 1988

Source: SRS, Utah
FIG. 13. MILK COW NUMBERS, UTAH 1984–86.

Source: SAS, Utah 1984 -- 1986, by Month
FIG. 14. MILK PER COW, UTAH 1984–86.

Source: SRS, Utah 1984 - 1986, by Month
FIG. 15. MILK PRODUCTION, UTAH 1984-86.

Source: SRS, Utah 1984 - 1986, by Month
FIG. 16. CLASS I SALES, GREAT BASIN 1984–86

Source: Mkt. Adm.  1984 - 1986, by Month
FIG. 17. CHEESE PRODUCTION, UTAH 1984-86.

Source: SRS, Utah 1984 - 1986, by Month
we are going to bring supplies in line with the market, and Figure 17 shows we are doing our part.

These trends in milk cows, milk per cow, milk production, fluid milk sales, and cheese production, not only reflect what is happening in Utah, but nationally as well. Total milk production in the U.S. amounted to 144.9 billion pounds in 1986, up about 1 percent over 1985. Milk production in 1986 exceeded that of 1985 during each of the first 6 months, then dropped below 1985 for the remainder of the year. Production during the last quarter was 4 percent less than the year before. Commercial use of dairy products was up 3 percent in 1986.

Government purchases of surplus dairy products decreased from 13.2 billion pounds of milk equivalent in 1985 to about 10 billion pounds in 1986. In 1987, government purchases are expected to amount to between 4 and 7 billion pounds. The dairy termination program will continue though August, 1987, with the elimination of the remaining one-fourth of the herds in the program, but some expansion is anticipated among remaining herds.

These trends demonstrate that the current dairy program has worked fairly well during the past year as we progress toward bringing milk supplies back in line with demand. Returning to a healthy market situation, at least temporarily, the Minnesota-Wisconsin (M-W) price exceeded the support price in late 1986 during the short-supply season of the year.

However, in December, 1986, at the same time milk prices increased, feed prices fell, improving the milk feed/price ratio (Figure 18). With continued decreases in feed prices expected in 1987, the milk/feed ratio could reach an all-time high before the year is over. Some are already calling on Congress to rescind through legislative action the 50 cent per hundredweight reduction in the support price due to take effect on
FIG. 18. MILK AND FEED PRICE TRENDS, UTAH

Source: SRS, Utah
January 1, 1988, should anticipated milk supplies exceed demand by more than 5 billion pounds, milk equivalent. In actuality, the reduction may come too late to prevent another surge in milk production. Experience has demonstrated that price in an industry like the dairy industry works more rapidly and effectively to increase production as it goes up than it does to decrease production as it goes down, because once new facilities and herds have been added, they become relatively fixed in place.

CONCLUSION

In conclusion, after using the price support program for short run price enhancement during the late 1970s and early 1980s, and getting supply out of balance with demand, once again we have a price support program designed to bring the industry back into balance, and provide long run price stability. The imbalance between milk supplies and use during recent years is not so much an indictment against the basic concept of the dairy support program, as our misuse of it. The present price support program can serve the dairy industry well on through the 1980s if emphasis is placed on continued economic adjustment, technological change, market orientation, and long run price stability.

On the other hand, if emphasis is placed on short run price enhancement, the present program will not work any better during the last half of this decade than it did during the first half. Once the current dairy termination program is over, efforts to maintain the support price above a long run equilibrium level will encourage more milk production than can be sold in the marketplace.

Enhancing milk prices without increasing production would require a more permanent supply control program than the ones we have used in recent
years, such as quotas or bases. While effective supply control programs help to maintain higher prices while holding milk production in check, the level of control that is necessary to limit production usually also limits growth, adjustment, and adoption of new production-increasing technology in the industry. While quotas might effectively improve prices and incomes for today's dairymen, they will not benefit tomorrow's dairymen if the higher milk price is offset by the cost of quota to gain market access.