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AGRICULTURAL LETTER FEDERAL RESERVE BANK OF CHICAGO

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## **Milk production**

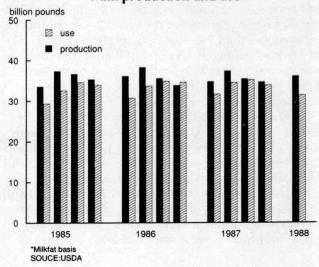
The year-to-year gains in milk production that began last August continued through the spring months. The start of the upturn last summer coincided with the ending of the herd liquidation phase of the Milk Termination Program. Implemented in the spring of 1986, the program was intended to trim the excess production capacity from the U.S. dairy industry. While price support purchases of manufactured dairy products by the Commodity Credit Corporation were trimmed, projections of continued large milk surpluses triggered a price support cut in January of this year. For all of this year, milk production is expected to reach a new record high, while commercial use of milk continues to show year-to-year increases. Net removals of manufactured dairy products from the market by the Commodity Credit Corporation, however, are projected to be up from a year ago as well.

Milk production in the twenty-one major producing states surveyed monthly has held above year-early levels through May. However, the margin of the increase has been trending down since earlier in the year. Milk output in the twenty-one states, which typically account for 85 percent of U.S. production, totaled just over 11 billion pounds in May, up less than 1 percent from a year earlier. The recent gain was considerably smaller than the 3.2 percent year-to-year increase that was registered in January. A larger gain of 6 percent was registered in February but that was due to the extra production day this year. For the first five months of the year, milk production has climbed 2.7 percent from the comparable period last year to more than 52.2 billion pounds in the twenty-one major producing states.

Milk production in the five states of the Seventh Federal Reserve District exhibited a similar trend of narrowing gains through the first five months of 1988. Milk production in District states, at 3.5 billion pounds in May, was virtually unchanged from the year-ago level. But production in District states for the five month period was up almost 3 percent from the same months last year. Increases from year-ago levels were registered in all of the District states except Indiana, where milk output for the five months was almost 1 percent lower than last year. Milk output in Wisconsin, which is the nation's leading producing state and accounts for almost two-thirds of District milk production, was up about 4 percent from the first five months of 1987.

The increase in milk production so far this year is attributable to greater productivity per cow which has more than offset year-to-year declines in the dairy herd. Output per cow in the twenty-one major producing states has ranged from almost 5 percent above a year ago in January to a less than 2 percent gain in May. The declining productivity gains reflect the downtrend in the milk-feed price ratio, a traditional indicator of the profitability of milk production. Dairy cows on farms have averaged 1.2 percent below year-ago levels during the first five months of 1988. However, the year-to-year declines have been narrowing as the dairy herd stabilizes. With these trends in place through the rest of 1988, milk production this year is expected to reach a new record of 145 billion pounds, up 1.8 percent from last year.

Commercial disappearance of milk is also expected to increase this year, continuing the trend of recent years. However, when measured on a milkfat basis, commercial disappearance through the first five months of 1988 is down about 1 percent from the year-earlier level. Analysts at the USDA attribute the decline to weakening sales of manufactured dairy products with a high milkfat content, while sales of nonfat and lowfat milk products remain relatively strong. Current projections of commercial disappear-



#### Milk production and use\*

ance for all of this year point to a year-to-year increase between 1 and 2 percent.

Given the weakness in sales of cream based products, CCC net removals of manufactured dairy products have risen sharply from year-ago levels when measured on a milkfat equivalent basis. This shift in the mix of manufactured dairy products purchased to support prices has contributed to an increase of almost 74 percent through May from the low level of the comparable period in 1987. For all of this year, USDA expects CCC net removals to total about 8 billion pounds on a milkfat equivalent basis, about a fifth higher than the previous year's level. At that level, net removals of manufactured dairy products would be equivalent to about 5.5 percent of milk production.

Milk prices have declined seasonally through the first five months of 1988, dropping almost 9 percent from the beginning of the year. In addition, milk prices have held well below year-ago levels, reflecting the 50 cent per hundredweight cut in the milk support price that was instituted in January. During the entire five month period, milk prices have averaged slightly more than 5 percent below the comparable months in 1987. For all of 1988, milk prices are expected to average almost 6 percent lower than last year. However, the effective decline will be somewhat less because of a smaller assessment on milk marketings this year. In 1987, milk producers were assessed 25 cents per hundredweight of milk marketed through September to help fund the Dairy Termination Program.

Drought and hot weather conditions through much of the nation have generated reports of reduced milk production and raised the possibility of higher feed costs cutting back on output later this year. A substantial reduction in output could result in lower CCC net removals of manufactured dairy products and preclude another milk price support cut in January of next year. In gauging the possible effect on output, the effect of droughts on milk production in both 1980 and 1983 appear to be small. In 1980, milk output rose 4.1 percent from a year earlier. While milk cow numbers averaged less than 1 percent higher than in 1979, output per cow averaged 3.5 percent higher than the previous year. Although productivity showed some decline during the summer months, output per cow continued to show year-to-year gains of 2.7 percent during the period. In 1983, milk production rose 3.1 percent for the year, as milk cow numbers averaged almost 1 percent higher and output per cow averaged 2.3 percent more than a year earlier. Although output and productivity gains slowed somewhat during the second half of that year due to weather conditions and rising feed costs, a deduction from milk marketing receipts beginning in April and another between September and November is responsible for exerting a

moderating force on output per cow as well. Output per cow and total milk production in the second half of 1988 may show smaller year-to-year gains than the first five months of the year in part due to heat and higher feed costs. However, the second half of 1987 was characterized by strong year-to-year gains in production and output per cow as the herd liquidation phase of the Dairy Termination Program ended, which will also tend to limit second half gains.

### U.S. agricultural trade

USDA analysts recently revised upward their estimates of U.S. agricultural exports. The latest estimates suggest that the value of U.S. agricultural exports in the fiscal year that ends in September will reach \$33.5 billion, up 20 percent from the previous year and 27 percent above the fiscal 1986 low. Export tonnage is expected to total 145.5 million metric tons, a 12.6 percent increase from last year and a third greater than the fiscal 1986 low. However, these latest revisions were made in the very early states of the drought and prior to the greater uncertainty associated with this year's production and escalating prices. While severe production declines as a result of the drought may reduce to tonnage of U.S. agricultural exports, the higher prices will tend to boost the overall value of exports.

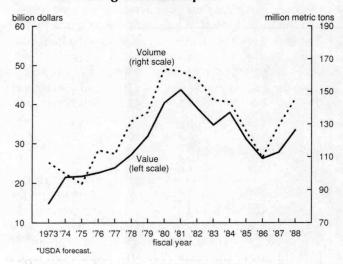
Much of the upward revision in the export forecast stemmed from expected larger sales of grains, with the Export Enhancement Program and tight supplies among some export competitors boosting the U.S. share of world grain trade. Wheat exports, after nearly doubling the year-earlier level in the first half of the fiscal year are expected to show an increase of 38 percent for the year. The sharp increase in wheat export tonnage this fiscal year is largely attributable to subsidies under the Export Enhancement Program.

Coarse grain exports, comprised primarily of corn, are forecast to show a 10 percent year-to-year increase in tonnage. Price competitiveness through most of the year and tight supplies among competing exporters have contributed to the rise. Exports of coarse grains through March outpaced year-earlier sales by more than 15 percent, with corn export tonnage up nearly a fifth from the first half of the previous year. The value of coarse grain exports in fiscal 1988 is forecast to reach \$4.6 billion, up almost 23 percent from last year.

Rather than the substantial gains expected in wheat and coarse grain exports, U.S. soybean exports are expected to show a slight drop in shipments. With a 6.8 percent increase from a year ago registered during the first half of fiscal 1987, soybean export tonnage was expected to drop with increased availability of supplies following Southern Hemisphere harvests. Soybean



#### **U.S. agricultural exports**



meal exports are forecast to be down about 7.5 percent, while exports of soybean oil are expected to almost double from the previous year's low level. Despite the tonnage declines in soybeans and meal, the value of soybean and soybean product exports is forecast to rise 18.5 percent from the fiscal 1987 level, approaching \$6.8 billion.

Other agricultural commodities are expected to contribute to this year's rise in export values as well. Exports of horticultural products are expected to total \$3.7 billion, registering a gain of 17 percent from last year in terms of both shipments and value, while higher prices are expected to boost the value of livestock, poultry, and dairy product exports by 11 percent to \$5.6 billion. An increase in export shipments of cotton and linters of almost 13 percent, combined with sharply higher prices, will boost the value of cotton exports 50 percent from last year's level.

Imports of agricultural products into the United States are forecast to rise about 2 percent from last year's level, about equalling the record level of fiscal 1986. During the first half of the fiscal year, agricultural imports rose 3 percent from the same months last year, totalling \$10.9 billion. Much of the first half increase was attributed to higher fruit and vegetable imports. For the year as a whole, however, fruit and vegetable imports are expected to remain at fiscal 1987 levels. The overall increase in agricultural imports this year is largely attributable to increased cocoa, rubber, and animal and animal product imports. Partially offsetting these increases, the value of coffee and sugar imports are projected to fall sharply from their year-earlier levels.

The continued increase in U.S. agricultural exports, although partially offset by the slight increase in imports, will boost the U.S. agricultural trade surplus by more than 70 percent from the previous year's level and more than 130 percent from the fiscal 1986 low. However, at \$12.5 billion the agricultural trade surplus would remain about half of the fiscal 1981 peak.

The United States maintains agricultural trade surpluses with most regions of the world. A projected surplus of \$9.9 billion with Asian countries in fiscal 1988 is by far the largest, but the United States also exports a significantly larger amount of agricultural products to Western Europe than it imports, with the surplus totaling \$3.1 billion this fiscal year. Trade surpluses of \$1.3 and \$1.8 billion are projected for Middle East and African countries this year as well. The most significant U.S. agricultural trade deficit exists with Latin America countries, which are forecast to export \$3.7 billion more in agricultural products to the United States this fiscal year than they will import.

#### Peter J. Heffernan

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# Selected Agricultural Economic Indicators

	Latest period	Value	Percent change from		
			Prior period	Year ago	Two years ago
Prices received by farmers (1977=100)	June	139	3.7	7	14
Crops (1977=100)	June	129	10.3	18	18
Corn (\$per bu.)	June	2.43	24.6	44	5
Oats (\$per bu.)	June	2.22	20.7	46	102
Soybeans (sper bu.)	June	8.56	22.5	60	266
Wheat (\$per bu.)	June	3.50	17.1	43	42
Livestock and products (1977=100)	June	147	-2.6	-1	10
Barrows and gilts (sper cwt.)	June	48.60	3.2	-20	-9
Steers and heifers (\$per cwt.)	June	70.10	-5.0	4	32
Milk (\$per cwt.)	June	11.30	-0.9	-5	-5
Eggs (¢per doz.)	June	45.7	6.0	-9	-10
Prices paid by farmers (1977=100)	April	168	1.8	4	6
Production items	April	155	2.0	4 5	7
Feed	April	112	0.0	11	-1
Feeder livestock	April	198	2.6	11	35
Fuels and energy	April	163	1.2	3	4
Producer Prices (1982=100)	May	108	0.6	2	4
Agricultural machinery and equipment	May	112	-0.1	2	2
Fertilizer materials	May	98	-1.8	10	10
Agricultural chemicals	May	107	0.5	5	5
Consumer prices (1982-84=100)	May	118	0.3	4	8
Food	May	117	0.3	3	8
Production or stocks					
Corn stocks (mil. bu.)	June 1	5.833	N.A.	-8	17
Soybean stocks (mil. bu.)	June 1	656	N.A.	-22	-23
Beef production (bil. lbs.)	May	1.92	4.1	4	-9
Pork production (bil. lbs.)	May	1.23	-2.5	15	2
Milk production (bil. lbs.)tt	May	11.0	4.2	1	-1

N.A. Not applicable Prior period is three months earlier. 21 selected states.

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