

Agricultural Outlook Forum 2004

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OUTLOOK FOR DAIRY 2004

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Last year was a year of transition. The surge in dairy farm expansions and the period of very low exit of weaker farms, both triggered by the generally high returns of 1996-2001, finally came to an end. Meanwhile, dairy product demand was slowly moving out of its late 2001-2002 weakness. It only remained to work off the huge butter stocks before dairy markets could return to better balance—something that was accomplished by yearend.

Conditions in 2004 promise to be considerably different. Farm structural changes are likely to show the effects of the low 2002-03 returns, while milk per cow is beset with a number of possible weaknesses. Demand appears to be mostly back to normal, and stocks are moderate. Prices are expected to recover some this year, with additional recovery likely in future years.

The dramatic swings in dairy market conditions over the past 7 or 8 years have camouflaged what may have been some significant long-run changes in the ways in which dairy markets behave. Some of these trend changes will continue to be important long after recent gyrations have become faded memories.

Demand Slowly Recovering

Recent patterns of commercial use illustrate how the structure of dairy product demand has changed over the years. Restaurant use of butter and cheese began to weaken in late 2001-early 2002 in response to economic softness and shifting consumer expenditures. This weakness persisted well into 2003. By late 2003, economic recovery had brought restaurant spending back, and cheese and butter use were showing some strength. However, dairy demand from this sector still lagged the very brisk 1999-2001 period.

Food processor use of dairy products as ingredients was particularly sluggish during the last two years. Dairy products are generally used to boost quality in premium versions of foods, a position that makes them vulnerable when consumers become more conservative about food spending. There may have been a modest recovery in ingredient use late in 2003, but this segment generally remains weak.

The retail segment was a bit more robust than the other segments in 2003 but was somewhat sluggish most of the year. Consumers seemed to be passing by the treats they had bought in earlier years. However, the autumn holiday season reportedly was the strongest in a number of years.

Despite the generally favorable dairy prices in 2003, commercial use grew only modestly. Milkfat sales grew about 2 percent following 2002's fractional increase. The 2003 use of skim solids was about 1 percent larger than in 2002, after no growth that year. By product, cheese sales rose only about 1 percent as a slip in American cheese use offset part of the gain for other varieties. Restaurant woes may have been particularly important for American cheese sales. Commercial disappearance of butter slipped fractionally in 2003, as strength late in the year was unable to overcome early declines. However, butter use probably was stronger than autumn disappearance data indicate because the very disappointing 2002 holiday season probably had left swollen pipeline holdings at the start of 2003. Fluid milk sales slipped fractionally, while use of most perishable manufactured products was weak.

Dairy demand appears to have gained some momentum during 2003 and is expected to continue its recovery this year. The restaurant segment is projected to do better, and ingredient use should come back somewhat. However, the improvement as yet has not been either steady or strong. Consumer spending may stay unsettled. In addition, it is unclear what the effects of recent intense media attention on weight problems might be.

Commercial use of all dairy products is projected to grow about 1 percent on a milkfat basis in 2004. Boosted by expected larger ingredient use, commercial use on a skim solids basis is projected to rise more--about 2 percent. Although welcome, these increases do not represent too much recovery in dairy demand in light of the still-low expected prices.

Butter Stocks Dissipate

Huge butter stocks plagued butter markets throughout 2002 and 2003. However, sharp seasonal declines during the second half of 2003 did much to correct the problem. On January 1, holdings were the smallest in 2 years and probably not much more than market needs. Meanwhile, commercial cheese and nonfat dry milk stocks stayed moderate. Overall, commercial stocks at the start of 2004 were a relatively neutral factor for dairy markets.

The 2003 surplus of skim solids stayed quite large but declined slightly from 2002. Commercial use grew somewhat more than did production. Net removals totaled 8.7 billion pounds milk equivalent, skim solids basis (about 5 percent of marketings), down from 9.8 billion pounds a year earlier. Growing commercial use in 2004 is projected to trim the skim solids surplus further.

The milkfat surplus was equivalent to only 1.2 billion pounds in 2003. Exports of butter under the Dairy Export Incentive Program (DEIP) and small cheese purchases boosted milkfat removals from the negligible levels of 2001 and 2002. The surplus of milkfat is expected to stay small in 2004 as milkfat markets probably will remain relatively tight. The actual levels of removals will depend on whether invitations for DEIP butter bids are extended.

Milk Production Slows

Milk per cow grew only fractionally in 2003. More tellingly, the rise from the 5-year moving average was dramatically below the long-run trend. However, this has been far from unusual in recent years. Expansion has been well below average for 3 straight years and for 6 of the last 8 years.

A number of factors contributed to last years sluggish gains in milk per cow. Milk prices were low relative to concentrate feed prices. Although the milk-feed price ratio does not shape gains in output per cow as much as formerly, recent ratios have made producers cautious about boosting concentrate feeding. In addition, 2003 resembled 2002 in having large amounts of mediocre alfalfa hay but tight supplies of good hay.

Other factors probably included an unusually large share of first-calf heifers in the milking herd and somewhat conservative use of bovine somatotropin (BST). Supplies of heifers available to start production in 2003 were quite large, a welcome relief from the heifer shortage of 2002. But, such a large cohort of heifers serves to lower average milk per cow the first year. Low milk prices probably made farmers leery of using BST on cows other than those with high odds of a profitable response.

Monsanto has announced that there will be no new BST customers in 2004 and that established users will be allowed only half their normal purchases. With more than a fifth of the cow herd currently receiving the hormone, reduced availability will significantly affect 2004 milk per cow. Unattractive milk-feed price ratios and uneven forage quality probably will also work against recovery in milk per cow. On the other hand, a much smaller number of first-calf heifers should spur gains in milk per cow.

Milk per cow in 2004 is expected to rise less than 2 percent from 2003 on a daily average basis. Growth may pick up later in the year but significant recovery probably will have to wait until 2005.

Average gains in milk per cow appeared to have slowed in recent years, but it is not clear that this is a long-run shift. Clearly, farmers cannot simply boost milk per cow by feeding more grain as they did in earlier decades. Increasing the nutrient density of modern rations is still done but the process has become more complex, slowing the response to changes in relative feed and milk prices. In addition, milk per cow probably has become more sensitive to forage quality than it was for many years.

On the other hand, there are indications that the share of first-calf heifers in the herd has taken a quantum rise in recent years—a possible explanation for a temporary slackening of growth. Similarly, the relatively low farm exit rate of recent years probably made a contribution. No clear evidence exists that either the rate of genetic or management improvement has slowed. Even so, future increases in milk per cow may be somewhat smaller and more erratic than those considered typical in the past.

Changes in milk cow numbers during 2002 and 2003, like most earlier periods, were driven by structural changes

induced by milk prices and returns. What made these years different was the delay between changes in returns and the effects of structural adjustments. The generally high returns of 1996-2001 unleashed a wave of dairy farm expansions during 2001 and 2002. However, many of these new facilities were not completely filled until 2003 because of the shortage of dairy replacements. These expansions bolstered milk cow numbers into early 2003.

Similarly, the rate of farms exiting was relatively low in 2001 because of the strong returns. The exit rate stayed slow during most of 2002 in spite of sharply lower returns. Even the relatively weak farms entered the year much better able to continue than normal, and their ability to persist was further enhanced by the Milk Income Loss Contract payments. However, the low returns were taking their toll by late 2002 and 2003, and the exit rate picked up considerably.

Milk cow numbers declined rapidly during the last 3 quarters of 2003, going from 0.3 percent above a year earlier in January-March to 1.4 percent below in October-December. Once expansions began to slow, the accelerated exit rate became the dominant force shaping cow numbers. In addition, rising cull cow prices during the year and the much lower replacement price throughout 2003 sharply narrowed the gap between replacement and slaughter values, lowering the share of cows in exiting herds that went into other herds.

Returns in 2004 are expected to be somewhat stronger than in 2002 or 2003 but still relatively weak. Dairy farm exits probably will remain numerous. Expansion by stronger producers might pick up a bit after the 2003 hiatus but is projected to stay fairly modest.

Significantly fewer heifers will enter the milking herd this year, even though the overall herd of replacement heifers on January 1 was only 2 percent below a year earlier. An unusually large share of the year-earlier heifers was older animals, and the number expected to begin milking in 2004 was down 4 percent. And, no Canadian replacements will be available so long as the ban on importation of live animals continues. It is uncertain when the current prohibition will end.

Cull cow markets remain unsettled. The loss of beef exports will require that additional quantities of fed beef will have to be absorbed domestically, weakening cow beef prices as well as fed prices. In addition, some buyers reportedly are hesitating to deal with older dairy cows. However, beef supplies remain tight, demand has held, and cow prices are projected to stay fairly high.

Milk cow numbers are projected to decline at a fairly rapid rate throughout 2004. For the year, cows are expected to average almost 2 percent fewer than in 2003, the largest decline since at least 1991.

Based on recent experience, structural change might occur more slowly in the future—but the evidence is still quite tentative. Part of the recent extended lags probably is due to price volatility. Large and brief price swings did not leave producers adequate time to complete their adjustments, and insufficient supplies of forage and heifers at times caused added delays.

In general, the time needed to bring a new expansion from initial decision into full production has lengthened. Obtaining environmental and land use permits is more difficult. Also, large new operations can generate substantial local opposition from a variety of motives.

On the other hand, dairy farms today may be slower to respond to pressures for exit. Dairy farms have progressively become more specialized in milk production, trending away from other commodities, feed production, and even heifer raising. In general, more specialization on a dairy farm means more restricted alternatives for the farm's capital and other resources.

Milk production in 2004, on a daily average basis, is projected to be essentially the same as in 2003. Production in 2003 was likewise steady. Such stability would be highly unusual in an industry where typical shifts in output have become much larger than in the past.

International Prices Firm

International market prices of butter and nonfat dry milk have risen since mid-2003. Seasonal tightness in the

Northern Hemisphere played a role (particularly for butter), as did Oceania's lackluster rebound from the previous season's drought. However, the primary factor in the price rises was simply the weakness in the U.S. dollar.

Import demand has been modestly good. The key importers of milk powders generally have had economic growth and increased consumption of dairy products. Butter import demand has improved in both Russia and the Middle East. However, neither product is likely to experience the kind of buying spree that would send prices sharply higher. Nonfat dry milk prices are effectively capped by U.S. domestic prices, while butter demand seems unlikely to grow much.

Export supplies in 2004 are expected to be moderate. The European Union position is projected to remain similar to 2003. Conditions in New Zealand have been sharply mixed during the current season, as parts of the North Island have had extraordinary good weather while the South Island has been in drought. Overall, New Zealand output has been slightly above a year earlier. Australia's production has been lower as they had substantial problems recovering from the effects of last season's drought. U.S. supplies of nonfat dry milk will be large—but will be available internationally only as long as international prices stay near current levels.

Short-run price prospects probably will be affected much more by exchange rates than by dairy market developments. Supplies from Oceania reportedly are fairly fully committed for the rest of the season, the EU situation likely will be fairly stable, and demand seems to be on a fairly steady course.

Dairy Price Recovery To Continue

Wholesale butter and cheese prices have risen counterseasonally since the start of the year. The increases were caused by rebuilding of pipeline stocks after stronger-than-expected sales late in the holiday season, reductions in expected milk supply due to the BST limits and other factors, and buyers coming into markets relatively early to protect themselves against possible tight markets later in 2004. Some cheese buyers in particular probably were concerned about the possibilities of market tightness after having been pinched in 2003.

Butter and cheese markets likely will be quite sensitive to new market information in coming months, typical for periods when markets are unusually influenced by anticipated conditions. Recent information has fairly consistently been bullish, a pattern that tends to perpetuate itself. The first production or stocks report with significantly bearish news could precipitate a substantial reassessment and even a downward price adjustment. In addition, recent buyer actions to assure themselves of supplies will tend to diminish second-half prices, even as they boost prices in the near term.

Strength in first-half wholesale cheese and butter prices will translate into manufacturing values much higher than a year earlier. Both Class III and Class IV prices will reflect the much tighter market conditions and are expected to run fairly close together. Midyear pipeline holdings of cheese are expected to be considerably larger than a year earlier, making repetition of last year's summer price jumps less likely. If milk production holds close to a year earlier as expected, second-half Class III values probably will average somewhat below 2003. However, butter and Class IV values are projected to average considerably higher because this year seems unlikely to face the same overbearing commercial butter stocks.

Farm milk prices are expected to average 50 cents to \$1 per cwt higher in 2004, following a 40-cent rise in 2003. Increases will be sizable during the first half of the year but are projected largely to disappear during the second half. Despite the recovery from the very low 2002 prices, 2004 milk prices are expected to be far below the 1996-2001 average.

The possibilities of 2004 milk prices being higher than the current most likely are considerably larger than during the last 2 years, both in terms of likelihood and possible magnitude. In 2002 and 2003, the surge in dairy farms expansions and continued demand sluggishness almost ensured that ample stocks would be available to trim potential price increases. Everything had to happen just right to push prices up much. In 2004, milk production is vulnerable to a number of possible obstacles, while demand growth well could accelerate. Under the expected tight market conditions, such events easily could drive milk prices higher.

Retail dairy prices in 2003 averaged just barely lower than a year earlier, following a fractional increase in 2002.

The farm-to-retail price spread fell as retail prices did not keep pace with rising farm milk prices. Since 2000, moderate declines in the spread have alternated with sizable increases. For 2004, retail dairy prices are projected to rise 4-5 percent from a year earlier. Both farm prices and the spread are expected to rise moderately.

Outlook for Dairy 2004

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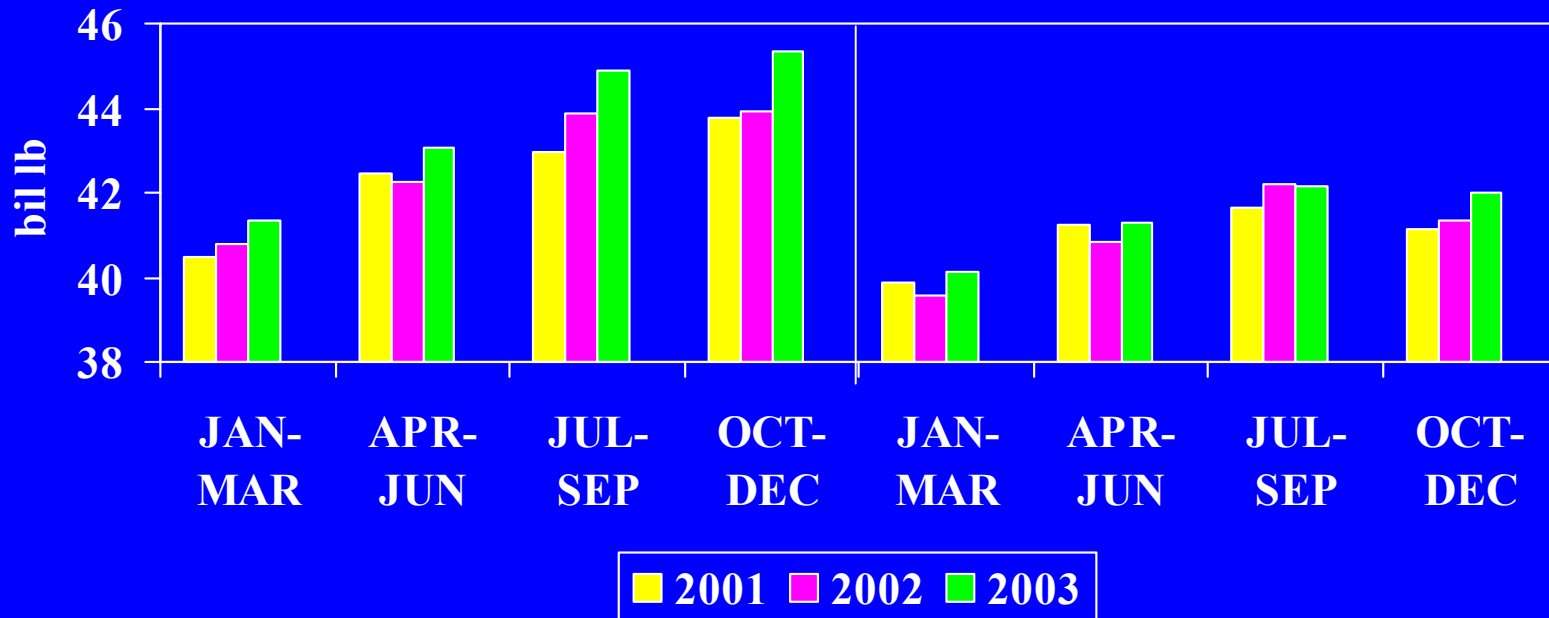
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Commercial use Milk equivalent

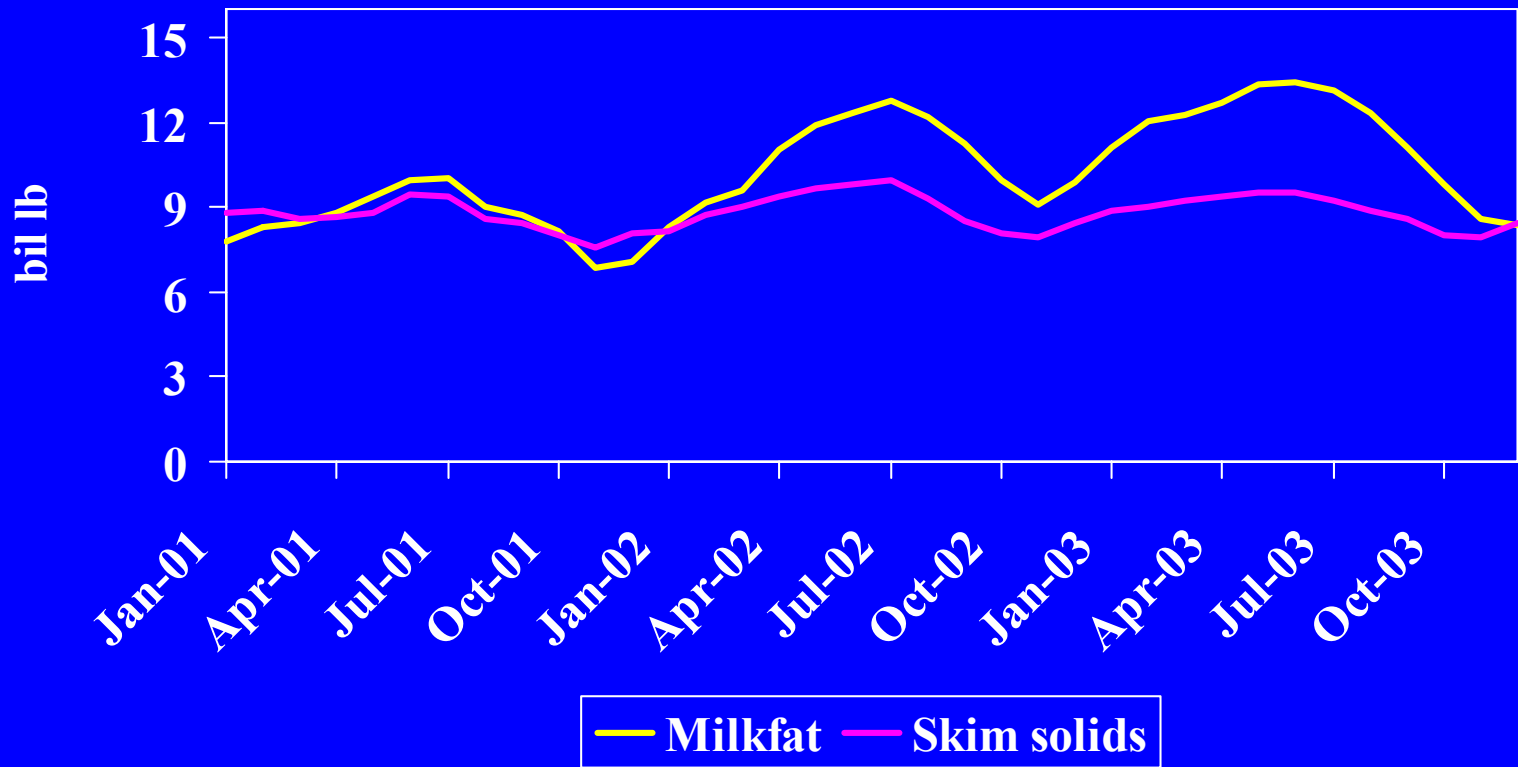
milkfat basis

skim solids basis



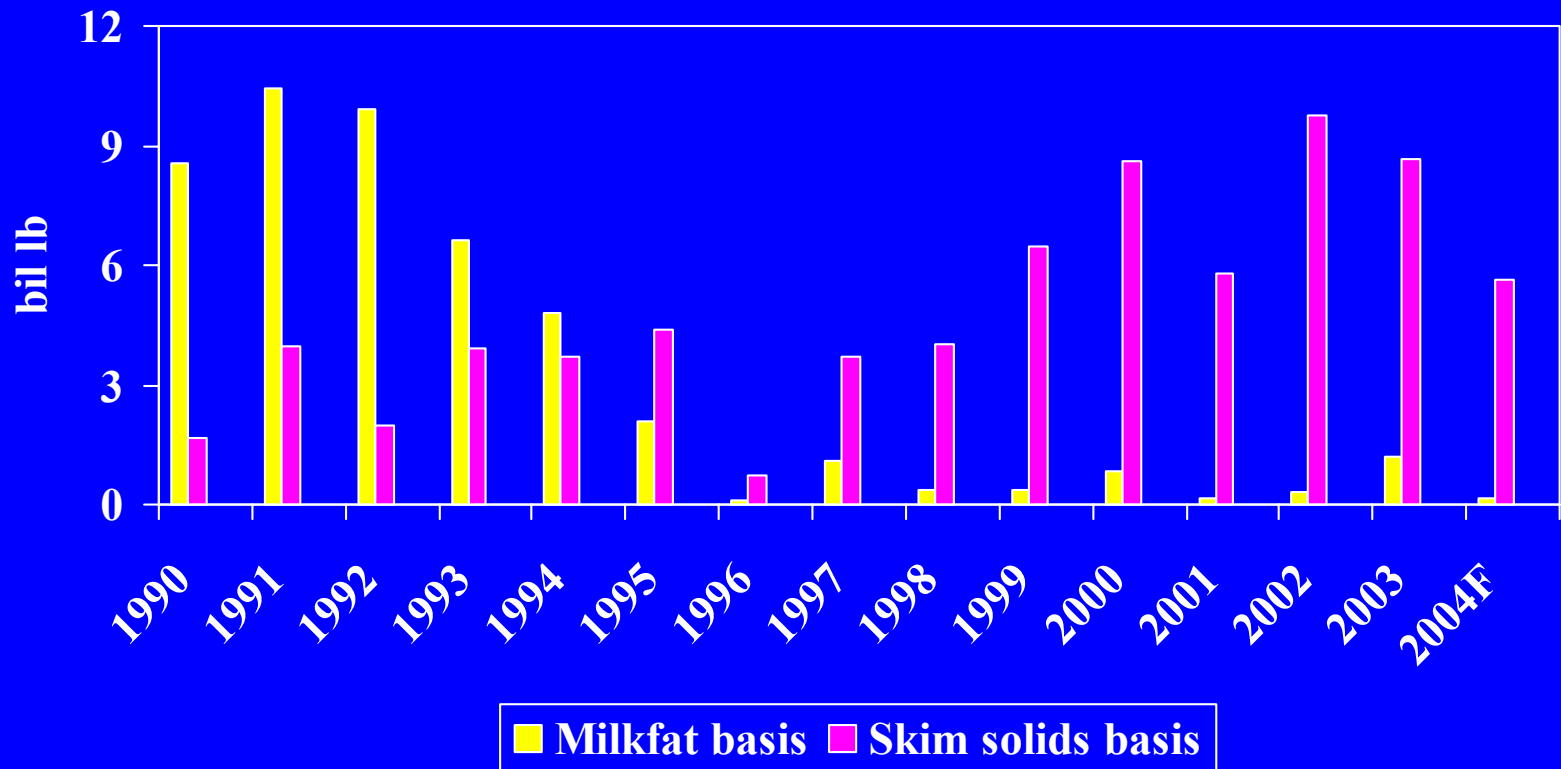
Commercial Stocks

Milk equivalent

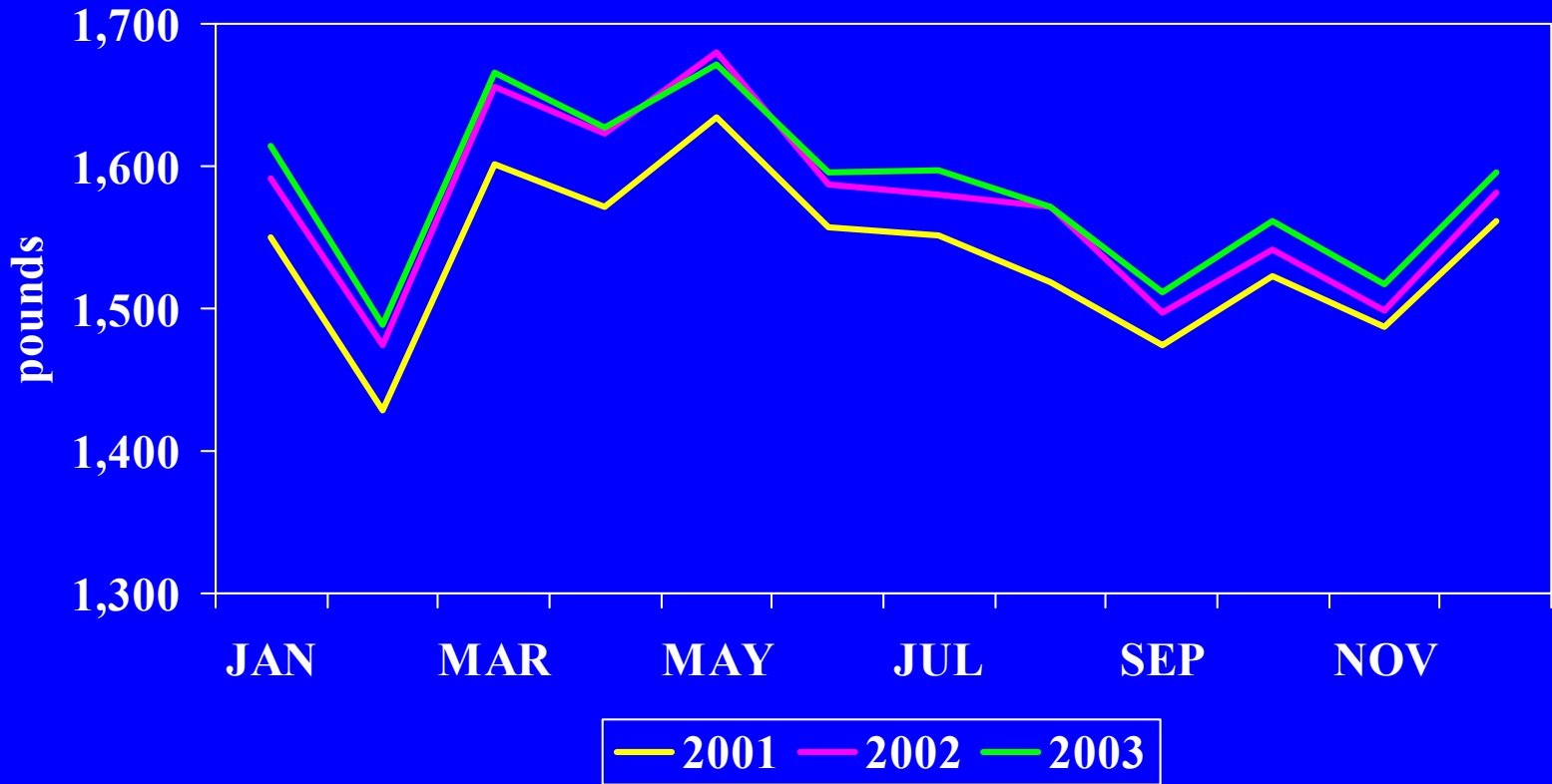


CCC net removals

Milk equivalent

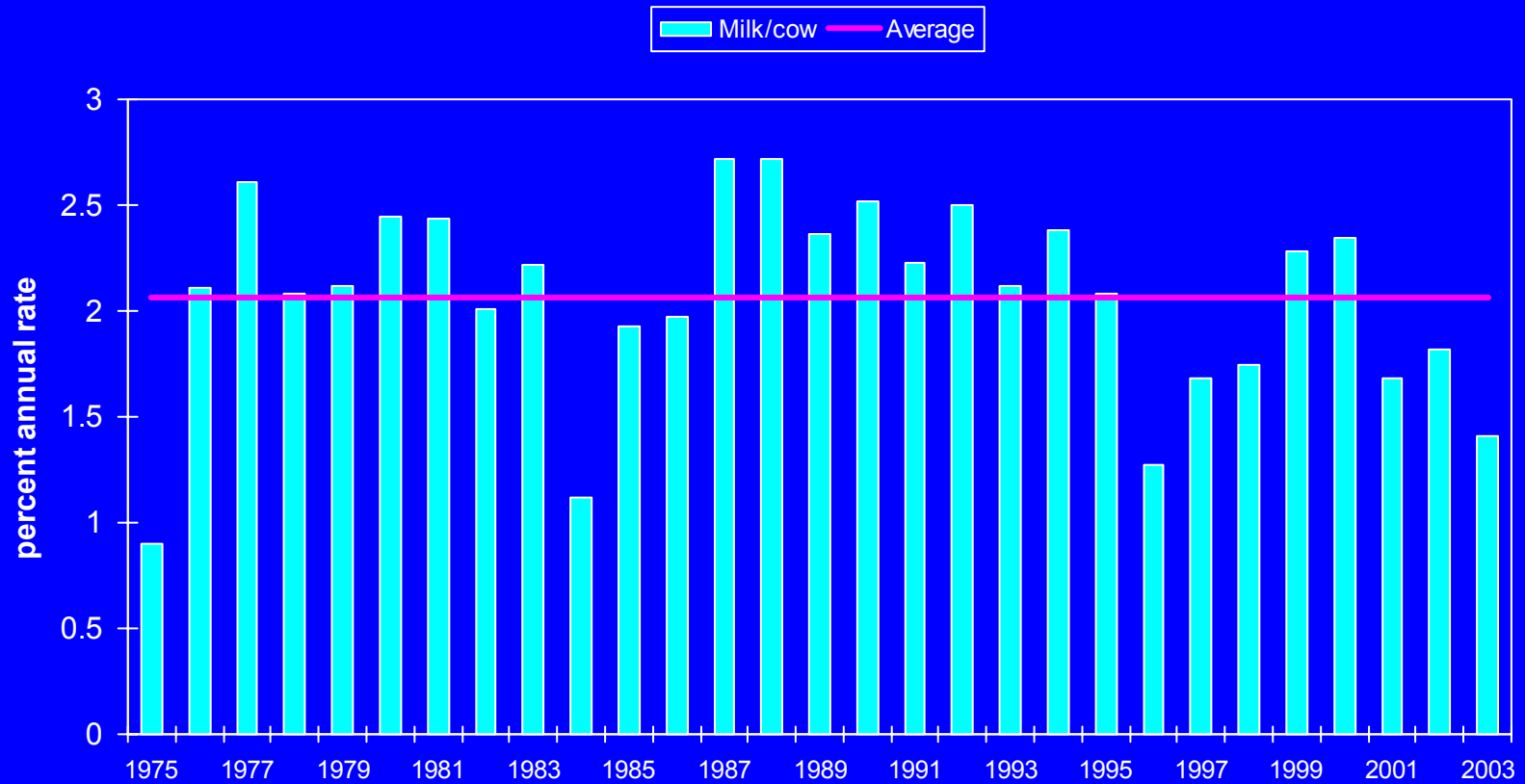


Milk per cow, 20 States

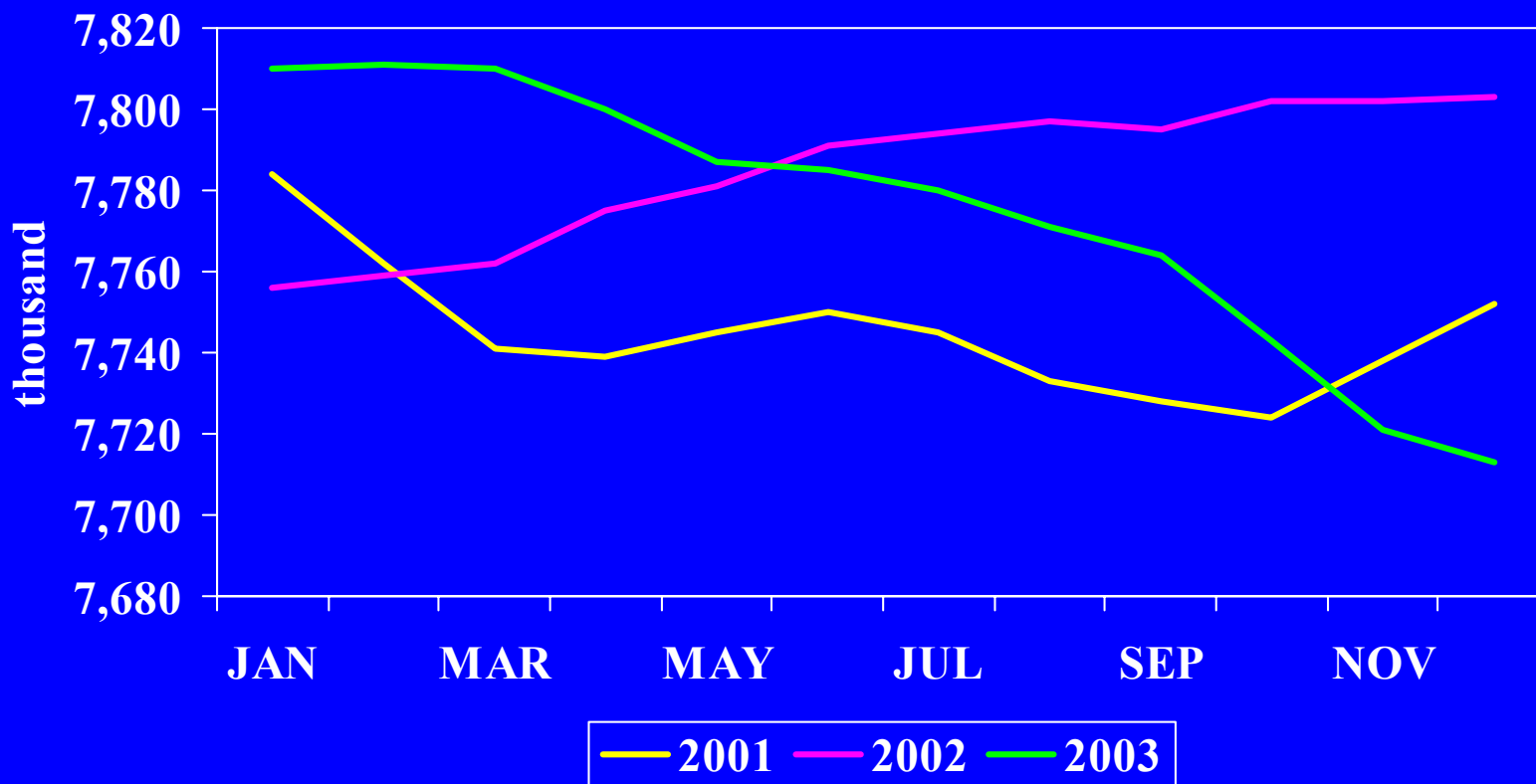


Growth in milk per cow

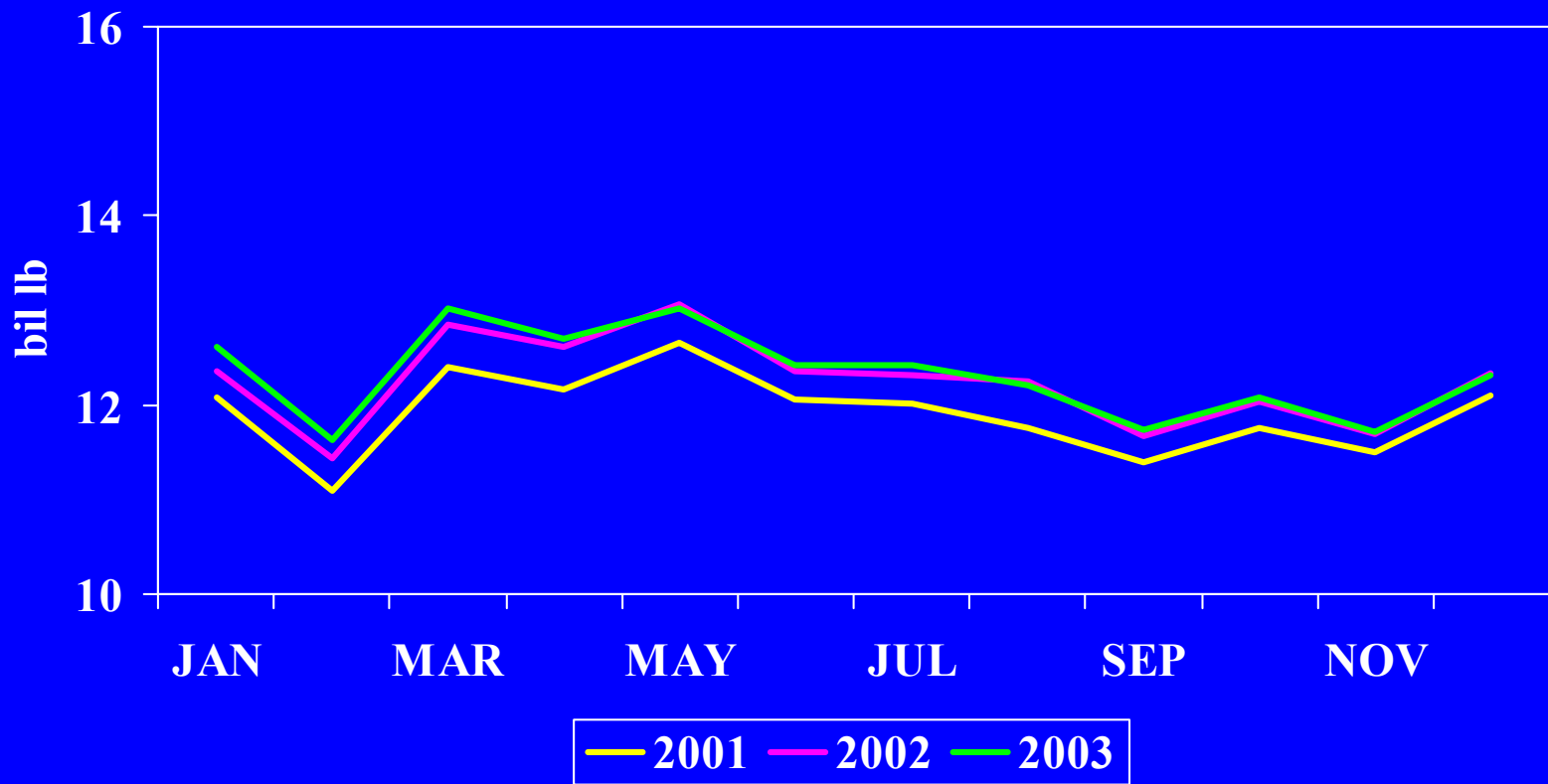
From 5-year moving average



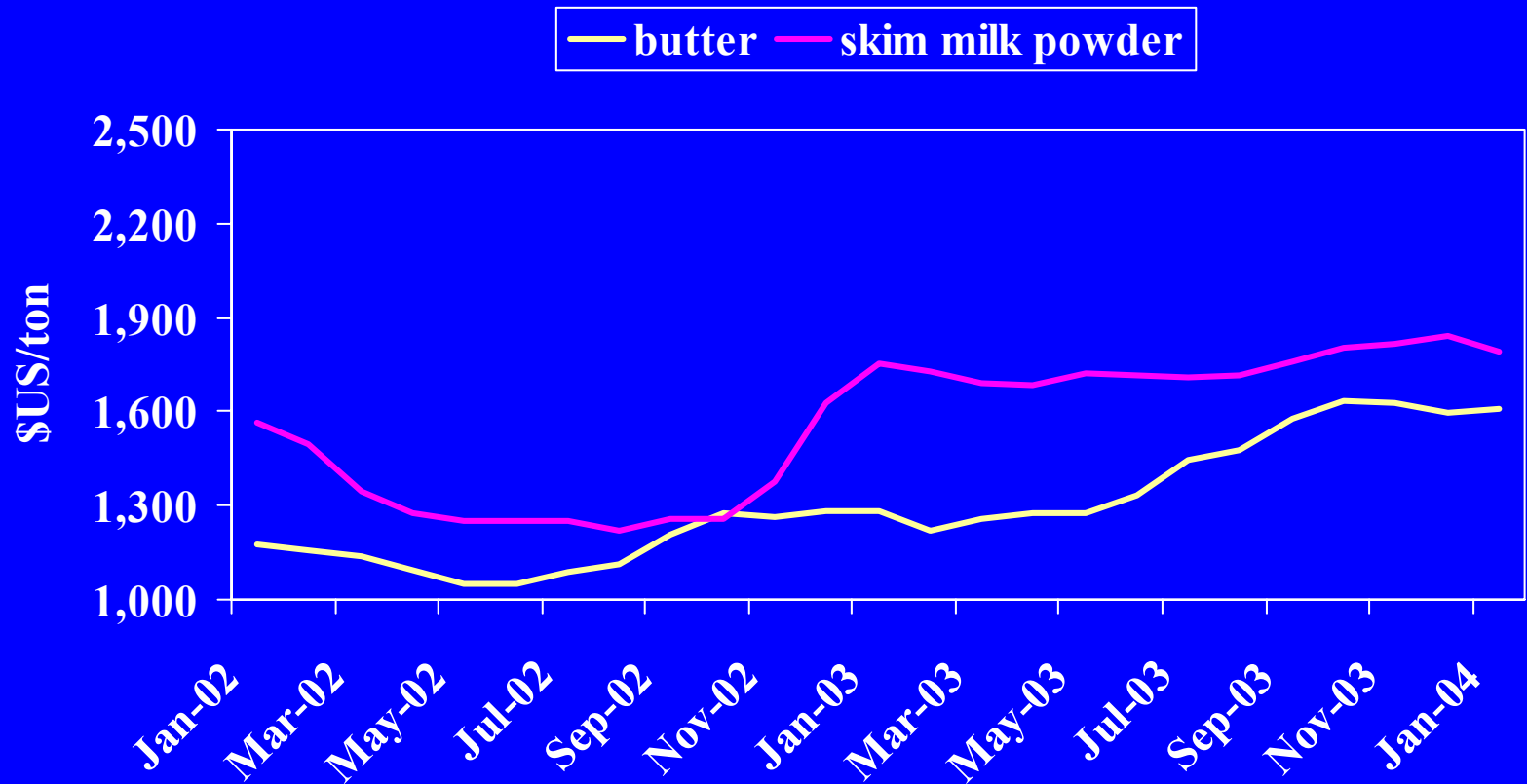
Milk cow numbers, 20 States



Milk production, 20 States



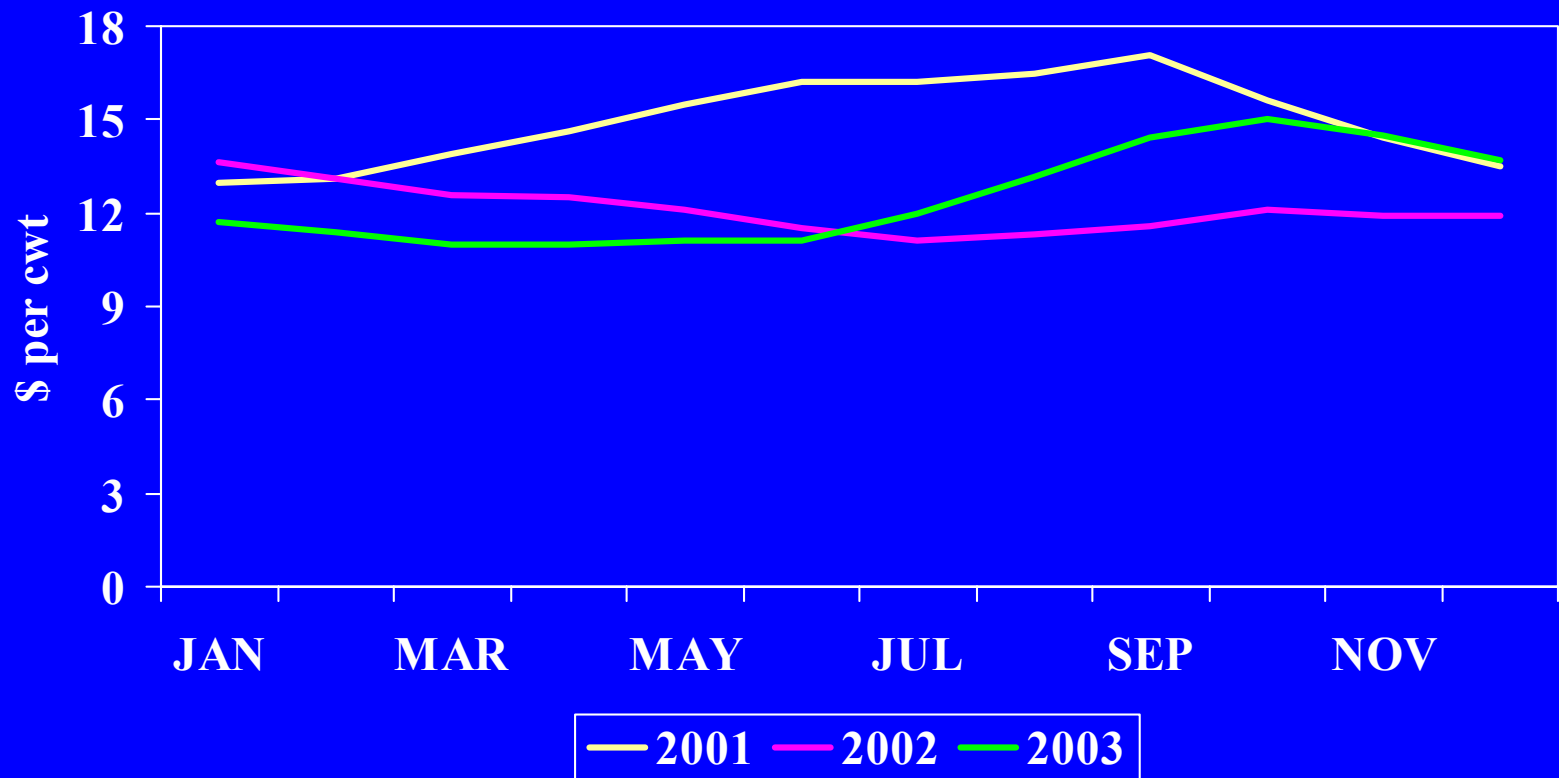
International dairy prices fob northern Europe



Manufacturing milk prices



All milk price



Retail dairy prices

