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Staff paper 263

November, 1986 Staff Paper No. 263

OVERVIEW OF THE U.S. DAIRY INDUSTRY IN THE NEXT FIVE YEARS

by

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EXECUTIVE SUMMARY

"Traumatic change" best characterizes the dairy industry of the future. The next five years will likely see the following changes in U.S. dairying:

1. 10% increase in production per cow-- to approximatley 14,500 pounds of milk annually, but a 5% decrease in the number of milk cows to approximately 10.5 million.
2. A 25% increase in the number of milk cows per farm to an average of of about 50. Future herd size in Wisconsin, where farmers raise much of their feed and roughage will increase from 46 currently to about 60 which is the maximum for a family operation. Over this level additional help must be hired, thereby increasing unit costs. California's current average of 193 milk cows per farm will likely increase to approximately 250 by 1990.
3. A one-eighth increase in the number of farms over 50 milk cows, but a 20% decrease in the number of dairy farms to approximately 220,000. Larger herd sizes -- 100 and over -- will eventually dominate in states where feed is purchased, and less labor is needed.
4. A 5% increase in milk production, from 143.7 billion pounds in 1985 to approximately 150 billion pounds in 1990, -- as production per cow increases faster than cow numbers decrease.

5. A one-third increase in volume of milk sold per farm -- to approximately 700,000 pounds annually.
6. A 5% increase in cash receipts to dairy farmers, to approximately $19 billion annually, -- reflecting relatively flat farm milk prices, and a 5% increase in milk production.
7. A marked increase in concentration of milk production, with major dairy states and a few others substantially increasing production, while others gradually decrease production because of relatively flat farm milk prices, continued pressure for less government support, and increased emphasis on supply management in government programs.
8. Continued major control by farmers and their organizations over farm milk marketing -- with cooperatives continuing to market approximately 80% of farm milk, as at present.
9. A 50% increase in the volume of milk handled per manufacturing milk plant, to approximately 60 million pounds annually, with a substantial increase in the number of plants handling over two million pounds of milk daily.
10. A 10% decrease in the number of cheese plants to approximately 600, and manufacturing plants to approximately 1,800, due to mergers and acquisitions, particularly by cooperatives, and expansion in capacity of new and existing plants by privates as well as cooperatives.
11. Conversion to about 90% Grade A farm milk, -- from 87% currently, and 80% a decade ago.
12. Virtually complete conversion from can to bulk tank procurement of farm milk, encouraged by increased production per farm.

13. A 20% increase in the volume of farm milk regulated by Federal Milk Orders, -- to approximately 115 billion pounds annually, representing an increase to 85% of Grade A milk, and 77% of all milk, as contrasted to 80% of Grade A milk and 70% of all milk at present. The increase in volume of milk regulated by Federal Milk Orders will result from three factors: (a) increased milk production; (b) continued shift of "unregulated" milk to Federal Orders in an attempt to gain more farm milk price protection; and (c) continued shift from "State" Milk Order regulation to "Federal" Milk Order regulation, also in an attempt to gain more farm milk price protection. Only 13 states currently regulate farm milk prices, compared to 18 in 1975, and only 6 states currently regulate wholesale and retail prices compared to 14 in 1975.

However, even though the volume of milk regulated by Federal Milk Orders will increase substantially, the number of Federal Orders will decrease. This decrease will occur because there will be more interregional Orders, with mergers reducing the present 44 to less than 40.

14. A possible $2.00 per cwt (17%) decrease to $9.60 per cwt in the price support level for farm milk, -- and therefore farm milk prices, by 1990, if present dairy legislation stays in effect. However, strong pressures will develop to replace current dairy legislation with some form of supply management, to discourage unneeded increases in milk production without substantial decreases in farm milk prices. Nevertheless, the prospects for significant increases in farm milk prices are dim because of the surplus milk situation. At best farm milk prices will remain fairly stable, but more likely will decrease moderately, until milk surpluses can be reduced.

However, Government involvement in maintaining income to dairy farmers will continue irrespective of budget pressures and the party in office, because of the political power of farm groups, and the political importance of food.

15. A favorable milk-feed price ratio, as high or higher than the 1985 average of 1.52, reflecting heavy grain production, in turn encouraging heavier farm feeding and upward pressure on milk production even with flat or falling farm milk prices.

16. A 5% increase in per capita consumption of milk equivalent to approximately 625 pounds annually, primarily reflecting at least a 20% increase in per capita natural cheese consumption, and 5% increases in per capita consumption of butter and ice cream. However, increased use of imitation dairy products will occur, particularly imitation cheese, which will increase to a level of approximately 7% of total cheese consumption.

    All in all, however, per capita consumption of milk equivalent and hence total commercial demand, will increase by at least one-half of the 11% increase in the past 5 years. Continuation of the $200 million annual dairy promotion expenditures by dairy farmers will be a further plus for increased cheese and overall dairy sales.

17. Continued government discouragement of excess dairy imports through import quotas, as a way of preventing further declines in farm milk prices. Also, increased government export subsidization of dairy products to counter EEC, Australian, and New Zealand export assistance, which has reduced world prices of some dairy products to one-half or less of U.S. prices, can be expected.

EEC instituted a five year milk production quota system in April 1984 which turned a 3-4% annual increase in milk production in 1982 and 1983 into a 5% decrease by 1985. Since this was not enough to solve the EEC milk surplus problem, production quotas are being reduced 2% in 1987/88, and a further 1% in 1988/89.

In an attempt to reduce dairy surpluses Australian domestic support prices for dairy products will be phased down to the export price for each product plus 30%, for the next six years.

New Zealand imposed a ban on new entrants into dairy farming in June, 1985, renewed the ban in June, 1986, and is currently working out details of an industry financed dairy herd buyout program.

Therefore, competition from EEC, Australian, and New Zealand subsidized dairy exports will be less in the next five years than it has been in the past five years. However, dairy export competition will still be severe during the next five years because of likely continued EEC, Australian, and New Zealand milk surpluses, even with their corrective measures. Thus they will likely continue some type of direct or indirect dairy export subsidy program.

As a result some increase in U.S. commercial dairy exports is likely in the next five years. However, they will not greatly exceed the current level of only about 2% of U.S. milk production. Therefore, dairy exports, -- particularly cheese exports,will continue to be only a very minor portion of total dairy product sales for U.S. dairy firms. Utilization of governmental export assistance programs offers the best prospect for U.S. firms to increase dairy exports during the coming five years, because of likely continued export subsidization by EEC, Australia and New Zealand.

However, U.S. firms will likely continue to enjoy considerable protection against most imported dairy products during the coming five years. Milk equivalent import quotas were only 1.6% of U.S. milk production, and cheese import quotas were only 4.8% of U.S. cheese production in 1985, and will likely remain low for the foreseeable future.

Table 1

Milk Production, Major Dairy States, 1985, and Increase 1980/85

Top 10 Milk Producing States[a]	U.S. Rank	1985 Production Bil. Pds.	1985 Production % of U.S.	1980/85 Increase Mil. Pds.	1980/85 Increase %[b]
WI	1	25.1	17.5	2,727	10.9
CA	2	16.7	11.6	3,157	18.9
NY	3	11.7	8.1	772	6.6
MN	4	10.8	7.5	1,305	12.0
PA	5	10.0	7.0	1,487	14.9
MI	6	5.6	3.9	598	10.7
OH	7	4.9	3.4	560	11.5
IA	8	4.1	2.9	(50)	(1.2)
TX	9	4.0	2.8	343	8.6
WA	10	3.8	2.6	808	21.6
States with Major Production Increases[c]					
ID	13	2.4	1.7	474	19.6
NM	32	1.1	.8	474	44.1
AZ	24	1.3	.9	317	23.5
IL	12	2.8	1.9	274	9.7
OR	23	1.4	1.0	269	18.7
CO	31	1.1	.8	247	22.4
IN	14	2.4	1.7	205	8.5
ND	30	1.1	.8	176	15.8
MD	22	1.7	1.2	162	9.6
VA	18	2.1	1.5	128	6.1
U.S.		143.7		15,142	10.5

a/ Excluding Alaska and Hawaii -- procedure followed throughout the study on all comparisons.

b/ Increase as a percent of 1985 volume. This procedure is followed throughout the study.

c/ Other than those included in the "top 10 milk producing states."

Table 1 (continued)

Milk Production Various U.S. Regions, 1985, and Increase 1980/85

Region	1985 Production Bil. Pds.	1985 Production % of U.S.	1980/85 Increase Mil. Pds.	1980/85 Increase %[b]
Northeast[a]	28.7	20.0	2,588	9.0
Lake States[b]	41.5	28.9	4,630	11.2
Corn Belt[c]	17.0	11.8	1,033	6.1
Northern Plains[d]	5.5	3.8	281	5.1
Appalachian[e]	8.7	6.1	274	3.2
Southeast[f]	4.4	3.1	(75)	(1.7)
Delta States[g]	2.6	1.8	56	2.1
Southern Plains[h]	5.1	3.6	416	8.1
Mountain[i]	7.8	5.4	1,706	21.8
Pacific[j]	21.9	15.3	4,234	19.3
Alaska-Hawaii	.2	.2	(1)	(.6)

a/ ME, NH, VT, MA, RI, CN, NY, NJ, PA, DE, MD.
b/ MI, WI, MN.
c/ OH, IN, IL, IO, MO.
d/ ND, SD, NE, KS.
e/ VA, WV, NC, KY, TN.
f/ SC, GA, FL, AL.
g/ MI, AK, LA.
h/ OK, TX.
i/ MT, IA, WY, CO, NM, AZ, UT, NV.
j/ WA, OR, CA.

Significance of Table 1 Milk Production Data

Forty states increased milk production, and only eight, (IO, TN, GA, KS, LA, AL, NJ and RI) decreased production during the past 5 years. All of the top 10 milk producing states except IO (WI, CA, NY, MN, PA, MI, OH, TX, and WA) had substantial increases in milk production, accounting for 78% of the U.S. increase in U.S. production in the past 5 years. The 10 states (outside the top 10) with the largest increases in milk production during the past 5 years were Idaho, New Mexico, Arizona, Illinois, Oregon, Colorado, Indiana,

North Dakota, Maryland, and Virginia. Together these 20 states accounted for 95% of the total national increase in milk production in the 1980/85 period.

Wisconsin and California in particular are rapidly increasing milk production, with their increase accounting for almost two-fifths (39%) of the U.S. production increase in the past five years.

Even though milk produciton has been generally increasing throughout the country, greater concentration of milk production is likely to occur during the coming 5 years because of likely stagnant farm milk prices, and emphasis on supply management in government support programs. Therefore increased specialization in dairying is likely. Areas with greater comparative advantage in other agricultural products will be shifting into them as contrasted to increasing milk production as in the past. Therefore dairying will become more concentrated geographically then it now is, with most of the top 10 milk producing states and states with major production increases becoming more prominent. Also, the midwest is <u>not</u> likely to be replaced by the Pacific area, as the dominant dairy area. Midwest milk production cash expenses at $10.07 per cwt. (in 1984) were the lowest in the country, -- and $.26 per cwt. below the Pacific area. The midwest also had a larger increase in milk production in the past 5 years than the Pacific area did, --+4.6 billion pounds for the 3 Lake States, -- (Michigan, Minnesota and Wisconsin) compared to +4.2 billion pounds for the 3 states in Pacific area (California, Oregon and Washington).

Table 2

Dairy Herd Size, Major Dairy States, 1985, and Increase 1980/85

Top 10 States In Herd Size 1985	Average Number Milk Cows Per Farm 1985	Remaining Top 10 Milk Prod. States 1985	Average Number Milk Cows Per Farm 1985	Remaining States with Major Prod. Increases 1985	Average Number Milk Cows Per Farm 1985	Top 10 States in Herd Size Increase 1980/85 State	Inc. No.	Inc. %
CA	193	WI	46	ID	40	FL	43	52.9
FL	124	MI	44	IL	40	CA	33	20.7
AZ	96	MN	40	ND	29	NM	23	91.4
WA	65	PA	35	OR	26	AK	20	156.8
CT	59	OH	35	IN	25	AL	17	125.2
NY	57	IA	34	VA	25	CT	15	34.6
MD	56	TX	34	CO	24	WA	15	29.9
GA	53					GA	14	35.0
VT	53					MA	14	43.0
NM	48					NC	13	84.7
U.S.	40					U.S.	8	25.0

Significance

Three of the top 10 milk producing states -- California, New York and Washington, and two of the remaining states with major production increases -- Arizona and Maryland, are also leaders in herd size. Herd size in the top 10 states ranges from 48 in New Mexico, to 193 in California, and in top producing states from 34 in Texas to 46 in Wisconsin. Six of the top 10 states in herd size also had the largest increases in herd size in the past 5 years, (CA, FL, NM, WA, CT, and GA).

Table 3

Average Daily Milk Production Per Farm, Major Dairy States, 1985, and Increase 1980/85

Top 10 States In Production Per Farm 1985	Daily Prod. Per Farm Pds. 1985	Remaining Top 10 Milk Prod. States 1985	Daily Prod. Per Farm Pds. 1985	Remaining States with Major Prod. Increases 1985	Daily Prod. Per Farm Pds. 1985	Top 10 States In Prod. Per Farm Increase 1980/85 State 1985	Inc. Pds. 1985	Inc. %
CA	8817	MI	1695	ID	1579	CA	2174	32.7
AZ	4103	WI	1678	IL	1307	FL	1573	65.1
FL	3988	PA	1302	OR	1037	NM	1189	129.8
WA	3022	MN	1291	CO	917	WA	1007	50.0
CT	2124	OH	1213	VA	886	AR	615	196.0
NM	2106	TX	1144	ND	873	AL	602	180.2
MD	2095	IA	1059	IN	817	CT	599	39.3
NY	1950					AZ	573	16.2
VT	1876					MD	552	35.8
NV	1822					NC	551	107.2

U.S. Regions	Daily Prod. Per Farm Pds. 1985	1980/85 Increase Pds.	%
N.E.	1621	305	23.2
Lake States	1558	303	24.2
Corn Belt	1003	205	25.7
N. Plains	876	256	41.3
Appalachian	810	276	51.7
S.E.	1701	758	80.3
Delta States	890	403	82.9
S. Plains	954	221	30.1
Mountain Sts.	1325	446	50.7
Pacific	4844	1478	43.9
Ak-Hi	2808	(669)	(19.2)
U.S.	1439	388	37.0

Significance of Table 3 Milk Production Per Farm Data

Dairy Herd Size, Major Dairy States, 1985, and Increase 1980/85

California, Arizona and Florida led continental U.S. in milk production per farm with average daily production of 8817, 4103, and 3988 pounds, respectively in 1985, ... as contrasted to the U.S. average of 1439 pounds. Three of the top 10 milk producing states (California, Washington, and New York) along with three of other states with major production increases (Arizona, Maryland, and New Mexico) are in the top 10 in milk production per farm. The remaining leading states in total milk production had a range in daily produciton per farm from 1059 pounds in Iowa, to 1695 pounds in Michigan. "Major increasing production" states had a range in daily production per farm from 817 pounds in Indiana, to 1579 pounds in Idaho.

California, Florida, New Mexico, and Washington had the largest increases in production per farm in the past 5 years, ... an average of 1486 pounds, compared to 388 pounds for the U.S. as a whole. The Pacific region with a 1478 pound increase, and Southeast region with a 758 pound increase had far and away the largest increases in daily production per farm for U.S. regions.

Daily production per farm impacts substantially on milk procurement costs, and also reflects dairy farm "commercialization", and is therefore of major significance to dairy plant operations.

Table 4

Milk Cows, and Milk Production Per Cow, Major Dairy States, 1985, and Increase 1980/85

Top 10 States In Prod. Per Cow 1985	Number Milk Cows (000) 1985	1980/85 Increse in Milk Cows No. (000)	%	Production Per Cow Pounds 1985	1980/85 Increase in Prod. Per Cow Pounds	%
WA	222	21	9.5	16,892	2,255	13.4
CA	1,004	108	10.8	16,667	1,514	9.1
NM	67	22	32.8	16,060	2,682	16.7
AZ	86	11	12.8	15,674	1,927	12.3
OR	100	5	5.0	14,380	2,075	14.4
DE	10	0	0	14,282	2,263	15.9
ID	170	16	9.4	14,241	1,598	11.2
CO	78	7	9.0	14,167	2,082	14.7
NV	19	4	21.1	14,149	(444)	(3.1)
MI	394	(1)	(.3)	14,132	1,550	11.0
Remaining Top 10 Milk Producing States						
WI	1,876	61	3.3	13,383	1,052	7.9
NY	948	37	3.9	12,390	344	2.8
MN	915	53	5.8	11,847	786	6.6
PA	740	29	3.9	13,491	1,542	11.4
MI	394	(1)	(.3)	14,132	1,550	11.0
OH	388	13	3.4	12,552	1,059	8.4
IA	352	(24)	(6.7)	11,528	602	5.2
TX	319	2	.6	12,439	1,004	8.1

Table 4 (continued)

Milk Cows, and Milk Production Per Cow, Major Dairy States, 1985, and Increase 1980/85

Top 10 States In Prod. Per Cow	Number Milk Cows (000) 1985	1980/85 Increse in Milk Cows No. (000)	%	Production Per Cow Pounds 1985	1980/85 Increase in Prod. Per Cow Pounds	%
Remaining States With Major Prod. Increases						
IL	234	1	.5	12,026	1,125	9.4
IN	202	1	.5	11,955	960	8.0
ND	101	8	7.9	11,040	943	8.5
MD	123	0	0	13,675	1,317	9.6
VA	164	(7)	(4.3)	12,817	1,273	9.9
U.S.	11,025	215	2.0	13,031	1,142	8.8

Table 4 (continued)

Milk Cows and Milk Production Per Cow Various U.S. Regions, 1985, and Increase 1980/85

U.S. Regions	Number Milk Cows Cows (000)	1980/85 Increase in Milk Cows No. (000)	%	Production Per Cow Pounds	1980/85 Increase in Prod. Per Cow Pounds	%
Northeast	2,224	58	2.6	12,917	849	6.6
Lake States	3,185	113	3.6	13,035	1,028	7.9
Corn Belt	1,408	(34)	(2.4)	12,093	1,002	8.3
Northern Plains	485	(11)	(2.3)	11,410	820	7.2
Appalachian	767	(31)	(4.0)	11,329	783	6.9
Southeast	388	(45)	(11.6)	11,523	1,024	8.9
Delta States	263	(30)	(11.4)	10,000	1,215	12.2
Southern Plains	429	1	.2	12,007	944	7.9
Mountain Sts.	543	64	11.8	14,433	1,633	11.3
Pacific	1,326	134	10.1	16,532	1,694	10.2
Ak-Hi	13	(1)	(7.7)	12,615	830	6.6

Significance of Table 4 Milk Cow and Production Per Cow Data

The number of milk cows in the U.S. increased 2%, and milk production per cow increased 8.8% in the past five years 1980-1985, compared to a 10% increase in each in Pacific area states, and a 11% increase in each in Mountain area states. Eight of the top 10 states in milk production per cow are Western states, all of which also had large increases in the number of milk cows, and with one exception (Nevada) had large increases in milk production per cow. Washington, California, New Mexico, and Arizona rank highesrt in milk production per cow, and

also rank high in increases in the number of milk cows, and increased production per cow in the past five years.

Midwest states did not have as large increases in the number of milk cows, and production per cow, as Western states did in 1980-85. Five of ten U.S. regions had decreases in the number of milk cows (Corn Belt, Northern Plains, Appalachian, Southeast and Delta States).

Western "increases" will likely taper off in the next 5 years as farm milk prices recede, or become more static. Nevertheless, substantial increases in the number of milk cows and production per cow in the past 5 years, will put the Western states in a strong competitive position for the future, and in turn offer competitive advantages to dairy plant operators.

Table 5

Farms With Milk Cows, Major Dairy States, 1985, and Decrease 1980/85

Top 10 Milk Producing States	Number Farms With Milk Cows 1985	1980/85 Decrease in Farms No.	%	States With Major Production Increases	Number Farms with Milk Cows 1985	1980/85 Decrease in Farms No.	%
WI	41,000	4,000	8.9	ID	4,200	200	4.6
CA	5,200	400	7.1	NM	1,400	400	22.2
NY	16,500	2,500	13.2	AZ	900	(100)	(12.5)
MN	23,000	3,000	11.5	IL	5,900	600	9.2
PA	21,000	1,000	4.6	OR	3,800	1,000	20.8
MI	9,000	500	5.3	CO	3,300	800	19.5
OH	11,000	1,600	12.7	IN	8,100	(300)	(3.9)
IA	10,500	3,500	25.0	ND	3,500	700	16.7
TX	9,500	2,500	20.8	MD	2,200	500	18.5
WA	3,400	600	15.0	VA	6,500	3,000	31.6
U.S. Regions							
N.E.	48,560	5,800	10.8				
Lake States	73,000	7,500	9.3				
Corn Belt	46,500	8,400	15.3				
N. Plains	17,300	5,900	25.4				
Appalachian	29,400	13,800	31.9				
S.E.	7,200	6,000	45.4				
Delta States	8,100	6,400	44.1				
S. Plains	14,800	2,900	16.4				
Mountain Sts.	16,200	2,900	15.2				
Pacific	12,400	6,000	13.9				
Ak-Hi	160	(30)	(23.1)				
U.S.	273,620	61,650	18.4				

Significance of Table 5 Dairy Farm Data

The number of farms with milk cows decreased in 45 of the 48 continental states, during the past five years, -- with a total U.S. decrease of 18%. Only two states, -- Arizona and Indiana, had increases in the number of dairy farms. The largest relative decreases occurred in Southeastern, Appalachian and Delta States, while the smallest relative decreases were in Lake, Northeast, and Pacific States. The smallest decreases in major dairy states were Pennsylvania and Idaho 4.6%, Michigan 5.3%, California 7.1%, and Wisconsin 8.9%.

Table 6

Average Farm Milk Price, Various States and Regions, 1985

Top 10 Farm Milk Price States	$ Per Cwt.	Remaining Top 10 Milk Producing States	$ Per Cwt.	Remaining States with Major Production Increases	$ Per Cwt.	U.S. Regions	$ Per Cwt.
FL	16.50	WI	12.27	ID	12.10	N.E.	13.35
SC	15.40	CA	12.18	NM	13.10	Lake Sts.	12.34
NC	14.50	NY	12.80	AZ	13.70	Corn Belt	12.60
AL	14.50	MN	12.05	IL	12.70	N. Plains	12.38
LA	14.10	PA	13.10	OR	12.80	Appalachian	13.42
GA	14.10	MI	12.70	IN	12.80	S.E.	15.13
CO	14.00	OH	12.80	ND	11.40	Delta Sts.	13.90
MS	13.80	IO	12.20	MD	13.10	S. Plains	13.60
AK	13.80	WA	12.40	VA	13.40	Mt. Sts.	12.93
TX	13.80					Pacific	12.46
						Ak-Hi	19.93
U.S. Ave.	$12.75						

Significance

Farm milk prices are generally substantially higher in Southeastern and Southern States than in other parts of the country, -- approximately $2.00 per cwt. above major milk producing states and major increasing milk producing states.

Table 7

Change In Average Farm Milk Price, Various States, and Regions, 1980/85

Top 10 Farm Milk Price States	Change $ Per Cwt.	Change %	Remaining Top 10 Milk Producing States	Change $ Per Cwt.	Change %	Remaining States with Major Production Increases	Change $ Per Cwt.	Change %
FL	+.70	+4.2	WI	-.40	-3.3	ID	- .10	- .8
SC	+.90	+5.8	CA	-.70	-5.8	NM	-1.00	-7.6
NC	+.50	+3.5	NY	-.20	-1.6	AZ	+ .30	+2.2
AL	+.10	+ .7	MN	-.35	-2.9	IL	- .20	-1.6
LA	0	0	PA	-.50	-3.8	OR	- .30	-2.3
GA	+.10	+ .7	MI	-.50	-3.9	IN	- .20	-1.6
CO	0	0	OH	-.20	-1.6	ND	- .40	-3.5
MS	0	0	IA	-.40	-3.3	MD	- .50	-3.8
AK	+.30	+2.2	WA	-.30	-2.4	VA	+ .10	+ .8
TX	-.10	- .7						

U.S. Regions		
N.E.	-.21	-1.6
Lake States	-.42	-3.4
Corn Belt	-.22	-1.8
N. Plains	-.13	-1.0
Appalachian	+.14	+1.0
S.E.	+.45	+3.0
Delta Sts.	+.10	+ .7
S. Plains	-.15	-1.1
Mt. Sts.	-.13	-1.0
Pacific	-.43	-3.5
Ak-Hi	+2.12	+10.6
U.S. Ave	- .25	-2.0

Significance

Farm milk prices generally increased in Southeastern states in the past five years, but decreased in most other states and regions.

Table 8

Total Cheese Excluding Cottage Cheese Production, and Number of Cheese Manufacturing Plants, By States, 1985, and Change 1980/85

State	Production Mil. Pds. 1985	1980/85 Change In Production Mil. Pds.	%	Number of Plants 1985	1980/85 Change In Number of Plants No.	%
WI	1,778.3	+294.0	+16.5	284	-50	- 17.6
MN	595.1	+ 82.7	+13.9	24	- 8	- 33.3
NY	449.0	+129.4	+28.8	43	- 2	- 4.7
CA	374.2	+192.7	+51.5	45	+ 9	+ 20.0
IA	233.6	+ 29.0	+12.4	13	0	0
PA	165.5	+ 64.2	+38.8	25	+ 3	+ 12.0
MO	141.4	+ 40.6	+28.7	13	+ 2	+ 15.3
ID	140.4	+ 31.0	+22.1	13	- 1	- 7.7
SD	131.8	+ 53.0	+40.2	17	+ 1	+ 5.9
OH	106.6	+ 11.4	+10.7	16	- 6	- 37.5
VT	105.2	+ 25.4	+24.1	12	+ 1	+ 8.3
IL	104.9	+ 6.4	+ 6.1	22	- 2	- 9.1
NE	82.0	+ 11.6	+14.1	12	0	0
UT	71.1	- .6	- .8	10	0	0
ND	54.0	+ 5.8	+10.7	8	- 2	- 25.0
KY	52.4	- 7.1	+13.5	8	- 3	- 37.5
WA	51.9	+ 6.8	+13.1	7	0	0
MI	51.4	+ 16.1	+31.3	15	- 1	- 6.7
IN	45.1	- .1	- .2	6	0	0
NJ	43.4	+ 15.1	+34.8	8	0	0
KS	36.4	+ 5.8	+15.9	8	- 2	-25.0
OR	31.2	- 3.5	-11.2	5	- 1	-20.0
AK	23.2	+ 3.2	+13.8	3	- 1	-33.3
TN	20.5	- 11.6	-56.6	4	- 4	100.0
MI	12.6	+ 3.8	+30.2	4	0	0
VA	6.4	- .5	- 7.8	1	0	0
CT	5.2	+ .9	+17.3	7	+ 1	+14.3
Other	112.1	+ 41.3	+36.8	36	+ 8	+22.2
U.S.	5,024.9	+1,041.8	+20.7	669	-68	-10.2

Significance of Table 8 Cheese Production and Plant Data

Cheese production is heavily concentrated in nine states, (Wisconsin, Minnesota, New York, California, Iowa, Pennsylvania, Missouri, Idaho, and South Dakota). Together these states manufacture 80% of U.S. cheese production. California, Pennsylvania and South Dakota have had the largest relative increase in cheese production in the past five years. These states also had an increase in the number of cheese manufacturing plants in the past 15 years, while most other states had decreases.

Table 9

Number of Dairy Manufacturing Plants, Various States and Regions, 1985

Top 10 Milk Producing States	Number	Other Major Increasing Prod. States	Number	U.S. Regions	Number
WI	400	ID	21	N.E.	443
CA	271	NM	3	Lake States	530
NY	166	AZ	8	Corn Belt	286
MN	72	IL	82	N. Plains	81
PA	105	OR	22	Applachian	113
MI	58	CO	21	S.E.	63
OH	84	IN	38	Delta States	51
IA	41	ND	17	S. Plains	65
TX	46	MD	18	Mountain Sts.	103
WA	26	VA	18	Pacific Sts.	319
U.S.	2,061			Ak-Hi	7

Significance

Although the 14 Lake and Northeast states together have almost one-half of U.S. dairy manufacturing, plants, the three Pacific states alone have about one-sixth of U.S. dairy manufacturing plants.

Table 10

Change in Number of Dairy Manufacturing Plants
Various States and Regions 1980/85

Top 10 Milk Producing States	Change Number	Change %	Other Major Increasing Prod. States	Change Number	Change %	U.S. Regions	Change Number	Change %
WI	-25	-6.3	ID	-4	-19.1	N.E.	-23	-5.2
CA	+8	+3.0	NM	-2	-66.7	Lake States	-48	-9.1
NY	+2	+1.2	AZ	-5	-62.5	Corn Belt	-46	-16.1
MN	-16	-22.2	IL	-4	-4.9	N. Plains	-28	-34.6
PA	+1	+1.0	OR	-4	-18.2	Applachian	-6	-5.3
MI	-7	-12.1	CO	-7	-33.3	S.E.	-9	-14.3
OH	-23	-27.4	IN	-3	-7.9	Delta Sts.	-11	-21.6
IA	-15	-36.6	ND	-7	-41.2	S. Plains	-1	-1.5
TX	0	0	MD	-1	-5.6	Mountain Sts.	-20	-19.4
WA	-8	-30.8	VA	-1	-5.6	Pacific Sts.	-4	-1.3
U.S.	-196					Ak-Hi	0	0

Significance

The number of dairy manufacturing plants decreased in all areas of the country in the past 5 years, but increased in California, Pennsylvania and New York. The largest decreases occurred in Corn belt, Northern Plains, Mountain, and Delta states.

Table 11

—U.S. milk production costs and returns, by selected items

Item	1981	1982	1983	1984 1/	1985 2/	1986 2/	1987 2/
				Dollars per cwt 3/			
Cash receipts:							
Milk	13.69	13.52	13.50	13.37	12.67	12.31	12.39
Cull cows, calves, and replacement sales	1.25	1.14	1.09	1.07	1.05	1.13	1.21
Total cash receipts 4/	14.94	14.66	14.59	14.44	13.72	13.44	13.60
Cash expenses:							
Feed	4.85	4.72	4.83	4.85	4.61	4.57	4.43
Other variable expenses	2.60	2.67	3.10	3.17	2.78	2.60	2.58
Total variable expenses 5/	7.45	7.39	7.93	8.02	7.39	7.17	7.01
Total fixed expenses 6/	2.29	2.51	2.52	2.48	2.23	2.20	2.17
Total cash expenses	9.74	9.90	10.45	10.50	9.62	9.37	9.18
Receipts less cash expenses	5.20	4.76	4.14	3.94	4.10	4.07	4.42
Capital replacement	1.64	1.57	1.58	1.56	1.57	1.58	1.57
Receipts less cash expenses and replacement	3.56	3.19	2.56	2.38	2.53	2.49	2.85
Economic costs:							
Variable expenses 5/	7.45	7.39	7.93	8.02	7.39	7.17	7.01
General farm overhead	.49	.60	.61	.61	.60	.61	.63
Taxes and insurance	.37	.35	.36	.34	.34	.35	.36
Capital replacement	1.64	1.57	1.58	1.56	1.57	1.58	1.57
Allocated returns to owned inputs:							
Operating capital (equity)	.15	.12	.12	.12	.11	.10	.09
Other nonland capital	1.10	1.04	.98	.96	.96	.97	.96
Land	.37	.36	.37	.36	.30	.29	.29
Unpaid labor	1.46	1.51	1.49	1.52	1.46	1.43	1.42
Total economic costs	13.03	12.94	13.44	13.49	12.73	12.50	12.33
Residual to mgmt. and risk	1.91	1.72	1.15	.95	.99	.94	1.27
Net returns to owned inputs	4.99	4.75	4.11	3.91	3.82	3.73	4.03

Forecast assumptions—Milk price support level held at $11.60 per cwt through 1987. Feed costs per cwt of milk production declining over the 1985-87 period by up to 9 percent from the 1984 level. Milk production per cow expected to increase about 2 percent per year. 1/ Preliminary. 2/ Forecasts. 3/ Hundredweight of milk represents all milk sold and consumed on the farm. 4/ Does not include receipts from the paid diversion program in 1984 and 1985. 5/ Includes feed, hired labor, fuels and electricity, machinery and building repairs, milk and livestock hauling, marketing, veterinary and medicine, supplies, artifical insemination--and, in 1983, 1984 and 1985, payments under the 50-cent-per-cwt deductions authorized by Congress. 6/ Includes taxes and insurance, general overhead, and interest paid on land and nonland capital.

Significance

Milk production will continue profitable in the U.S. through 1987, with the residual to management and risk averaging over $1.00 per cwt. Profitability after that will depend on farm milk prices, -- in turn, strongly influenced by price support levels, other agricultural policies of the government, and feed prices. However, with $1.27 per cwt projected as the residual to management and risk for 1987, a strong incentive to produce milk will likely exist throughout the next five years.

Table 12

--Milk production cost and returns, by selected items, by regions and the U.S., 1984 1/

Item	Northeast	Upper Midwest	Corn Belt	Appalachia	Southern Plains	Pacific	All regions 2/
	Dollars per cwt 3/						
Cash Receipts:							
Milk	13.73	13.07	13.23	13.94	14.32	12.91	13.37
Cull cows, calves, and replacement sales	1.02	1.28	1.00	.93	.84	.83	1.07
Total cash receipts 4/	14.75	14.35	14.23	14.87	15.16	13.74	14.44
Cash Expenses:							
Feed	4.70	4.15	4.94	6.01	6.55	5.62	4.85
Other variable expenses	3.46	2.86	3.33	3.69	3.29	3.06	3.17
Total variable expenses 5/	8.16	7.01	8.27	9.70	9.84	8.68	8.02
Total fixed expenses 6/	1.98	3.06	2.71	1.99	2.04	1.65	2.48
Total cash expenses	10.14	10.07	10.98	11.69	11.88	10.33	10.50
Receipts less cash expenses	4.61	4.28	3.25	3.18	3.28	3.41	3.94
Capital replacement	1.61	1.83	1.80	1.45	1.14	.75	1.56
Receipts less cash expenses and replacement	3.00	2.45	1.45	1.73	2.14	2.66	2.38
Economic Costs:							
Variable expenses 5/	8.16	7.01	8.27	9.70	9.84	8.68	8.02
General farm overhead	.56	.73	.65	.56	.73	.35	.61
Taxes and insurance	.34	.40	.38	.30	.24	.15	.34
Capital replacement	1.61	1.83	1.80	1.45	1.14	.75	1.56
Allocated returns to owned inputs:							
Operating capital (equity)	.12	.11	.13	.14	.13	.11	.12
Other nonland capital	.98	1.07	1.06	.91	.62	.57	.96
Land	.30	.46	.58	.44	.25	.05	.36
Unpaid labor	1.60	1.87	1.98	1.28	.78	.39	1.52
Total economic costs	13.67	13.48	14.85	14.78	13.73	11.05	13.49
Residual to management and risk	1.08	.87	-.62	.09	1.43	2.69	.95
Net returns to owned inputs	4.08	4.38	3.13	2.86	3.21	3.81	3.91

1/ Preliminary. States within respective regions where dairy farmers were interviewed: Northeast (NY, PA, OH, New England), Upper Midwest (MN, WI, MI, SD), Corn Belt (IN, IV, IA, MO), Appalachia (KY, TN, VA, NC, GA), Southern Plains (TX), Pacific (CA, WA). 2/ Weighted average. 3/ Hundredweight of milk represents all milk sold and consumed on the farm. 4/ Does not include receipts from the paid diversion program. 5/ Includes feed, hired labor, fuels and electricity, machinery and building repairs, milk and livestock hauling, marketing, veterinary and medicine, supplies, artificial insemination, and payments under the 50-cent-per-cwt deductions authorized by Congress. 6/ Includes taxes and insurance, general overhead, and interest paid on land and nonland capital.

Significance

Milk production was profitable in all U.S. regions except the Corn Belt in 1984. The residual to management and risk at $2.69 per cwt was largest in the Pacific area. However, at $10.07 per cwt, upper midwest total cash expenses for producing milk were the lowest in the nation -- as were their total variable expenses at $7.01 per cwt. Midwest total cash expenses were $.26 per cwt below the Pacific area, and midwest total variable expenses were $1.67 per cwt below the Pacific area.

Unpaid labor, and capitol replacement costs push Midwest total production costs above Pacific total costs. However, the fact that total cash expenses are lowest in the midwest, production milk is profitable in the midwest, and unpaid labor costs do not reflect dollar outflow, means the midwest will likely continue as the major U.S. milk production area during the next five years.

Table 13

—Dairy products: Per capita civilian consumption, 1965-85

Year	Fluid milk and cream 1/	Butter	Cheese: Whole and part skim milk 2/: American	Cheese: Whole and part skim milk 2/: Other	Cheese: Cottage	Evaporated and condensed: Canned, whole milk	Evaporated and condensed: Bulk, whole milk	Evaporated and condensed: Bulk and canned, skim milk	Frozen products: Ice cream	Frozen products: Ice milk	Frozen products: Sherbet	Frozen products: Other frozen dairy products 3/	Frozen products: Mellorine	Dry milk products: Dry whole milk	Dry milk products: Nonfat dry milk	Dry milk products: Dry buttermilk	Dry milk products: Dry whey 4/
									Pounds								
1965	292	6.4	6.2	3.4	4.7	8.4	2.2	5.0	18.5	6.6	1.5	0.2	1.3	0.3	5.6	0.4	0.6
1966	291	5.7	6.2	3.6	4.6	7.7	2.0	5.4	18.2	6.8	1.6	.2	1.3	.3	5.9	.3	.7
1967	283	5.5	6.4	3.7	4.5	7.1	1.9	5.0	17.8	7.0	1.5	.2	1.3	.3	5.6	.3	.8
1968	282	5.7	6.6	4.0	4.6	6.8	2.1	4.8	18.4	7.2	1.6	.2	1.4	.2	5.8	.3	.8
1969	280	5.4	6.7	4.2	4.8	6.2	1.6	5.0	18.0	7.6	1.7	.2	1.3	.2	5.8	.3	.8
1970	277	5.3	7.1	4.4	5.2	5.9	1.2	5.0	17.6	7.8	1.6	.2	1.2	.2	5.3	.2	.9
1971	275	5.1	7.4	4.7	5.4	5.7	1.1	5.1	17.5	7.7	1.6	.2	1.1	.2	5.3	.3	1.0
1972	276	4.9	7.8	5.3	5.5	5.1	1.2	4.7	17.3	7.7	1.6	.3	1.1	.1	4.6	.2	1.7
1973	272	4.8	7.9	5.7	5.3	4.8	1.1	4.3	17.3	7.6	1.6	.3	.9	.1	5.3	.2	1.8
1974	262	4.5	8.6	6.0	4.7	4.4	1.2	3.5	17.4	7.7	1.5	.3	.8	.1	4.2	.2	2.0
1975	267	4.7	8.4	6.1	4.7	3.9	1.4	3.6	18.5	7.7	1.5	.3	.7	.1	3.3	.2	2.2
1976	264	4.3	9.0	6.7	4.7	3.7	1.3	3.6	17.9	7.3	1.5	.3	.5	.2	3.5	.2	2.4
1977	260	4.3	9.3	6.8	4.7	3.2	1.1	3.9	17.5	7.8	1.5	.3	.4	.2	3.3	.3	2.4
1978	257	4.4	9.6	7.4	4.7	3.1	1.0	3.5	17.4	7.7	1.4	.4	.4	.3	3.1	.2	2.5
1979	253	4.5	9.6	7.6	4.5	3.0	1.1	3.4	17.1	7.3	1.3	.3	.3	.3	3.3	.2	2.7
1980	250	4.5	9.7	7.9	4.5	2.8	1.0	3.3	17.3	7.2	1.3	.3	.3	.3	3.0	.2	2.7
1981	245	4.3	10.2	8.1	4.4	2.9	1.2	3.2	17.2	7.0	1.3	.6	.2	.4	2.2	.2	2.8
1982	242	4.3	11.4	8.6	4.3	2.8	1.3	3.0	17.5	6.7	1.3	.7	.2	.4	2.1	.2	2.9
1983	242	4.9	11.7	9.0	4.2	2.7	1.1	3.1	17.9	7.0	1.3	.6	.2	.4	2.3	.2	3.0
1984	243	4.9	11.9	9.7	4.2	2.5	1.3	3.7	18.0	7.0	1.3	.6	.2	.4	2.5	.2	3.1
1985 5/	245	4.9	12.2	10.2	4.1	2.3	1.4	3.8	18.0	7.0	1.3	.7	.2	.4	2.2	.2	3.2

1/ Product pounds of commercial sales and on-farm consumption. Commercial sales include whole milk, lowfat milk, skim milk, buttermilk, flavored milk and drinks, cream, milk-cream mixtures, sour cream and dips, eggnog and yogurt. 2/ Excludes cottage cheese. 3/ Includes frozen yogurt beginning 1981. 4/ Includes modified dry whey products beginning 1975. 5/ Preliminary or estimated.

Significance

Per capita consumption of ice cream increased 4%, butter 9%, and cheese 27% in the past five years. Several other dairy products had minimal increases in per capita consumption, but a large number had declines, --- including fluid milk and cream, cottage cheese, canned whole milk, ice milk, sherbert, mellorine, nonfat dry milk, and dry buttermilk.

Table 14

—Per capita civilian consumption of selected cheese varieties, 1971-85

Year	American			Italian							Miscellaneous		
	Cheddar	Other 1/	Total	Provolone	Romano	Parmesan	Mozzarella	Ricotta	Other	Total	Swiss 2/	Brick	Muenster
	Natural equivalent of cheese and cheese products												
	Pounds												
1971	6.00	1.42	7.42	.22	.14	.20	1.40	.28	.07	2.31	.95	.11	.19
1972	6.10	1.68	7.78	.24	.17	.23	1.59	.32	.08	2.63	1.08	.11	.22
1973	6.16	1.77	7.93	.27	.16	.19	1.79	.34	.09	2.84	1.08	.11	.22
1974	6.38	2.18	8.56	.28	.15	.25	1.88	.34	.09	2.99	1.21	.11	.23
1975	6.09	2.15	8.24	.28	.23	.17	2.14	.38	.07	3.27	1.11	.09	.24
1976	6.52	2.47	8.98	.32	.17	.28	2.34	.41	.08	3.60	1.26	.09	.26
1977	6.86	2.44	9.29	.35	.16	.27	2.49	.41	.09	3.77	1.22	.07	.25
1978	7.00	2.59	9.60	.37	.19	.28	2.72	.45	.11	4.12	1.35	.08	.27
1979	6.97	2.63	9.61	.41	.16	.32	2.84	.47	.08	4.28	1.36	.06	.29
1980	6.90	2.78	9.68	.42	.15	.28	3.05	.47	.10	4.47	1.34	.07	.31
1981	7.09	3.13	10.22	.45	.14	.31	3.01	.50	.09	4.50	1.28	.06	.30
1982	8.79	2.59	11.38	.47	.17	.33	3.32	.48	.12	4.89	1.31	.06	.31
1983	9.17	2.49	11.66	.50	.16	.33	3.71	.54	.09	5.33	1.26	.06	.31
1984	9.59	2.29	11.88	.55	.18	.36	4.06	.58	.09	5.82	1.25	.07	.32
1985 4/	9.82	2.39	12.21	.57	.21	.38	4.43	.61	.08	6.28	1.25	.09	.35

Year	Natural equivalent—continued						Product-weight form				
	Miscellaneous—continued					Total	Processed			Natural	Total 6/
	Cream and Neufchatel	Blue 5/	Edam and Gouda	Other	Total		Cheese	Foods and spreads	Total		
	Pounds										
1971	.63	.14	.10	.28	2.40	12.13	3.6	2.3	5.9	7.4	13.3
1972	.64	.16	.11	.37	2.69	13.10	3.4	2.7	6.0	8.2	14.2
1973	.67	.17	.12	.45	2.82	13.59	3.3	2.7	6.0	8.9	14.9
1974	.71	.16	.11	.43	2.96	14.51	3.4	2.9	6.4	9.5	15.9
1975	.75	.15	.11	.41	2.86	14.37	3.3	3.4	6.7	9.2	15.9
1976	.78	.18	.11	.37	3.05	15.63	3.8	2.6	6.5	10.5	17.0
1977	.81	.17	.11	.42	3.05	16.11	3.8	3.3	7.1	10.6	17.7
1978	.90	.19	.12	.31	3.22	16.94	3.7	3.3	7.0	11.5	18.5
1979	.95	.17	.13	.36	3.32	17.21	3.7	3.1	6.8	11.9	18.7
1980	1.01	.17	.13	.44	3.47	17.62	3.8	3.1	7.0	12.2	19.2
1981	1.06	.16	.15	.56	3.57	18.29	3.6	3.2	6.7	13.2	19.9
1982	1.14	.16	.19	.63	3.80	20.07	4.5	3.3	7.8	13.9	21.7
1983	1.16	.16	.18	.53	3.66	20.65	4.9	3.4	8.3	14.1	22.4
1984	1.18	.17	.19	.69	3.87	21.57	4.4	3.3	7.8	15.6	23.3
1985 4/	1.24	.16	.17	.64	3.90	22.39	4.6	3.0	7.6	16.3	23.9

1/ Includes colby, washed curd, stirred curd, Monterey, and Jack. 2/ Includes imports of Gruyere and Emmenthaler. 3/ Not available. 4/ Preliminary. 5/ Includes Gorgonzola. 6/ Total product-weight is greater than natural equivalent because processed cheese and cheese food is made from natural cheese and other dairy products. Numbers may not add due to rounding.

Significance

Per capita consumption of American cheese increased 26%, and Italian cheese 40% in the past five years. All cheeses except Swiss and Blue cheese had increases in per capita consumption in the 1980-85 period.

Table .15

1985 Dairy Law Price Provisions

Period	Support Price	Assessment for Whole-Herd Buyout	Net Price
1/86-4/86	$11.60	0	$11.60[A]
4/86-1/87	$11.60	$.40	$11.20[A]
1/87-10/87	$11.35	$.25	$11.10
10/87-1/88	$11.10	0	$11.10
1/88-1/89	$10.60	0	$10.60[B]
1/89-1/90	$10.10	0	$10.10[B]
1/90-1/91	$9.60	0	$9.60[B]

[A] Exclusive of the Gramm-Rudman deficit reduction program (announced 2-12-86) resulting in a 4.3% reduction in U.S. Department of Agriculture payments to plants for dairy product price support purchases during the period 3-1-86 to 10-1-86 — the equivalent of the 55-cent per hundredweight reduction in the price support level for milk.

[B] Increased 50 cents per hundredweight if whole-herd buyout did not reduce milk production 12 billion pounds and estimated Commodity Credit Corp. (CCC) purchases for the year exceed 5 billion pounds milk equivalent, or estimated CCC purchases are between 2.5 and 5 billion pounds milk equivalent. Increased $1 per hundredweight if estimated CCC purchases are less than 2.5 billion pounds milk equivalent.

Significance

Unless new dairy legislation is enacted U.S. farm milk support prices will likely decrease $2.00 per cwt (17%) in the next five years, -- from the current level of $11.60 per cwt, to $9.60 per cwt.

Table 16

—Dairy products removed from the commercial market by USDA programs, 1965-85

Year and month	Removals 1/					Solids content of removals			
	Butter 2/	American cheese 3/	Evaporated milk 4/	Nonfat dry milk 5/	Milk equivalent	Milkfat	Solids-not-fat	As a percentage of marketings: Milkfat	As a percentage of marketings: Solids-not-fat
	Million pounds						Percent		
1965	276.4	48.7	—	1,102.3	5,665				
1966	25.1	10.8	—	365.8	645	26.2	355.5	0.6	3.7
1967	265.1	180.5	—	686.9	7,427	276.3	719.1	6.6	7.5
1968	194.8	87.5	54.9	557.8	5,149	193.2	575.4	4.7	6.0
1969	187.9	27.7	107.5	407.2	4,479	171.5	421.5	4.2	4.4
1970	246.4	48.9	48.4	451.6	5,774	222.1	460.7	0.5	4.8
1971	292.2	90.7	111.4	456.2	7,268	276.4	489.8	6.6	5.0
1972	233.7	30.4	97.0	345.0	5,345	208.8	361.0	4.9	3.6
1973	97.7	3.2	53.7	36.8	2,185	84.2	47.0	2.1	0.5
1974	32.7	60.3	28.3	265.0	1,345	49.8	278.9	1.2	2.9
1975	63.4	68.2	24.5	394.5	2,036	77.7	405.6	1.9	4.2
1976	39.4	38.0	21.8	157.1	1,236	46.8	167.2	1.1	1.7
1977	221.8	148.2	15.9	461.7	6,080	230.8	494.9	5.2	4.8
1978	112.0	39.7	17.6	285.0	2,743	106.3	290.7	2.4	2.8
1979	81.6	40.2	16.4	255.3	2,119	81.7	261.8	1.8	2.5
1980	257.0	349.7	17.5	634.3	8,800	325.3	723.6	7.1	6.7
1981	351.5	563.0	18.6	851.3	12,861	471.7	999.2	9.9	8.9
1982	382.0	642.5	20.8	948.1	14,282	522.7	1,117.5	10.8	9.8
1983	413.2	832.8	24.6	1,061.0	16,814	610.2	1,285.7	12.2	10.9
1984	202.3	447.3	19.0	678.4	8,637	313.1	795.8	6.4	7.0
1985 6/	334.2	629.0	26.8	940.6	13,174	480.3	1,106.8	9.3	9.1

1/ Delivery basis, after unrestricted domestic sales. 2/ Includes butter-equivalent of anhydrous milkfat, PIK, and purchases under Sec. 709 and 4a. 3/ Includes purchases under Sec. 709 and 4a. 4/ Includes purchases under 4a. 5/ Includes PIK certificates and purchases under Sec. 709 and 4a. 6/ Preliminary. Totals may not add because of rounding.

Significance

USDA purchased 22% of American cheese production, 27% of butter production, and 68% of nonfat dry milk production in 1985. USDA's purchases totaled 13.2 billion pounds of milk equivalent, 9.3% of total milk production, at a price support cost of $2.2 billion in 1985. USDA is projecting a 1% increase in 1986 milk production above 1985's record of 143.7 billion pounds, and as a result 1986 price support purchases are likely to equal the 1985 level, despite the whole herd buyout. Comparable USDA purchases have been made during the past five years.

Virtually everyone agrees that unless USDA price support costs are reduced the entire price support program is in danger of collapse. Therefore, supply management programs are receiving serious consideration, as an alternative to the current price support program which guarantees government purchase of all surplus American cheese, butter, and nonfat dry milk production.

—Number of States controlling producer and resale prices for milk, 1933-86 1/*

Year	States controlling: Resale prices	States controlling: Producer prices	Year	States controlling: Resale prices	States controlling: Producer prices
	Number			Number	
1933	7	9	1960	13	16
1934	13	16	1961	14	19
1935	21	18	1962	13	19
1936	16	20	1963	14	20
1937	18	21	1964	15	20
1938	16	20	1965	14	21
1939	17	20	1966	15	21
1940	17	20	1967	15	21
1941	15	19	1968	15	19
1942	14	16	1969	15	19
1943	14	16	1970	15	18
1944	14	16	1971	14	18
1945	14	16	1972	14	18
1946	14	16	1973	14	18
1947	14	16	1974	14	18
1948	13	16	1975	14	18
1949	12	16	1976	13	17
1950	12	16	1977	12	17
1951	12	16	1978	11	17
1952	12	16	1979	10	17
1953	13	16	1980	9	17
1954	13	17	1981	7	16
1955	12	16	1982	7	16
1956	11	16	1983	7	14
1957	11	16	1984	7	14
1958	12	16	1985	6	13
1959	14	15	1986	6	13

1/ Excludes Puerto Rico, which has had producer and resale price control since 1957. *Revises table 1 of Shaw, C. N., and Levine, S. G., "Government's Role in Pricing Fluid Milk in the United States," Economics, Statistics, and Cooperative Service, U.S. Department of Agriculture, Agricultural Economic Report No. 397, Washington, D.C., March 1978, page 2.

—States regulating milk prices and trade practices and authorizing milk promotion, January 1986*

State	Minimum prices estiated at Producer level	Wholesale level	Retail level	Trade practice regulations	Milk promotion
Alabama	-	1/2/-	1/2/-	-	-
Arkansas	-	-	-	x	-
California	x	3/-	3/-	x	x
Colorado	-	-	-	x	x
Connecticut	-	-	-	x	x
Georgia	-	-	-	-	x
Hawaii	x	-	-	-	x
Idaho	-	-	-	x	x
Iowa	-	-	-	x	x
Kansas	-	-	-	x	-
Kentucky	-	-	-	-	x
Louisiana	1/-	-	-	x	x
Maine	x	x	x	x	x
Massachusetts	x	1/-	1/-	x	-
Michigan	-	-	-	-	x
Minnesota	-	-	-	x	x
Missouri	-	-	-	x	-
Montana	x	x	x	x	-
Nevada	x	1/-	x	x	-
New Hampshire	-	-	-	-	x
New Jersey	x	1/-	1/-	x	x
New York	x	-	-	x	x
North Carolina	x	1/2/-	1/2/-	x	x
North Dakota	x	2/x	2/x	x	x
Oklahoma	-	-	-	x	-
Oregon	x	2/-	-	-	x
Pennsylvania	x	x	x	-	x
South Carolina	1/-	1/-	1/-	x	-
South Dakota	-	-	-	-	x
Texas	-	-	-	-	x
Tennessee	-	-	-	x	x
Utah	-	-	-	-	x
Vermont	1/-	1/2/-	1/2/-	x	x
Virginia	x	4/x	3/4/-	x	-
Washington	-	-	-	-	x
West Virginia	-	-	-	-	x
Wisconsin	-	-	-	x	x
Puerto Rico	x	4/-	4/-	x	x

x = yes; - = no. 1/ Authorized but not used. 2/ Maximum pricing authorized but not used. 3/ Authorized only in the event of price disruption. 4/ Establishes maximum prices. * Revises table 5 of Shaw, C. N., and Levine, S. G., "Government's Role in Pricing Fluid Milk in the United States," Economic, Statistics, and Cooperatives Service, U.S. Department of Agriculture, Economic Report No. 397, Washington, D.C., March 1978, page 13.

Significance

State regulation of minimum farm, wholesale and retail milk prices has decreased dramatically during the past decade, declining from 14 to 6 states regulating resale prices, and declining from 18 to 13 states regulating farm milk prices. Continued challenges by consumer groups are likely to result in further attrition in state establishment of milk prices in the next 5 years.

However, a majority of states regulate trade practices, and will likely continue to do so in the coming 5 year period, --- again because of pressures from consumer groups.

Most states also have milk promotion programs, and more will likely have them in the next 5 years because of the Federally mandated 15¢ per cwt promotion farm milk "check off," against which a 10¢ per cwt credit can be claimed by states if they wish to do so.

Table 18

Cow Numbers and Milk Production in Selected Countries

	----Cow Numbers------			--Milk Production--		
	1984	1985 1/	1986 2/	1984	1985 1/	1986 2/
	----Million Head------			------Million Tons-----		
United States	10.8	11.0	10.7	61.4	65.2	65.3
Canada	1.7	1.7	1.7	8.2	8.2	8.1
EC-10	25.8	24.8	24.2	109.2	107.9	107.9
Eastern Europe	15.5	15.2	14.9	43.7	43.5	42.3
USSR	43.9	43.6	42.8	97.9	98.2	100.0
China	0.7	0.9	1.0	2.2	2.5	2.8
Japan	1.1	1.1	1.1	7.1	7.4	7.2
Australia 3/	1.8	1.8	1.8	6.1	6.2	6.2
New Zealand 4/	2.1	2.2	2.2	7.6	7.9	8.2
Total of 38 Countries	164.8	163.4	161.9	413.1	417.4	420.3

1/Preliminary. 2/Forecast. 3/Year ending June 30. 4/Year ending May 31.

Significance

A 3 billion pound increase in world milk production is projected for 1986. Countries with increased milk production include the U.S., China, and New Zealand. Countries with decreased milk production include Canada, ten European Economic Community countries, Eastern European countries, Japan, and Australia.

Overall, however, U.S. and world milk production continues to increase.

Table 19
Production of Dairy Products in Selected Countries
1,000 metric tons

	Butter			Cheese		
	1984	1985 1/	1984 2/	1984	1985 1/	1986 2/
United States	500	566	570	2,120	2,279	2,400
Canada	108	95	90	193	208	213
EC-10	2,099	1,996	2,012	3,759	3,836	3,882
Eastern Europe	879	856	833	768	765	775
USSR	1,588	1,595	1,625	780	785	800
Japan	78	89	85	19	20	20
Australia 3/	111	114	107	161	160	164
New Zealand 4/	287	295	299	110	115	126
Total 5/	6,759	6,718	6,740	9,218	9,500	9,740

	Nonfat Dry Milk		
	1984	1985 1/	1986 2/
United States	526	631	745
Canada	120	108	100
EC-10	2,118	1,917	1,841
Eastern Europe	223	198	188
USSR	457	459	468
Japan	155	181	172
Australia 3/	123	148	135
New Zealand 4/	248	242	230
Total 5/	4,332	4,235	4,208

1/Preliminary. 2/Forecast. 3/Year ending June 30. 4/Year ending May 31. 5/Total of 35 countries for butter, 34 countries for cheese, and 30 countries for nonfat dry milk.

Significance

Butter and cheese production is increasing world wide, while nonfat dry milk production is decreasing. Production of all three products are increasing in the U.S., -- 13% for cheese, 14% for butter and 42% for nonfat dry milk in the past two years.

Cheese production increased in all major countries in the past two years, but butter and nonfat dry milk production decreased in most major countries in the past two years.

Table 20

—Dairy products: U.S. imports, quota and nonquota, total, 1982-85, with comparisons

Product	Calendar year quota	1982	1983	1984	1985 1/	Change from year earlier 1983	1984	1985
		- - - - - Thousand pounds - - - - -				- - - Percent - - -		
Cheese, quota types								
American								
-cheddar	12,205.3	4/12,682	4/12,746	4/13,835	4/12,718	+0.5	+8.5	-8.1
-other	7,545.4	5,163	4/8,909	4/10,234	6,868	+72.6	+14.9	-32.9
Italian								
-original loaves	12,374.4	12,139	12,121	12,168	12,186	-.1	+.4	+.1
-other	1,550.0	1,436	1,537	1,488	1,571	+7.0	-3.2	+5.6
Edam and Gouda								
-natural	9,208.6	8,459	8,967	9,172	9,429	+6.0	+2.3	+2.8
-processed	3,151.3	2,955	3,077	3,121	2,938	+4.1	+1.4	-5.9
Blue mold	5,469.6	5,096	4/5,603	5,317	5,361	+9.9	-5.1	+.8
Swiss								
-Emmenthaler	70,278.1	67,193	68,441	69,473	69,725	+1.9	+1.5	+.4
-Gruyere process	16,479.0	14,848	15,693	16,335	15,469	+5.7	+4.1	-5.3
Other								
-over 0.5% fat	89,466.8	87,996	4/90,417	4/92,209	4/92,264	+2.8	+2.0	+.1
-under 0.5% fat	12,621.1	12,249	12,145	12,481	12,487	-0.8	+2.8	6/
Total	240,349.6	230,216	239,656	4/245,833	4/241,016	+4.1	+2.6	-2.0
Cheese, nonquota types								
Other cow's milk cheeses 2/		14,724	18,399	23,993	23,157	+25.0	+30.4	-3.5
Miscellaneous 3/		1,201	1,479	2,015	1,551	+23.1	+36.2	-23.0
Pecorino		22,291	25,703	33,074	35,748	+15.3	+28.7	+8.1
Roquefort		910	1,010	1,104	1,032	+11.0	+9.3	-6.5
Total		39,127	46,591	60,186	61,487	+19.1	+29.2	+2.2
Total cheese,								
Quota and nonquota	240,349.6	269,343	286,247	306,019	302,504	+6.3	+6.9	-1.1
Other quota products								
Butter	707.0	4/1,746	4/1,724	4/1,766	4/2,154	-1.3	+2.4	+22.0
Butteroil	1,200.0	1,200	1,200	1,200	1,200	0	0	0
Butterfat mixtures	2,580.0	2,335	2,334	4/3,063	4/3,816	-0.0	+31.2	+24.6
Ice cream	3,377.3	0	0	131	5	0	5/	-96.2
Frozen cream	12,540.0	4/15,133	4/14,179	11,764	4/14,690	-6.3	-17.0	+24.9
Nonfat dry milk	1,807.0	4/1,935	4/2,399	4/2,145	4/2,807	+24.0	-10.6	+30.9
Dried buttermilk and whey	496.0	436	401	485	604	-8.0	+20.9	+24.5
Evaporated milk	1,312.0	4/4,036	4/7,181	4/5,840	4/6,316	+77.9	-18.7	+8.2
Condensed milk	4,079.0	3,129	3,763	4,040	4,095	+20.3	+7.4	+1.4
Chocolate crumb								
-regular	21,409.2	18,825	16,240	13,393	19,329	-13.7	-17.5	+44.3
-lowfat	4,680.0	740	1,252	70	2,001	+69.2	-94.4	5/
Animal feed with milk solids	16,300.0	15,948	15,060	14,849	15,138	-5.6	-1.4	+1.9
Nonquota products								
Casein		176,752	159,527	192,312	231,429	-9.7	+20.6	+20.3
Lactose		1,050	1,055	1,540	2,669	+0.5	+46.0	+73.3
Total all products, milkfat basis	2,234,270	2,476,760	4/2,615,583	4/2,741,430	4/2,777,467	+5.6	+4.8	+1.3

1/ Preliminary. 2/ Primarily soft, ripened cheeses. 3/ Gjetost, Bryndza, Gammelost and Noekkelost, and Goya. 4/ Probable error in reported data. 5/ More than 1,000. 6/ Less than 1.

Source: U.S. Department of Commerce, Bureau of the Census.

Significance

U.S. annual dairy import quotas of 2.2 billion pounds milk equivalent were 1.6% of U.S. milk production, and cheese import quotas of 240 million pounds of cheese were 4.8% of U.S. cheese production in 1985.

U.S. Dairy import quotas represented a similarly small proportion of U.S. production during the entire previous five year period, and will likely continue to be a small proportion of U.S. production during the coming five years.

Casein, lactose and some foreign type cheeses are the only dairy products without import quotas. Casein is being imported at about one-half the price of domestic protein, for use in imitation cheese, and other dairy-related food products. However, other than casein, the U.S. dairy industry has and will likely continue to have considerable protection against imported dairy products.

Table 21

—U.S. dairy trade, 1982-85 1/

Year and quarters	Imports		Exports	Shipments 2/
	Cheese	Other		
	Million pounds			
1982	2,128	349	3,988	602
1983	2,273	343	2,124	577
1984				
1st	465	104	487	175
2nd	548	63	827	174
3rd	668	59	1,065	171
4th	753	82	559	114
Year 3/	2,434	307	2,938	634
1985				
1st	474	169	281	141
2nd	522	65	1,106	145
3nd	601	55	578	152
4th	800	92	708	128
Year 3/	2,397	380	2,674	566

1/ Milk-equivalent, fat basis. 2/ To U.S. territories. 3/ May not add because of rounding.

—Dairy product imports, 1970-85 1/

Year	Yearly quota 2/	Imports subject to quota	Imports not subject to quota	Total
	Million pounds			
1970	946	841	1,033	1,874
1971	973	776	580	1,356
1972	1,166	1,023	671	1,694
1973	3,608	3,263	596	3,859
1974	2,293	1,968	955	2,923
1975	1,306	976	693	1,669
1976	1,306	1,037	906	1,943
1977	1,306	1,119	849	1,968
1978	1,306	1,226	1,084	2,310
1979	1,306	1,235	1,070	2,305
1980	2,231	1,820	289	2,109
1981	2,234	2,061	268	2,329
1982	2,234	2,163	314	2,477
1983	2,234	3/2,243	373	3/2,616
1984	2,234	3/2,258	483	3/2,741
1985	2,234	3/2,283	494	3/2,777

1/ Milk-equivalent, fat basis. 2/ Includes temporary quotas authorized in 1973 and 1974. 3/ Probable error in reported data.

Significance

U.S. dairy imports totaled 2.8 billion pounds milk equivalent in 1985, compared to 2.7 billion pounds of dairy exports, -- duplicating a similarly close relationship between dairy imports and exports during recent years. Over four-fifths (82%) of dairy imports were subject to import quotas. However, if subsidized and other government aided exports were excluded, dairy imports would exceed dairy exports. The prospects for substantial increases in commercial dairy exports during the coming five year period are dim, because of continued direct and indirect export subsidization by EEC, Australia, and New Zealand. However, U.S. government export assistance is likely to increase, because of growing government stocks of dairy products, and huge trade deficits across the board. Therefore, utilization of governmental export assistance programs offers the best prospect for U.S. firms to increase dairy exports during the coming five year period.