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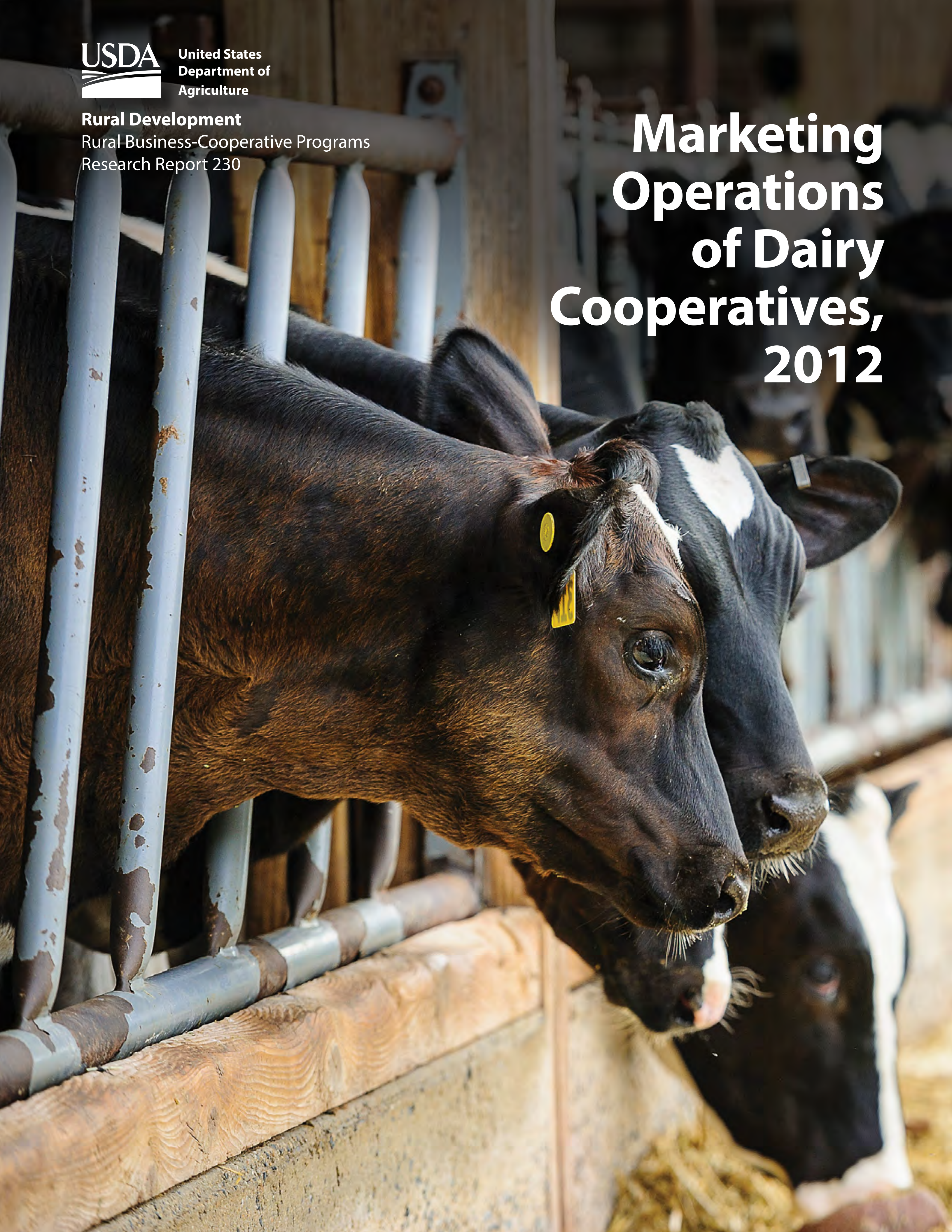
Marketing Operations of Dairy Cooperatives, 2012



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ABSTRACT

Just under 42,000 member-producers, owners of the Nation’s 132 dairy cooperatives, marketed 161.2 billion pounds of milk, or 81 percent of all U.S. milk marketed, in 2012. Including milk received from non-members and non-cooperative firms, total milk handled by cooperatives was 167.7 billion pounds (of which 3 billion pounds was organic milk), or 84 percent of the national share. Forty-seven cooperatives operated milk plants and receiving facilities. Cooperatives marketed 75 percent of the Nation’s butter, 91 percent of nonfat and skim milk powders, 22 percent of natural cheeses, and 43 percent of dry whey products. Eighty dairy cooperatives reported having 22,969 full-time and 816 part-time employees. Eighty-nine cooperatives reported that for the fiscal year, on a per-hundredweight (cwt) basis: total assets were $10.90; total liabilities were $8.12; total equity was $2.78; and net margin before taxes was 22 cents, or a return-on-equity of 8 percent.

Key Words: Cooperatives, milk, dairy products, marketing.

MARKETING OPERATIONS OF DAIRY COOPERATIVES, 2012

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PREFACE

Information for this report came primarily from the responses to a USDA survey of all U.S. dairy cooperatives that is conducted once every 5 years. The dairy-specific data were collected in conjunction with the annual survey of all cooperatives by the Cooperative Programs' Statistics Staff of USDA Rural Development. In some cases, data were estimated for non-respondents based on their financial statements or other sources.

Cooperatives were asked to supply information on their milk-marketing operations for the fiscal year ending in calendar 2012. These fiscal years vary within the calendar year, so the data reflect some differences in time periods.

When calculating cooperative marketing shares of various products, information for U.S. total milk volumes came from the statistics reported by USDA National Agricultural Statistics Service: *Milk Production, Disposition and Income, 2012 Summary, April 2013*; and *Dairy Products, 2012 Summary, April 2013.* Marketing share calculations are approximate, because cooperatives' fiscal years vary and do not exactly match the calendar year.

The cooperation of the responding cooperatives and the statistics staff is gratefully acknowledged.

The historical summaries of the results of this and previous surveys may be accessed at http://www.rurdev.usda.gov/BCP_Coop_Data_DairyMarketing.html.

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Member-producers of dairy cooperatives marketed 161.2 billion pounds of milk in 2012, a 5.7- percent increase from 2007. This volume represented 80.9 percent of the milk marketed by farmers nationally, a decrease from 82.6 percent 5 years earlier. (Cooperative shares of the Nation's milk and dairy product marketing are approximate, because cooperatives' fiscal years vary and do not exactly match the calendar year.)

Including milk received from non-members and non-cooperative firms, total milk handled by cooperatives was 167.7 billion pounds, or 84 percent of national milk marketed. Three billion pounds of the volume was organic milk received by 24 cooperatives.

The number of dairy cooperatives during this 5-year period decreased from 155 to 132. There were 47 cooperatives that processed and manufactured dairy products and operated receiving stations, and the other 85 had no milk-handling facilities.

Sixty-six percent of total cooperative volume was sold as raw milk in 2012 versus 63 percent in 2007. The other 34 percent was manufactured at plants owned and operated by cooperatives.

There were 41,999 member producers marketing milk in 2012, 15 percent (7,676) fewer than 5 years earlier. Three regions — East North Central, North Atlantic, and West North Central — together accounted for 86 percent of all member producers and 53 percent of cooperative milk volume. The Western region was the top source of cooperative milk. At 59.4 billion pounds, it represented 37 percent of all cooperative milk.

Dairy cooperatives owned and operated 184 plants, 13 of them for receiving and shipping milk only, 32 for manufacturing American cheese, 17 for making Italian cheese, 49 for packaging fluid milk products, 24 for churning butter, 35 for drying milk products, and 24 for drying whey products. Many other plants made various other dairy products or dairy-related products. (A plant may perform more than one function.)

Volumes of butter and nonfat and skim milk powders increased significantly from 2007 to 2012. Cooperative share of butter, at 1,396 million pounds (a 28-percent increase over 5 years), was 75 percent of U.S. production, and cooperative share of nonfat and skim milk powders, at 1,967 million pounds (a 36-percent increase), was 91 percent. However, cheese made by cooperatives decreased by 5 percent from 5 years earlier, to 2,386 million pounds and accounting for 22 percent (versus 26 percent in 2007) of U.S. production. Cooperative production of dry whey products increased 10 percent and cooperative share of national production increased slightly, from 42 percent to 43 percent in 2012.

As in 2007, there were four cooperatives that each handled more than 6 billion pounds of member milk in 2012. Together, the four increased their milk volume by 2 billion pounds and accounted for 47.8 percent of total cooperative milk in 2012. However, this was less than the 49.2 percent share reported 5 years ago.

Both the cooperative number and the milk volume of the next size group (3-billion-to-6-billion-pounds) increased over the 5-year period. This was the size group that showed the most significant increase in the share of total cooperative milk volume (from 22.9 percent in 2007 to 28.3 percent, a 5.4-point increase).

Together, the 14 cooperatives that were in these top 2 size groups (each cooperative marketed at least 3 billion pounds) had a 76.1 percent share of cooperative milk.

The four largest cooperatives had a lower share of the Nation's milk, moving from 40.7 percent in 2007 to 38.7 percent in 2012. Broadening the focus to the largest 8 dairy cooperatives and the largest 20, their shares of total U.S. milk also declined.

In terms of milk volume, the dominant position of dairy cooperatives relative to the rest of the industry declined slightly.

Fifty-three dairy cooperatives reported having 22,969 full-time and 804 part-time employees in

2012, and 6 other cooperatives had 12 part-time employees. Another 21 cooperatives reported having no employees. These 80 cooperatives marketed 79 percent of cooperative milk. The other 52 cooperatives did not supply data on their number of employees.

Complete financial data submitted by 89 dairy cooperatives (out of the total of 132) showed that total assets for the fiscal year ending in 2012 were $13.9 billion ($10.90 per hundredweight), total liabilities were $10.4 billion ($8.12 per cwt), and total equity was $3.6 billion ($2.78 per cwt). Eighty-four percent of the equity was allocated to members. Net margin before taxes was $285 million (22 cents per cwt), a return on equity of 8 percent. Together, these cooperatives marketed 79 percent of total cooperative milk volume, with 15 reporting that their dairy sales included $1.5 billion of dairy exports.

Marketing Operations of Dairy Cooperatives, 2012

K. Charles Ling

Farmer owned and operated dairy cooperatives continue to provide the most significant channel for marketing milk from the Nation's dairy farms.

In line with industry and dairy farm trends, the number of cooperatives is declining, but those remaining are handling larger volumes. In addition to marketing milk, many cooperatives own and operate plants to process, manufacture, and market various dairy products.

This report, 10th in a series of periodic appraisals of the scope and performance of dairy cooperatives, describes their continuing evolution in an ever changing market environment.

Cooperative Industry Profile

Between 2007 and 2012, the number of dairy cooperatives decreased by 23 (15 percent), from 155 to 132. The pace was slower than the reduction of 39 cooperatives (20 percent) recorded from 2002 to 2007. In 2012, 111 (84 percent of all dairy cooperatives) were headquartered in the North Atlantic, East North Central, and West North Central regions; the North Atlantic region had the most with 45 dairy cooperatives (table 1).

All regions showed a drop in dairy cooperative numbers from 2007, except the South Atlantic region, which gained one. The North Atlantic region had the steepest reduction, 10, followed by a reduction of 7 in the West North Central region and 5 in the Western region (see figure 1 for region demarcation).

In 2012, 47 cooperatives (36 percent of all dairy cooperatives) operated milk-handling facilities (milk plants or receiving facilities), a drop of 10 from 2007. The drop occurred in every region, except in the South Atlantic and South Central regions. The East North Central region still had the most cooperatives (21) with plants and milk receiving facilities.

Cooperatives that did not have plants or milk-receiving facilities decreased from 98 to 85. Almost half of these were in the North Atlantic region. However, the 41 such cooperatives in that region represented a decrease of 7 from 2007, the steepest drop among the regions that showed a decline. The South Atlantic and East North Central each gained one such cooperative.

One-hundred-fourteen dairy cooperatives sold at least some bulk raw milk (table 2). The number of cooperatives that marketed dry milk products (nonfat dry milk, dry whole milk, and dry butter milk) and dry whey products (dry whey, whey protein concentrates and isolates, and lactose) increased, with those that made whey protein concentrates and isolates registering the most increase. Making the first appearance in the table are nine cooperatives that marketed skim milk powder. The number of co-

Table 1 Dairy cooperatives by type of operation and by headquarters region, 2007 and 2012

Region[1]	Operating milk plants or receiving facilities		Not operating milk plants or receiving facilities		Totals	
	2007	2012	2007	2012	2007	2012
	Number					
North Atlantic	7	4	48	41	55	45
South Atlantic	2	2	3	4	5	6
East North Central	23	21	12	13	35	34
West North Central	14	12	25	20	39	32
South Central	1	1	2	1	3	2
Western	10	7	8	6	18	13
All regions	57	47	98	85	155	132
	Percent					
Share of total co-ops	37	36	63	64	100	100

[1]Figure 1 shows States by region

Table 2 Cooperatives marketing selected dairy products, 2007 and 2012[1]

	2007	2012	5-year change
	----Number of cooperatives----		
Bulk raw milk	136	114	-22
Butter	19	15	-4
Nonfat dry milk	14	16	+2
Skim milk powder[2]		9	
Dry whole milk	5	7	+2
Dry buttermilk	10	13	+3
Natural cheeses other than cottage cheese	31	25	-6
American cheese	18	16	-2
Italian cheese	6	8	+2
Swiss cheese	4	4	0
Other (specialty) cheeses	15	14	-1
Cottage cheese	6	6	0
Sour cream	8	6	-2
Packaged fluid milk products	13	10	-3
Yogurt	6	6	0
Dry whey	11	12	+1
Whey protein concentrates & isolates	6	11	+5
Lactose	4	6	+2

[1]A cooperative may market several products.
[2]Separately counted for 2012.

Table 3 Cooperative share of milk marketed by producers, 2007 and 2012[1]

	Milk from member-producers	Milk from sources other than cooperatives[2]	Total milk handled by cooperatives[3,4]	United States total	Cooperative share of U.S. total: Member milk	Cooperative share of U.S. total: Total milk handled
	----*Million Pounds*----				----*Percent*----	
2007	152,514	3,272	155,786	184,565	82.6	84.4
2012	161,222	6,451	167,673	199,362	80.9	84.1
	----*Percent*----					
5-year change	5.7	97.2	7.6	8.0		

[1]Cooperatives' fiscal years vary and do not exactly match the calendar year.
[2]Milk from nonmembers and non-cooperative firms.
[3]Handled by physical receipt, bargaining or servicing transactions, excluding inter-cooperative volume.
[4] 2012 total includes 2,997 million pounds of organic milk received by 24 co-ops.

operatives marketing butter and natural cheeses all decreased, except Italian cheese (increased by two) and Swiss cheese (unchanged).

Milk Volume and Utilization

In 2012, cooperative member-producers marketed 161.2 billion pounds of milk, or 80.9 percent of milk marketed by all U.S. producers (table 3). The cooperative share of milk was a decrease of 1.7 points from 2007, when it was 82.6 percent. Over the 5-year period, milk marketed by cooperative members increased 5.7 percent, while the increase was 8 percent by all U.S. producers. (Cooperative shares of national marketing of milk and dairy products are approximate, because cooperatives' fiscal years vary and do not exactly match the calendar year.)

Milk received from non-members and non-cooperative firms almost doubled when compared with 2007. In total, cooperatives handled or bargained for 167.7 billion pounds of milk, or 84.1 percent of total volume marketed by all U.S. producers. Cooperative share was a fraction (0.3 point) lower than in 2007.

Of the 167.7 billion pounds of milk handled by cooperatives in 2012, 3 billion pounds was organic milk received by 24 cooperatives.

Cooperatives marketed 66 percent of the milk volume they handled as bulk raw milk (including the volume shipped to plants that cooperatives had investment in), up 3 points from 2007 (table 4). In other words, cooperatives processed or manufactured 34 percent of the milk in the plants they owned and directly operated.

Member Supply and Location

There were 41,999 cooperative member-producers marketing milk in 2012. Most (17,323 member-producers) were in the East North Central region, followed by the North Atlantic region (10,693 member-producers) and the West North Central region (8,165 member-producers). Together, these regions had 86 percent of total member producers, but only 53 per-

Table 4 Utilization of milk marketed by cooperatives, 2007 and 2012[1]

Year	Milk marketed	Utilization rate
	--Million pounds--	*--Percent--*
2007		
Sold raw[2]	98,288	63
Processed or manufactured	57,498	37
Total	155,786	100
2012		
Sold raw[2]	110,481	66
Processed or manufactured	57,192	34
Total	167,673	100

[1]Excludes inter-cooperative volume and includes milk from non-member producers and non-cooperative firms.
[2]Includes milk shipped to plants that cooperatives had investment in.

Figure 1 Number of Cooperatives Operating in Each Region, Member-Producers, Member Milk, and Milk per Producer, 2012

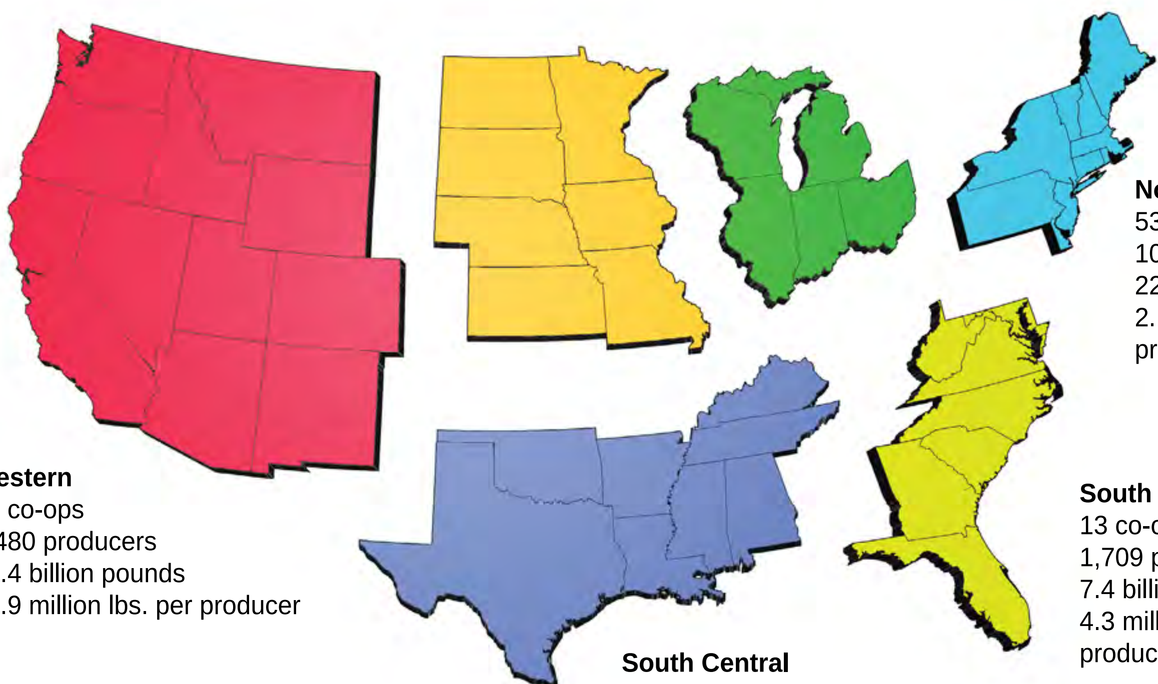

Table 5 Number of cooperatives operating in each region, member-producers, member milk, and milk per producer, 2007 and 2012[1]

Year and region[2]	Cooper-atives[3]	Member-producers	Member milk	Milk per producer	Co-op regional share of milk[4]
	-------Number-----		*----Million pounds---*		*Percent*
2007					
North Atlantic	62	12,078	20,428	1.69	76
South Atlantic	10	2,118	7,350	3.47	94
East North Central	47	20,255	37,675	1.86	91
West North Central	49	10,160	19,192	1.89	97
South Central	11	2,328	9,788	4.20	83
Western	21	2,736	58,081	21.23	76
Total		49,675	152,514	3.07	82.6
2012					
North Atlantic	53	10,693	22,078	2.06	80
South Atlantic	13	1,709	7,362	4.31	92
East North Central	47	17,323	42,923	2.48	92
West North Central	42	8,165	20,238	2.48	97
South Central	12	1,629	9,266	5.69	71
Western	16	2,480	59,356	23.93	72
Total		41,999	161,222	3.84	80.9

[1]Cooperatives' fiscal years vary and do not exactly match the calendar year.
[2]Figure 1 shows States by region.
[3]Cooperatives having member-producers in the region.
[4]Cooperative member milk volume as a percentage of regional volume marketed by producers.

cent of member milk (table 5).

Following the national trend of decreasing dairy farm numbers, dairy cooperatives reported a 15-percent decline in the number of member-producers in 5 years — from 49,675 to 41,999. The greatest decline in the number of member-producers was in the East North Central region, which had 2,932 (14 percent) fewer member-producers. The West North Central region had 1,995 (20 percent) fewer member-producers, and the number in the North Atlantic was 1,385 (11 percent) fewer. However, percentage-wise, the South Central region had the steepest decline, a 30-percent decrease in member-producers.

Every region of the Nation seemed to be adequately served by dairy cooperatives. The South Central region was served by 12 cooperatives, while 53 cooperatives had members in the North Atlantic region.

In 2012, the Western region remained the top source of cooperative milk volume. The 2,480 member-producers there (6 percent of all dairy cooperative members) marketed 59.4 billion pounds of member milk. This represented 37 percent of member milk marketed by all cooperatives; the share was slightly lower than the 38 percent reported in 2007. The East North Central region accounted for 27 percent of total member milk volume, an increase of two points from 2007. The North Atlantic and West North Central regions, respectively, supplied 14 and 13 percent of the total U.S. cooperative member volume.

All regions except the South Central increased milk volumes from cooperative members. The greatest increase was in the East North Central region, up 5.2 billion pounds in 5 years, a 14- percent increase. The North Atlantic region showed an increase of 1.7 billion pounds, up 8 percent.

Milk deliveries per member-producer were up in all regions in the last 5 years. Nationally, it increased 25 percent, from 3.07 million pounds to 3.84 million pounds. Per-member delivery was highest in the Western region, at 23.93 million pounds. However, percentage-wise, this was only 13 percent higher than in 2007. Compared to other regions, the increase in per-member delivery ranged from 22 percent in the North Atlantic to 35 percent in the South Central region.

There were three regions in which cooperative regional share of milk decreased: South Central, Western, and South Atlantic. The declines, respectively, were from 83 to 71 percent, from 76 to 72 percent, and from 94 to 92 percent.

Plant Operations

Three regions are used in reporting locations of dairy plants: the Atlantic region (combination of the North and South Atlantic regions in figure 1); the Central region (combination of the East North Central, West North Central, and South Central regions); and the Western region.

Cooperatives owned and operated 184 dairy plants in 2012, 9 fewer than in 2007 (table 6). Almost two-thirds of the plants (119 plants, or 65 percent) were in the Central region (mainly East North Central and West North Central). The region was also the most prominent in almost all categories of dairy plants, except for churning butter and drying milk products. The Western region had the most plants for manufacturing butter and dry milk products.

The Western region had 4 more plants in 2012 than in 2007, the Atlantic region had 1 fewer plant, and the Central region had 12 fewer plants operated by cooperatives.

Table 6 Number of dairy plants owned and operated by cooperatives performing various marketing functions, by plant location, 2007 and 2012[1]

Marketing function	Region[2] Atlantic	Central	Western	Total
	Number			
2007				
Receive and ship milk[3]	0	13	4	17
Churn butter	5	11	8	24
Make dry products	8	15	16	39
Make American cheese	4	24	6	34
Make Italian cheese	1	14	2	17
Make other cheeses	1	17	0	18
Package fluid milk	8	35	6	49
Make cultured products	2	8	1	11
Make ice cream	0	8	3	11
Make condensed products[4]	1	2	1	4
Make dry whey products	2	18	4	24
Other dairy-related activities	8	13	5	26
Total[5]	27	131	35	193
2012				
Receive and ship milk[3]	0	10	3	13
Churn butter	5	8	11	24
Make dry products	8	10	17	35
Make American cheese	3	23	6	32
Make Italian cheese	1	13	3	17
Make other cheeses	0	18	0	18
Package fluid milk	8	34	7	49
Make cultured products	3	8	4	15
Make ice cream	0	7	1	8
Make condensed products[4]	1	1	0	2
Make dry whey products	2	16	6	24
Other dairy-related activities	7	28	12	47
Total[5]	26	119	39	184

[1]All dairy plants, including joint-venture plants operated by co-ops.
[2]Atlantic region=North and South Atlantic in figure 1; Central region=East North Central, West North Central, and South Central.
[3]Facilities that only performed milk receiving and shipping functions.
[4]Plants that only condensed milk as final products without further processing on site.
[5]Total number of dairy plants (some plants performed multiple functions in the same plants).

Thirteen plants served only as milk-receiving stations, compared with 17 in 2007. Processing and manufacturing operations were carried out in 171 plants, 5 fewer than 5 years ago.

Forty-nine cooperative plants packaged fluid milk products, the same number as in 2007. The Central region had the most, with 34, but that was 1 plant fewer than 5 years ago. The western region gained one plant, to seven plants, and the number of fluid product plants remained at eight in the Atlantic region.

The number of plants manufacturing butter, 24, remained the same as in 2007. Thirty-five plants manufactured dry milk products (other than dry whey products), down four from 5 years earlier.

Many manufacturing operations were devoted to cheesemaking—32 plants made American cheese, 17 made Italian, and 18 made other cheeses. The number of plants making American cheese was down by two from 2007; the number for other types of cheese remained the same. The Central region had the most cooperative plants making cheese in every category.

In 2012, cultured products were made in 15 cooperative plants, an increase of 4 from 2007, while the number of plants that made ice cream decreased by 3 to only 8 plants. Dry whey products were made in 24 cooperative plants, the same number as 5 years ago.

Most notable was a significant increase in the number of plants that made dairy-related products. Forty-seven plants made products that are not categorized in table 6, an increase of 21 plants (81 percent increase) from 2007.

Table 7 Selected dairy products marketed by cooperatives, 2007 and 2012

Item	2007	2012	5-year change	
	Thousand Pounds			Percent
Butter	1,087,012	1,396,363	309,351	28
Dry milk products				
Dry whole milk	16,322	39,783	23,461	144
Dry buttermilk	53,043	96,609	43,566	82
Nonfat and skim milk powders	1,444,395	1,967,341	522,946	36
Nonfat dry milk, human[1]	1,357,782	1,929,236	571,454	42
Skim milk powders[1]	83,790	36,864	-46,926	-56
Dry skim milk, animal[1]	2,823	1,241	-1,582	-56
Milk protein concentrates		64,410		
Natural cheeses other than cottage cheese	2,512,713	2,385,980	-126,733	-5
American cheese	1,698,485	1,513,174	-185,311	-11
Blue and Gorgonzola		13,701		
Specialty[2]		13,010		
Hispanic		6,503		
Italian cheese	742,830	732,572	-10,258	-1
Muenster		13,183		
Swiss cheese	36,921	31,363	-5,558	-15
Not separately identified & all other cheese	34,477	62,475	27,998	81
Dry whey and modified whey products	1,027,144	1,125,349	98,205	10
Dry whey, and reduced lactose and minerals	739,877	678,781	-61,096	-8
Whey protein concentrates & isolates	171,077	195,878	24,801	14
Lactose	116,190	250,690	134,500	116

[1]Nonfat dry milk (human) may be over-counted and skim milk powders and dry skim milk (animal) under-counted, because some cooperatives reported the three products as a lump sum number.
[2]Includes Cream and Neufchatel, Feta, and Gouda.

Dairy Products Marketed

This section and the accompanying tables (tables 7 and 8) describe the net volumes of selected dairy products marketed by cooperatives. Comparisons are made between the volumes marketed by cooperatives and total U.S. production.

Butter: Cooperatives churned 1,396 million pounds of butter in 2012, up 28 percent from 2007. Cooperative share of U.S. production increased from 71 percent to 75 percent.

Dry milk products: Cooperatives marketed 1,967 million pounds of nonfat and skim milk powders (nonfat dry milk, skim milk powders, and dry skim milk for animal) in 2012, an increase of 36 percent from 5 years ago. Combined, they had a 91-percent share of U.S. production of these dry milk products, though the share was lower than the 96 percent reported in 2007.

Cooperatives more than doubled dry whole milk production and increased dry buttermilk production by more than 80 percent in 5 years. They marketed 68 percent of the Nation's dry whole milk, up from 51 percent in 2007. Their share of dry buttermilk was 89 percent, up from 65 percent in 2007.

Milk protein concentrates is a new line of dry milk product being reported. Cooperative share of this new product category, at 64 million pounds, was 63 percent of national production.

Cheese : In 2012, cooperatives marketed 2,386 million pounds of natural cheeses, excluding cottage cheese, a decline of 5 percent from 2007. As a result, cooperative share of U.S. natural cheese production decreased by 4 points, from 26 percent to 22 percent.

Among natural cheeses produced by cooperatives, just under two-thirds (1,513 million pounds or 63 percent) was American cheese, followed by Italian cheese (733 million pounds or 31 percent).

American cheese made by cooperatives was down 11 percent from 2007, while U.S. production

Table 8 Selected dairy products marketed by cooperatives and shares of U.S. production, 2007 and 2012[1]

Item	2007 co-ops	2007 U.S.	Co-op share	2012 co-ops	2012 U.S.	Co-op share
	----Thousand Pounds----		*Percent*	*-----Thousand Pounds-----*		*Percent*
Butter	1,087,012	1,532,717	71	1,396,363	1,859,554	75
Dry milk products						
Dry whole milk	16,322	31,746	51	39,783	58,132	68
Dry buttermilk	53,043	81,386	65	96,609	109,132	89
Nonfat and skim milk powders	1,444,395	1,503,992	96	1,967,341	2,154,913	91
Milk protein concentrates				64,410	102,318	63
Natural cheeses other than cottage cheese	2,512,713	9,776,785	26	2,385,980	10,890,144	22
American cheese	1,698,485	3,877,214	44	1,513,174	4,358,477	35
Blue and Gorgonzola				13,701	87,940	16
Hispanic				6,503	224,259	6
Italian cheese	742,830	4,198,800	18	732,572	4,633,627	16
Muenster				13,183	152,630	9
Swiss cheese	36,921	313,689	12	31,363	320,599	10
Not separately identified & all other cheese	34,477	1,387,082	2	75,484	1,112,612	7
Dry whey products	1,027,144	2,420,250	42	1,125,349	2,620,581	43
Dry whey, and reduced lactose and minerals	739,877	1,231,798	60	678,781	1,088,565	62
Whey protein concentrates & isolates	171,077	432,928	40	195,878	505,890	39
Lactose	116,190	755,525	15	250,690	1,026,126	24

[1]Cooperatives' fiscal years vary and do not exactly match the calendar year.

increased 12 percent, resulting in a lower cooperative share, 35 percent versus 44 percent in 2007.

In the same 5 years, cooperative Italian cheese marketing decreased by 1 percent, and cooperative share of U.S. total Italian cheese dipped 2 points, to 16 percent.

Cooperative Swiss cheese production in 2012 was 31 million pounds, 15 percent lower than in 2007. Cooperative share of U.S. production was down to 10 percent.

There are several new cheese categories tracked, including: Blue, Gorgonzola, Hispanic, and Muenster. Cooperative shares of these cheeses were, respectively, 16 percent, 6 percent, and 9 percent.

Cooperatives also marketed 75 million pounds of other cheese, including cheese that was not separately identified above or was not categorized. Among these were several specialty cheeses: Cream, Neufchatel, Feta, and Gouda, of which 13 million pounds was produced.

Dry whey and modified whey products: In 2012, cooperatives marketed 1,125 million pounds of dry whey and modified whey products, up 10 percent from 2007, while U.S. production increased 8 percent in the same period, resulting in cooperative share increasing by 1 point, to 43 percent. Among dry whey and modified whey products, cooperative production of dry whey and reduced lactose and minerals whey decreased by 8 percent, while production of whey protein concentrates and isolates increased by 14 percent and lactose more than doubled. Respectively, these three categories of whey products had 62, 39, and 24 percent share of U.S. productions.

Cooperative Sizes

There were four cooperatives that each handled more than 6 billion pounds of member milk in 2012, the same as in 2007 (table 9). The milk volume of the four increased by 2 billion pounds and accounted for 47.8 percent of cooperative milk in 2012, but the share was 1.4 points lower than the 49.2 percent reported for 2007.

Table 9 Size of dairy cooperatives in terms of milk marketed by members, 2007 and 2012

Milk marketed by members	Cooperatives		Share of cooperatives		Member milk		Share of co-op milk	
	2007	2012	2007	2012	2007	2012	2007	2012
	---Number---		------Percent------		----Million Pounds----		-----Percent----	
More than 6 billion pounds	4	4	2.6	3.0	75,075	77,090	49.2	47.8
3 to 6 billon pounds	8	10	5.2	7.6	34,899	45,609	22.9	28.3
2 to 3 billon pounds	5	3	3.2	2.3	12,504	8,193	8.2	5.1
1 to 2 billion pounds	11	9	7.1	6.8	15,439	14,098	10.1	8.7
0.5 to 1 billion pounds	8	11	5.2	8.3	5,176	8,053	3.4	5.0
100 to 500 million pounds	32	27	20.6	20.5	6,740	5,770	4.4	3.6
Less than 100 million pounds	87	68	56.1	51.5	2,681	2,410	1.8	1.5
Total	155	132	100.0	100.0	152,514	161,222	100.0	100.0

The number of cooperatives in the next size group (3 billion to 6 billion pounds of milk) increased by 2, to 10, by 2012. The milk volume of this group occupied a 28.3-percent share of cooperative milk, an increase of 5.4 points from 2007. This was one of the only two size groups to show an increase in cooperative number, milk volume, and share of cooperative milk over the 5 years. Furthermore, this group's 5.4-point share increase far surpassed the other group (0.5-billion-to-1-billion-pound group).

The 2-billion-to-3-billion-pound group saw a decrease of two cooperatives from 2007, and the group's share of cooperative milk decreased by 3.1 points, from 8.2 percent to 5.1 percent.

In the 1-billion-to-2-billion-pound group, the number of cooperatives also dropped by two, from 11 to 9. This size group's share of cooperative milk decreased, by 1.4 points.

The 0.5-billion-to-1-billion-pound group included 11 cooperatives in 2012, three more than in 2007. This group (along with the 3-billion-to-6-billion-pound group) was one of the two groups that showed an increase in cooperative number, milk volume, and share of cooperative milk; the share increase was 1.6 points.

Twenty-seven cooperatives were in the group that marketed between 100 million and 500 million pounds of milk in 2012, a decrease of 5 cooperatives. Together, this group had a 3.6-percent share of cooperative milk, down from 4.4 percent in 2007.

There were 68 cooperatives in the smallest sized group, which marketed less than 100 million pounds of milk each in 2012. This was a steep (22 percent) decline from 2007, when 87 cooperatives in this group were counted. The group's milk volume held only a 1.5-percent share of cooperative milk, a decline from the 1.8-percent share in 2007.

The 14 largest sized cooperatives in the 2 largest size groups (greater than 3 billion pounds of milk each) accounted for 76.1 percent of cooperative milk.

Concentration Ratio

A measure commonly used to gauge the concentration of a sector (or market) is the share occupied by the four largest firms in the sector.

The share of the largest four dairy cooperatives decreased to 47.8 percent of cooperative milk in 2012, down from 49.2 percent in 2007 (tables 9 and 10). Because increase in milk marketed by cooperative was lower than the increase in the total U.S. milk marketed (table 3), the largest four dairy cooperatives also had a lower share of the Nation's milk, decreasing from 40.7 percent in 2007 to 38.7 percent in 2012, a decrease of 2 points.

When the focus was expanded to the largest eight dairy cooperatives, their share of cooperative milk went down .8 point from 2007 to 2012 and went down 1.8 points as a share of U.S. milk.

Meanwhile, the largest 20 dairy cooperatives had a 0.8-point increase in their share of cooperative milk, while their share of the Nation's milk decreased by 0.8 point.

In terms of milk volume, the relative position of dairy cooperatives to the rest of the industry, though still dominant, was a little bit less so.

Employees

Fifty-three dairy cooperatives (40 percent of all dairy cooperatives) reported having 22,969 full-time and 804 part-time employees in 2012 (table 11). These cooperatives marketed 121 billion pounds of member milk, or 75 percent of cooperative milk.

(In addition to the main business of marketing milk, some cooperatives also handled farm supplies and/or other commodities. Therefore, not all employees were engaged in the business of handling milk and dairy products.)

Six other cooperatives had only part-time employees. Together, these bargaining cooperatives reported having 12 part-time employees. Twenty-one cooperatives reported having no employees (though some out-sourced work to other firms).

These 80 cooperatives represented 61 percent of all dairy cooperatives and marketed 79 percent of cooperative milk. The remaining 21 percent of the milk was handled by the 39 percent of dairy cooperatives that did not supply employment information.

Table 10 Share of milk marketed by members of dairy cooperatives, 2007 and 2012

Category	2007	2012
	Percent	
Share of cooperative vol ume		
4 largest cooperatives	49.2	47.8
8 largest cooperatives	62.3	61.5
20 largest cooperatives	83.7	84.5
Share of total U.S. volume1		
4 largest cooperatives	40.7	38.7
8 largest cooperatives	51.6	49.8
20 largest cooperatives	69.1	68.3

[1]Cooperatives' fiscal years vary and do not exactly match the calendar year.

Table 11 Number of employees reported by 80 dairy cooperatives, 2012

	Cooperatives reporting	Full-time employees	Part-time employees	Member milk
	Number			*Million lbs.*
Having full-time employees	53	22,969	804	120,980
Having only part-time employees	6	-	12	1,247
Having no employees[1]	21	-	-	5,733
Total reported	80	22,969	816	127,960
	Percent			
Share of total cooperatives	61	n.a.[2]	n.a.	79

[1]Some of these cooperatives out-sourced work to other firms.
[2]Not available.

Financial Performance

Complete financial data submitted by 89 dairy cooperatives showed that their total assets for the fiscal year ending in 2012 were $13.9 billion (table 12). Current assets accounted for $8.6 billion, and fixed assets (net property, plant, and equipment (PP&E) and other assets) were $4.4 billion. Dairy cooperatives invested almost $1 billion in other cooperatives and subsidiaries.

Total liabilities for the 89 cooperatives were $10.4 billion. They owed $6.9 billion in current liabilities and incurred $3.5 billion long-term debt.

Total equity, the balance of assets and liabilities, was $3.6 billion. Most equity (84 percent, or $3 billion) was allocated to members.

On a per-hundredweight-of-milk basis, total assets were $10.90, total liabilities were $8.12, and equity was $2.78.

The 89 cooperatives marketed 127.9 billion pounds of milk in 2012. They represented 67 percent of all dairy cooperatives and 79 percent of cooperative milk volume.

(Dairy cooperatives typically pay members for their milk twice a month. A large proportion of the current assets and the current liabilities are related to such periodic cash payments to members. This is a unique characteristic of the balance sheet of dairy cooperatives.)

Total revenues reported by the 89 cooperatives were $48 billion (table 13). Of this amount, 77 percent ($37 billion) was from milk and dairy products sales, 22 percent ($10.7 billion) was from supply and other sales, and less than 1 percent was from other income.

Of the $37 billion milk and dairy product sales, $1.5 billion (4 percent) was export sales, reported by 15 cooperatives.

Subtracting total costs and expenses from total revenues, net margin before taxes was $285 million, or 22 cents per hundredweight of milk marketed. This represents a before-tax return on equity of 8 percent.

Some cooperatives reported the value of the milk they bargained for as sales in the income statements, while others did not. For this latter group, an estimated value of the milk that was bargained for was included in the milk and dairy products sales in order for the cooperative sales figures to be consistent. The estimated value is offset by the equal amount of the cost of goods sold and, therefore, does not affect the $285 million net savings reported. Milk and dairy product sales may also include some inter-cooperative transactions, but they are also netted out to arrive at the total net savings of dairy cooperatives as a group.

Table 12 Aggregated balance sheet of 89 dairy cooperatives, 2012

	--Thousand Dollars--
Assets:	
Current assets	8,623,306
Net PP&E[1] and other assets	4,371,161
Investments in other co-ops &subsidiaries	945,765
Total assets	13,940,232
Liabilities & equity:	
Current liabilities	6,883,584
Long-term & other liabilities	3,499,336
Total liabilities	10,382,920
Equity	
Common stock	1,163
Preferred stock	247,959
Allocated equity	2,980,614
Retained earnings & unallocated equity	270,680
Non-controlling minority interests	56,896
Total equity	3,557,312
Total liabilities and equity	13,940,232
Number of dairy cooperatives reporting	89
Member milk (million pounds)	127,942
Total assets per hundredweight	$10,90
Total liabilities per hundredweight	$8.12
Total equity per hundredweight	$2.78

[1]PP&E: Property, plant and equipment.

Table 13 Aggregated income statement of 89 dairy cooperatives, 2012

	--Thousand Dollars--
Milk & dairy product sales1	36,963,760
Supply and other sales	10,684,699
Service receipts, subsidiary and other income	306,622
Total revenues	47,955,081
Cost of goods sold	44,628,358
Expenses	2,739,858
Non-operating income & non-recurring losses	301,477
Total costs and expenses	47,699,693
Net margin before taxes	285,388
Number of dairy cooperatives reporting	89
Member milk (million pounds)	127,942
Net margin before taxes per hundredweight	$0.22
Before-tax return on total equity	8.0%

[1]Fifteen cooperatives reported export sales at a total of $1.5 billion.