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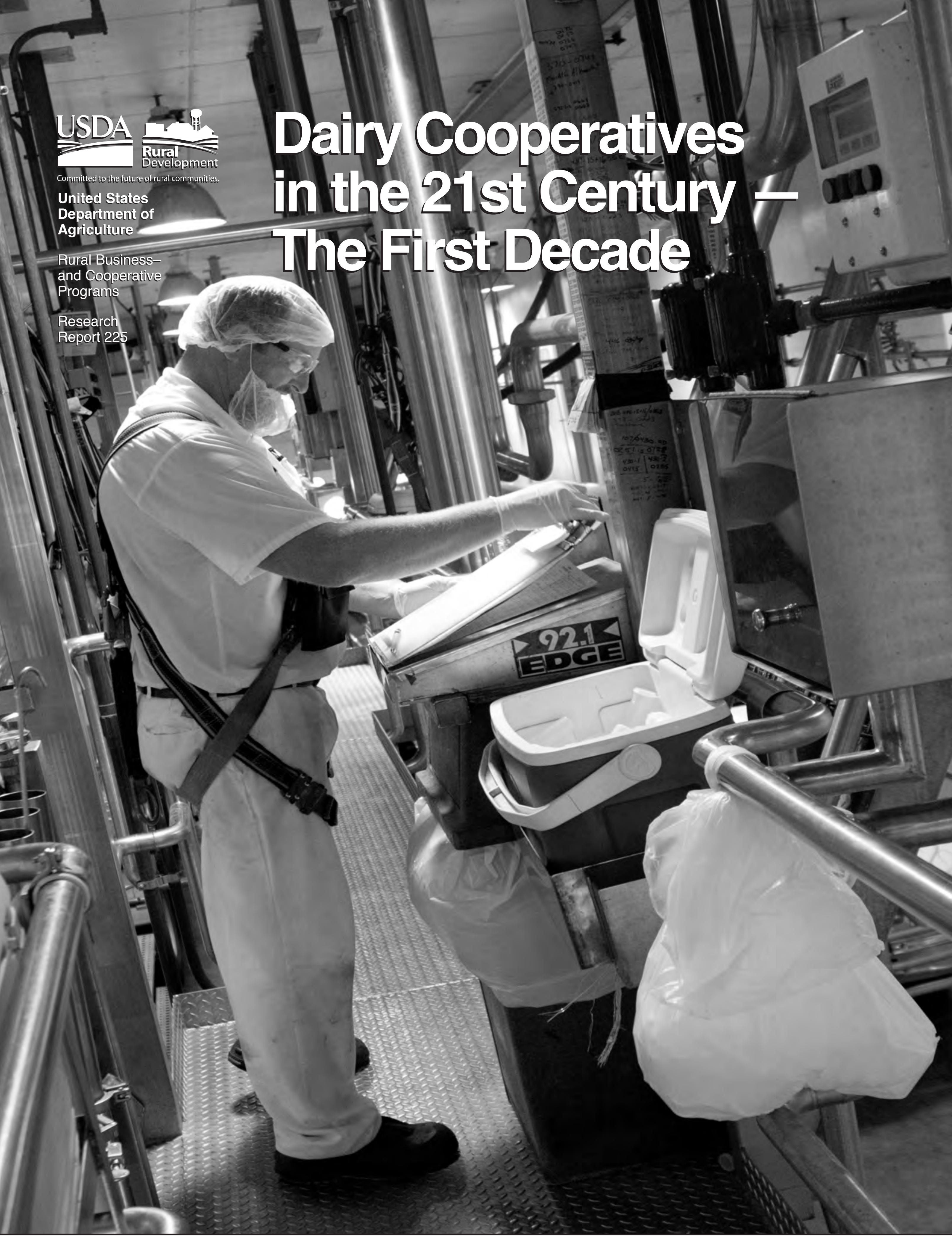
Dairy Cooperatives in the 21st Century — The First Decade



Abstract

Dairy cooperatives continued to dominate the milk industry at the first-handler level during 2000-10. The number of dairy cooperatives shrunk by a net of 60 cooperatives during 2000-10. Of the 83 cooperatives that exited, 49 were sold or otherwise went out of operation, 30 had merged with another cooperative, and 4 no longer had producer milk. Twenty-three new cooperatives formed during 2000-10. There were eight more cooperatives with diversified operations, mostly due to existing cooperatives expanding the scope of their operations. There were few fluid processing cooperatives in both 2000 and 2010, even with a net decline of just one cooperative. Niche marketing cooperatives were the most dynamic among the manufacturing/processing cooperatives with many entries, exits, and operational changes. The number of bargaining-only cooperatives continued to far out-number the other operating types of dairy cooperatives, despite declining by a net 49 cooperatives during 2000-10. Small cooperatives (those handling less than 50 million pounds of milk per year) no longer represented a majority of the Nation's dairy cooperatives. The North Atlantic region continued to have the most dairy cooperatives headquartered there, though a majority of these were small cooperatives.

Key Words: Dairy cooperatives, milk, milk marketing, dairy producers, extra value

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Dairy Cooperatives in the 21st Century—The First Decade

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Rural Business-Cooperative Service

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Cover photo by USDA photographer Lance Cheung

Preface

The Cooperative Marketing Act of 1926 tasked the U.S. Department of Agriculture (USDA) to gather data on cooperatives and to conduct research on issues related to the cooperative marketing of agricultural products and the cooperative purchase of farm supplies and services. This project serves to document changes in the dairy cooperative sector over the first decade of the 21st century. It follows the previous report, Rural Business-Cooperative Service (RBS) Research Report 187: *Structural Change in the Dairy Cooperative Sector, 1992-2000*.

Information for this report comes primarily from data collected via surveys of U.S dairy cooperatives conducted by RBS. In 1997, 2002, and 2007, surveys collected detailed information on the marketing operations of dairy cooperatives. Dairy cooperatives' size categories were also based on information from these marketing operations surveys. Financial data was collected from RBS's annual surveys of all agricultural cooperatives.

For the periodic marketing operations surveys, any cooperative that marketed milk for member-producers was considered a dairy cooperative. By necessity, the annual RBS survey used a different criterion—if a majority of the cooperative's sales were from the sale of milk and dairy products, it was considered a dairy cooperative.

Industry statistics were taken from various USDA agencies: Economic Research Service, Foreign Agricultural Service, and the National Agricultural Statistics Service. The extra value index calculations followed the methodology previously developed by RBS (Research Report 212: *Measuring Performance of Dairy Cooperatives* by K. Charles Ling, June 2006).

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Highlights

In the first decade of the 21st century, dairy cooperatives lost a net of 60 cooperatives—dropping from 211 in 2000 to 151 in 2010. Of the 151 dairy cooperatives operating in 2010, almost 3 of every 4 had been in operation prior to 1992, but only a little more than 1 in 7 had been formed since 2000.

The number of dairy cooperatives that disappeared between 2000 and 2010 outpaced the number of new cooperatives that were formed by nearly four to one. Almost two of every five dairy cooperatives existing in 2000 had gone out of existence by 2010, averaging 7.5 cooperative exits per year between 2000 and 2010. About two new dairy cooperatives were formed per year, on average.

Most of the 83 cooperatives that ceased to exist between 2000 and 2010 were sold or otherwise went out of operation (49 cooperatives) while 30 merged with another cooperative. Four no longer handled member-producer milk.

There were eight more cooperatives with diversified operations in 2010 than in 2000. The increase was mostly due to cooperatives that broadened their operations to become diversified, where there was just one newly formed diversified cooperative. Three of the four exits of diversified cooperatives were by merger.

All the other operating types saw declines in their numbers. The number of cooperatives that did not operate plants for manufacturing or processing milk products saw the largest decline between 2000 and 2010, but continued to far out-number the other operating types of dairy cooperatives.

There was ample adjustment among cooperatives that manufactured or processed their members' milk into specialty niche products. Over the 2000-10 decade, quite a few cooperatives exited or ceased making niche products, while at the same time a number of cooperatives began making niche products or were formed in order to make niche products.

The small cooperatives (those handling less than 50 million pounds of milk annually) had more exits and entries than either medium-sized cooperatives (50 to 1 billion pounds) or large cooperatives (1 billion pounds or more). Furthermore, the net drop of 63 small cooperatives during 2000-10 was the largest change among the 3 size groups. Accordingly, small cooperatives went from being a majority of the Nation's dairy cooperatives (60.2 percent in 2000) to 42.4 percent in 2010.

Medium-sized cooperatives showed the smallest net change in numbers—a decline of three cooperatives, while the number of large cooperatives grew by a net of six cooperatives, mostly due to increases in the amount of milk handled by existing cooperatives.

Close to one-half of the 83 dairy cooperative exits were in the North Atlantic region. In addition, the North Atlantic was the only region where a majority of the cooperative exits were by merger. The South Atlantic region (with the fewest cooperatives of all the regions in 2000) had no exits and added two cooperatives during 2000-10. The East North Central region had 8 new cooperatives form between 2000 and 2010 while the North Atlantic region had 7 new cooperatives form—accounting for almost two-thirds of all new dairy cooperatives. In contrast, the South Central region was the only region with no new cooperatives.

The performance of dairy cooperatives was examined using a measure of financial performance that takes into account the alternative cost of using member-supplied capital, the extra value index. The results indicate that, on average, dairy cooperatives generated extra value for their members for the entire decade, meaning their earnings were able to cover a nominal charge for their use of member-supplied capital. The results also indicated that for cooperatives that merged, financial performance was not an obvious reason for their exit; rather, a strong position may have made them attractive merger candidates. On the other hand, for the cooperatives that dissolved by 2010, poor financial performance may have been a contributing factor.

The changes outlined in this report reveal dairy cooperatives to be flexible, responsive organizations that adapt to member needs in the marketplace. Dairy cooperatives represent a major share of U.S. milk production even as some have altered their operations to meet changes in the market environment and some have gone out of business. The cooperative model for U.S. milk producers appears resilient across a range of operating types.

Dairy Cooperatives in the 21st Century—The First Decade

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Introduction

The beginning of the 21st century found dairy cooperatives continuing to dominate the milk industry at the first-handler level. Over this first decade of the 2000s, dairy cooperatives continued to adapt their operations in order to best market their members' milk. Some cooperatives expanded operations to handle increased member milk supplies by building or expanding manufacturing plants. In addition, they added equipment, facilities, and expertise to hone product lines to better serve their customers. Cooperatives merged and created alliances to increase efficiency, in part by reducing marketing and administrative overhead expenses. Atypical events included a dairy cooperative bankruptcy and the sale of a long-enduring cooperative to an investor-owned dairy company.

This report examines and describes the changes in the U.S. dairy cooperative sector that have occurred in the first decade of the 21st century. The changes in cooperative numbers according to their mode of operation, their size, and where they are headquartered are documented. In addition, the financial performance of dairy cooperatives is examined.

Background

Dairy cooperatives exist to serve their member-owner dairy producers. Dairy producers have long looked to cooperatives to provide a market outlet for the milk they produce and representation in the marketplace. Accordingly, conditions in the broader dairy industry have direct implications for dairy cooperative operations.

Milk production trends

The volume of milk marketed by U.S. producers grew an average of 2.6 billion pounds annually between 2000 and 2010 (box 1). Cow numbers decreased by an average of 9,700 head annually, but there were increases in 6 of the 10 years. In contrast, the number of licensed dairy herds in the United States continued on a steady downward trend. Accordingly, the number of memberships in cooperatives with a majority of sales from milk and dairy products shrunk by an average of 5,300 per year during 2000-10. The number of producer-members of cooperatives that handled producer milk likewise showed a drop between 2002 and 2007 to about 50,000 producer-members.

The volume of milk marketed by U.S. milk producers per licensed dairy herd nearly doubled from an annual average of 2.4 million pounds per licensed dairy herd in 2003 to 3.6 million pounds in 2010. Likewise, the amount of milk produced per dairy cooperative producer-member also increased between 2002 and 2007 (the years it was measured). Moreover, cooperative member-producers marketed about 82 percent of all milk marketed by U.S. producers in both 2002 and 2007.

Dairy product production trends

The figures in box 2 provide a snapshot of production and marketing in the major dairy product categories with the volume marketed by cooperatives. Notable is the continued growth in cheese production for 2000-10. Cooperative marketing of cheese did not follow suit. Cheese marketed by cooperatives was 435 million pounds lower in 2007 than in 2002, while U.S. cheese production rose by 1.2 billion pounds between those 2 years. Accordingly, the share of cheese marketed by cooperatives continued a downward trend, falling to 26 percent in 2007.

Nonfat dry milk (NFDM) production continued on an upward trend. Likewise, dairy cooperatives marketed 96 percent of U.S. NFDM production in 2007, up from 84 percent in 2002. U.S. butter production also increased an average of 30.7 million pounds per year between 2000 and 2010. Dairy cooperatives marketed 71 percent of the U.S. butter production in 2002 and 2007.

The volume of milk used for fluid products in the United States increased 3 billion pounds from 2000 to 2010, while the cooperative share of the U.S. packaged fluid milk volume was steady at 7 percent both in 2002 and 2007.

In total, the volume of milk cooperatives manufactured or processed rose somewhat from 56.2 million pounds in 2002 to 57.5 million pounds in 2007. However, dairy cooperatives' share of the volume of the total milk used in manufacturing processing in the United States declined slightly from 33.1 percent in 2002 to 31.0 percent in 2007.

Marketing environment

The first decade of the 21st century was tumultuous for both the dairy industry and the United States economy generally. The volatility of milk prices experienced in the 1990s only increased in the first decade of the 21st century. Average monthly milk price peaked in November 2007 at an all-time record of $21.90 per hundredweight (cwt) and then fell to less than $11.50 per cwt for June and July of 2009, reversing the fortunes of many a dairy farmer (box 3). Month-to-month changes in average milk price were greater than $2 per cwt 8 times in the decade. (In contrast, month-to-month changes were more than $2 per cwt just 6 times from 1980 to 2000.)

While milk prices were swinging from record highs to record lows, feed prices saw dramatic increases toward the end of the decade. As a result, annual average income over feed cost (a measure of milk production profitability) was erratic, ranging by a margin of $7.49 per cwt of milk from high to low between 2000 and 2010. (By way of comparison, it varied by just $2.91 per cwt from high to low during the previous decade.)

Likewise, total sales (net of sales between cooperatives) for cooperatives with a majority of sales from milk and dairy product sales fluctuated from year to year over 2000-10. These cooperatives' total sales fell in 5 of the 10 years between 2000 and 2010 and ranged from an increase of $8.1 billion in 2007 to a drop of $9.9 billion in 2009. (In contrast, total sales for cooperatives with majority milk and dairy product sales fell only once in the previous decade, with the largest year-to-year change at only $1.9 billion).

Regulations

In the regulatory arena, the Federal milk marketing orders were consolidated into 11 orders as this century began. In 2004, the Western order was terminated, leaving 10 milk marketing orders in the United States. The milk price support program was also altered to support dairy product prices rather than milk prices. The support purchase price for nonfat dry milk was lowered while the purchase price for butter support was raised. There were minimal government purchases of surplus dairy products during the decade. An income support program was instituted where under certain conditions the U.S. Government made direct monthly payments to qualifying dairy producers.

Dairy Cooperative Dynamics

Dairy cooperatives are vibrant organizations, adapting to changes in the marketplace and member needs while striving to maximize their efficiency and effectiveness. The trend to fewer dairy producers producing larger milk volumes is mirrored by the net decline of 60 cooperatives serving member-milk producers between 2000 and 2010 (table 1). Moreover, of the 211 cooperatives operating in 2000, 83 cooperatives, or almost two of every five, had exited by 2010. However, while a majority of cooperatives dissolved (49 cooperatives), quite a few exits (30 cooperatives) were by merger with other dairy cooperatives. The mergers represent producer organizations realigning themselves to address the increase in size of their customers and to improve efficiency in milk marketing and handling operations. Only a handful of cooperatives (4 cooperatives) ceased handling producer milk between 2000 and 2010.

As an indication of the vitality of the cooperative form of business for milk marketing, 23 new cooperatives formed over the 2000-10 decade. And, of the 83 cooperatives that ceased to exist, one-third exited by merging into another cooperative. Furthermore, the members of cooperatives that were sold or ceased operation often signed up with other coopertives. Thus, the drop in the number of cooperatives does not

Table 1—Dairy cooperative exitsentries and , 2000-10

	2000 total	Merged[1]	Dissolved[2]	No longer "dairy"[3]	Total Exits 2000-10	Entries[4] 2000-10	2010 total	Net change 2000-10
Number of dairy cooperatives	211	30	49	4	83	23	151	-60
		Percent of 2000						
Share		14.2	23.2	1.9	39.3	10.9	71.6	-28.4

[1] Cooperatives that merged with another cooperative and were not the surviving entity.
[2] Cooperatives that were sold, dissolved, etc.
[3] Cooperatives no longer handling member milk.
[4] Includes cooperatives formed by merger of existing cooperatives when the new entity operated under a new name.

indicate a decline in the usefulness of dairy cooperatives, but rather points to their ability to adapt to market conditions and member needs.

Operating types of dairy cooperatives

Over the years, dairy farmers have banded together to form cooperative businesses to better market their milk. The methods these farmers directed their cooperatives to use to ensure a market for their raw milk varied widely. For this reason, dairy cooperatives have been broadly classified according to their type of operations.

Diversified cooperatives carry out a diverse set of activities, such as making and marketing a variety of dairy products while also selling a large portion of their members' milk as bulk, raw milk to other handlers to ensure that members have a place in the market. Their products may include butter, dried milk powder(s), and cheese. The butter and cheese may be produced in bulk for other manufacturers or in consumer-ready packages, or both. Some cooperatives produce cheese or dry milk products with specific criteria as requested by their customers. Diversified cooperatives may also bottle fluid milk and make "soft" products such as yogurt, cottage cheese, and sour cream. Typically, these cooperatives handle a large volume of milk and have members in numerous States.

Fluid processing cooperatives process their members' milk in bottling plants and market packaged beverage milk. In addition, they may make a variety of soft products and/or ice cream. However, very few cooperatives have gone this route exclusively. The fluid processing sector is competitive and requires ample financial resources and top-notch management.

Niche marketing cooperatives typically process all of their members' milk in the cooperative's plants to manufacture and market specialty or branded cheese and other dairy products for particular markets. They often market their products directly to consumers and typically handle a relatively small volume of milk. A few sell a portion of their milk raw, and in some cases the cooperative does not have its own manufacturing facilities, but has made arrangements with a processor (or processors) to make their specialty products.

Bargaining-only cooperatives are the most numerous type of dairy cooperative in the United States. They operate at the first-handler level in seeking to secure the most profitable outlets for their members' milk and provide producers a say in the market. They may negotiate prices and terms of trade, as well as secure a buyer(s) for members' milk. For the most part, bargaining-only cooperatives do not own plants. Some have members in multiple States and handle a large volume of milk while others are quite small and provide only basic marketing services for members.

Two other operating types, ***"bargaining-balancing"*** and ***"hard product manufacturing"*** are no longer economically viable. Bargaining-balancing cooperatives were those that operated at the first-handler level bargaining for their producer-members, but also had plant facilities to accommodate handlers' needs and/or to balance milk supplies. Their manufacturing operations were generally used for manufacturing commodity dairy products (butter, powder, and sometimes cheese) for last-resort balancing of surplus milk volume. The cost of inefficient plant utilization led this type of cooperative to merge with other cooperatives, alter their operations, or dissolve.

In fact, between 2000 and 2010, five bargaining-balancing cooperatives expanded their operations to the point that they are considered diversified cooperatives while one merged with a diversified dairy cooperative. And since 2000, three bargaining-balancing cooperatives closed their plants to focus on bargaining only while two dissolved. However, dairy cooperatives continue to provide the balancing function in milk markets—now it is mostly provided by the diversified cooperatives. The diversified cooperatives direct varying volumes of milk through their systems of plants to accommodate the ebb and flow of milk production and demand.

Similarly, hard-product manufacturing cooperatives have adopted diversified operations. Previously, these cooperatives used most of their members' milk in their own manufacturing plants to make undifferentiated, commodity dairy products. These cooperatives had the opportunity to capture processor margins by operating well-run, large-scale modern plants, but found that their margins became very narrow. Some found it more advantageous to diversify their product lines and to formulate products to unique customer specifications. One hard-product manufacturing cooperative merged with other cooperatives and through the combination of operations, gained the advantages of diverse operations. Interestingly, none of the hard-product manufacturing cooperatives went out of business altogether in the 10-year period.

Changes by type of dairy cooperative

There was substantial adjustment in dairy cooperative operations between 2000 and 2010. In fact, there were as many changes in operating focus as there were new cooperatives formed (23). There were net declines in the number of cooperatives according to all operating types, except for diversified dairy cooperatives—the only type that saw an increase in their numbers (table 2).

Even so, three diversified cooperatives merged to better position their producer-members in the marketplace while one diversified cooperative was sold to a privately owned dairy company (its members then joined alternative dairy cooperatives, for the most part). Another diversified cooperative became predominately focused on its fluid operations and so is classified as a fluid processing cooperative. Therefore, of the 14 diversified cooperatives in 2000, five were no longer counted in the diversified category in 2010.

One new diversified cooperative was formed in the 2000-10 decade by a merger of three manufacturing/processing dairy cooperatives (diversified, fluid processing, and hard-product manufacturing). There were a dozen cooperatives that expanded the scope of their operations to become categorized as diversified, with the bulk of these (seven cooperatives) being former bargaining-balancing or hard-product manufacturing cooperatives. Three niche marketing cooperatives grew into diversified operations and two formerly bargaining-only cooperatives added manufacturing/processing operations between 2000 and 2010. Remarkably, a majority of the diversified cooperatives in 2010 (13 out of 22 cooperatives) were not operating as diversified cooperatives a decade earlier.

Of the four fluid cooperatives operating in 2000, three went out of existence by 2010—one by merger and two through dissolution. Furthermore, no new cooperatives were formed to operate primarily in the fluid milk processing arena. However, notably, one bargaining-only cooperative did add fluid milk bottling operations during the decade and a diversified cooperative became more appropriately classified as a fluid processing cooperative. So, there were three fluid processing cooperatives in 2010, only one of which had been a fluid bottler the entire decade.

The niche marketing category saw quite a bit of change between 2000 and 2010, despite the net decline of just four cooperatives. Of the 23 niche marketing cooperatives in 2000, eight went out of operation by 2010. Three of these were relatively short-lived cooperatives, as they were formed after 1992 and went out of operation by 2010. Furthermore, another five cooperatives moved out of niche operations over the decade. Three medium-sized niche marketing cooperatives added additional product lines and became diversified, while two small niche cooperatives ceased manufacturing operations but continued to exist as bargaining-only cooperatives. As a result, by 2010 a majority of the niche marketing cooperatives in existence 10 years earlier (13 cooperatives) had either exited or ceased manufacturing niche products.

At the same time, five new niche marketing cooperatives were formed between 2000 and 2010 to make and market niche dairy products. Mostly they sought to capitalize on unique milk production characteristics such as “organic” or “grass-fed.” In addition, four small cooperatives that had been performing only bargaining services in 2000 began manufacturing specialty cheese by 2010. In some cases, these cooperatives were returning to the cheese manufacturing business.

As mentioned above, there were no longer any cooperatives that fit in the bargaining-balancing or hard-product manufacturing categories. Most of these (10 cooperatives) altered their operations to continue in operation—7 as diversified and 3 as bargaining-only cooperatives.

Fittingly, the most numerous type of dairy cooperative, bargaining-only, saw the largest decline in numbers between 2000 and 2010. The largest number exited by dissolving (36 cooperatives) while 24 merged, mostly into diversified cooperatives. Bargaining-only cooperatives were the only type where some (four cooperatives) no longer handled producer milk. Seven bargaining-only cooperatives added manufacturing/processing operations to become niche marketing cooperatives (four cooperatives), fluid processing cooperatives (one cooperative), or diversified cooperatives (two cooperatives).

Meanwhile, there were 17 newly formed bargaining-only cooperatives. In addition, as mentioned above, five cooperatives got out of the manufacturing business to focus solely on their bargaining functions. Despite the net decline of 49 cooperatives over the decade, bargaining-only cooperatives continue to far out-number the other operating types of dairy cooperatives in 2010.

Changes by size of dairy cooperative

Dairy cooperatives were also classified according to the amount of milk they handled. (However, milk volume is not necessarily a proxy for the number of member-farms since the amount of milk produced on any given farm varies widely, with some cooperatives dominated by members with large herd sizes, others with smaller, and some with mixed farm sizes).

The small cooperatives (those handling less than 50 million pounds of milk annually) continued to be the most numerous size of cooperative, but the num-

Table 2—Types of dairy cooperative exits and entries between 2000 and 2010

Operating Mode	2000 co-ops	Merged[1]	Dissolved[2]	No longer "dairy"[3]	Total Exits	Mode changes from	Exits plus mode changes	Entries[4]	Mode changes to	Total additions	2010 co-ops	Net change 2000-10
	Number of dairy cooperatives											
Diversified	14	3	1	0	4	1	5	1	12	13	22	8
Fluid	4	1	2	0	3	0	3	0	2	2	3	-1
Niche	23	0	8	0	8	5	13	5	4	9	19	-4
HPM, BB [5]	14	2	2	0	4	10	14	0	0	0	0	-14
Bargaining-only	156	24	36	4	64	7	71	17	5	22	107	-49
Total	211	30	49	4	83	23		23	23	n/a	151	-60
		Percent of 2000 cooperatives, by type						*Percent of 2010 cooperatives, by type*				*Percent of 2000*
Diversified		21.4	7.1	0.0	28.6	7.1	35.7	4.5	54.5	59.1		57.1
Fluid		25.0	50.0	0.0	75.0	0.0	75.0	0.0	66.7	66.7		-25.0
Niche		0.0	34.8	0.0	34.8	21.7	56.5	26.3	21.1	47.4		-17.4
HPM, BB [5]		14.3	14.3	0.0	28.6	71.4	100.0	n/a	n/a	n/a		-100.0
Bargaining-only		15.4	23.1	2.6	41.0	4.5	45.5	15.9	4.7	20.6		-31.4
Total		14.2	23.2	1.9	39.3	10.9		15.2	15.2			-28.4

Note: Mode of operation was determined from the marketing operations survey data of 1997, 2002 and/or 2007.
[1] Cooperatives that merged with another cooperative and were not the surviving entity.
[2] Cooperatives that were sold, dissolved, etc.
[3] Cooperatives no longer handling member milk.
[4] Includes cooperatives formed by merger of existing cooperatives when the new entity operated under a new name.
[5] Hard Product Manufacturing and Bargaining Balancing cooperatives

ber dropped sharply from 127 small cooperatives in 2000 to 64 in 2010 (table 3). In fact, most of the 83 dairy cooperative exits between 2000 and 2010 were in the small cooperative category (62 cooperatives). Most of the small cooperatives exited by dissolution (41 cooperatives), while 17 small cooperatives merged with other cooperatives and 4 no longer handled producer milk. At the same time, 14 small cooperatives grew in size.

Despite the large number of exits, 12 new small cooperatives were formed over 2000-10, representing a majority of the 23 newly formed dairy cooperatives. Regardless, the net decline of 63 small cooperatives was the largest among the size groups.

There was quite a bit of adjustment among the medium-sized cooperatives (those handling from 50 to 1 billion pounds of milk annually), yet the number of medium-size cooperatives declined by just 3 cooperatives in the 2000-10 period. Nineteen medium cooperatives went out of operation—12 by merger while 7 dissolved. Seven changed size category where six medium-sized cooperatives grew into large cooperatives and just one shrank. As noted above, 13 small cooperatives grew into medium-sized cooperatives. Finally, 10 new medium-sized cooperatives were formed during the decade.

In contrast, the number of large cooperatives (those that handled 1 billion pounds or more of milk annually) grew by a net of six cooperatives. This growth was due to increases in the amount of milk handled by seven existing cooperatives, with just one newly formed large cooperative. Otherwise, there was little change among the large cooperatives, where just one cooperative exited by merger and one by dissolution and none shrunk in size.

Changes by regional headquarters of dairy cooperatives

Dairy cooperatives continue to have a presence in every region of the United States. The most dairy cooperatives were headquartered in the North Atlantic region, both in 2000 and in 2010. This region also had the most cooperative exits among the regions (table 4). Of the 41 cooperative exits in the North Atlantic during the decade, 21 were by merger. Most of those that merged had been members of a federation that disbanded, and they subsequently merged into a large diversified cooperative, also headquartered in the North Atlantic. While most of those merging were small bargaining cooperatives, three medium and large manufacturing/processing cooperatives headquartered in the North Atlantic went out by merging.

There were seven newly formed dairy cooperatives in the North Atlantic region. One was the result of the merger between the three manufacturing/processing cooperatives mentioned above. Most were newly formed, small bargaining-only cooperatives, some organized by organic milk producers. Still, there was a net reduction of 34 cooperatives from 2000 to 2010, more than in any other region.

The South Atlantic region was unique in being the only region not to have any dairy cooperative exits and to see an increase in the number of dairy cooperatives headquartered there. Two new medium-sized bargaining-only cooperatives formed between 2000 and 2010, giving the South Atlantic a total of five dairy cooperatives, the second-fewest dairy cooperatives in 2010, rather than the fewest as in 2000.

The East North Central region had 14 dairy cooperatives exit—almost all by dissolution, where just 1 merged and 2 no longer handled producer milk. Yet, there were eight entries—three of which were small niche marketing cooperatives and the remaining five were bargaining-only cooperatives. So, there was a net decline of six cooperatives in the East North Central region.

Similarly, the West North Central region had 19 dairy cooperatives exit. Most dissolved and two no longer handled producer milk, but five had merged with other cooperatives. Only two new cooperatives were formed in the West North Central region. Therefore, the West North Central region had the second-largest decline in number of dairy cooperatives (17 cooperatives) among the regions.

In contrast, the South Central region saw just one cooperative merge with another dairy cooperative and another dissolve between 2000 and 2010. Furthermore, it was the only region with no new cooperatives. The net decline of two dairy cooperatives meant the South Central region had the fewest dairy cooperatives in 2010.

The Western region had 2 cooperatives exit by merger and 5 that dissolved, so 7 out of the 16 dairy cooperatives headquartered there in 2000 had exited by 2010. Most of those that dissolved were small and medium bargaining-only cooperatives, but one was a fluid processing cooperative that went bankrupt. Four bargaining-only cooperatives were formed between 2000 and 2010—all in the Mountain States of Idaho, New Mexico, and Utah.

Table 3—Dairy cooperative exits and entries, by size, 2000-10

Size category	2000 co-ops	Merged[1]	Dissolved[2]	No longer "dairy"[3]	Total Exits	Size changes from	Exits plus size changes	2000-2010-Entries[4]	Size changes to	Entries plus size changes	2010 co-ops	Net change 2000-10
	Number of cooperatives											
Small[5]	127	17	41	4	62	14	76	12	1	13	64	-63
Medium[6]	62	12	7	0	19	7	26	10	13	23	59	-3
Large[7]	22	1	1	0	2	0	2	1	7	8	28	6
Total	211	30	49	4	83	21		23	21		151	-60
		Percent of 2000 cooperatives, by size						*Percent of 2010 cooperatives, by size*				*Percent of 2000*
Small[5]		13.4	32.3	3.1	48.8	11.0	59.8	18.8	1.6	20.3		-49.6
Medium[6]		19.4	11.3	0.0	30.6	11.3	41.9	16.9	22.0	39.0		-4.8
Large[7]		4.5	4.5	0.0	9.1	0.0	9.1	3.6	25.0	28.6		27.3
Total		14.2	23.2	1.9	39.3	10.0		15.2	13.9			-28.4

Note: Size category was determined from the marketing operations survey data of 1997, 2002 and/or 2007.

[1] Cooperatives that merged with another cooperative and were not the surviving entity.

[2] Cooperatives that were sold, dissolved, etc.

[3] Cooperatives no longer handling member milk.

[4] Includes cooperatives formed by merger of existing cooperatives when the new entity operated under a new name.

[5] Cooperatives that handled less than 50 million pounds of milk annually.

[6] Cooperatives that handled 50 to 999 million pounds of milk annually.

[7] Cooperatives that handled 1 billion or more pounds of milk annually.

Table 4—Dairy cooperative exits and entries, by region, 2000-10

	2000 coops	Merged[1]	Dissolved[2]	No longer dairy[3]	Total exits	2000-10 Entries[4]	2010 coops	Net change
	Number of cooperatives							
North Atlantic	88	21	20	0	41	7	54	-34
South Atlantic	3	0	0	0	0	2	5	2
East North Central	41	1	11	2	14	8	35	-6
West North Central	55	5	12	2	19	2	38	-17
South Central	5	1	1	0	2	0	3	-2
Western	19	2	5	0	7	4	16	-3
All regions	211	30	49	4	83	23	151	-60
		Percent of 2000 cooperatives, by region				*Percent of 2010*		*Percent of 2000*
North Atlantic		23.9	22.7	0.0	46.6	13.0		-38.6
South Atlantic		0.0	0.0	0.0	0.0	40.0		66.7
East North Central		2.4	26.8	4.9	34.1	22.9		-14.6
West North Central		9.1	21.8	3.6	34.5	5.3		-30.9
South Central		20.0	20.0	0.0	40.0	0.0		-40.0
Western		10.5	26.3	0.0	36.8	25.0		-15.8
All regions		14.2	23.2	1.9	39.3	15.2		-28.4

[1] Cooperatives that merged with another cooperative and were not the surviving entity.
[2] Cooperatives that were sold, dissolved, etc.
[3] Cooperatives no longer handling member milk.
[4] Entries include cooperatives formed by merger of existing cooperatives when the new entity operated under a new name.

Dairy cooperatives in 2010

Of the 151 dairy cooperatives operating in 2010, almost 3 of every 4 (110 cooperatives) had been operating since prior to 1992 (table 5). Most of these cooperatives had been operating since well before 1990s, where at least a dozen had been operating for over 75 years. Eighteen cooperatives were relatively newer cooperatives, having been formed during 1992-99, while 23 cooperatives were newly formed during 2000-10.

As the marketing environment and needs of the producer-members changes, dairy cooperatives adjust their operations. Some cooperatives significantly altered their operations such that they were identified as a different operating type. Nineteen of the cooperatives that had been operating since prior to 1992 had changed their mode of operation during 2000-10. Moreover, four of the newer cooperatives had also changed their mode of operation during 2000-10. However, 91 of the Nation's dairy cooperatives in 2010 had been in operation since prior to 1992 and had continued in the same mode of operation durinng 2000-10. While these cooperatives likely expanded, altered, and adapted their operations over the years, they remained in the same category of operations.

Furthermore, a majority of the cooperatives of each operating type had been in operation since prior to 1992. However, bargaining-only cooperatives were the only type of dairy cooperative where a majority (71.0 percent) had been operating since prior to 1992 and had not changed from focusing solely on bargaining functions over the 2000-10 decade. In contrast, only a minority of the manufacturing/processing cooperatives (diversified, fluid processing, and niche marketing cooperatives) that had been in operation since prior to 1992 had continued operating within the same mode of operation during 2000-10. For example, only 27.3 percent of the 22 diversified cooperatives, had been operating with diversified operations since prior to 1992. Similarly, while all three of the fluid processing cooperatves had been in operation since prior to 1992, just one had been identified as a fluid processing cooperative since prior to 1992.

Among the manufacturing/processing cooperatives, niche marketing cooperatives were remarkable because they had the highest proportion of cooperatives (42.1 percent) that had been in operation since prior to 1992 and that had remained niche marketers for the 2000-10 decade (where 3 cooperatives had niche operations for 100 years or more). At the same time, niche marketing cooperatives also had the largest proportion of entries (26.3 percent) during 2000-10.

The proportion of cooperatives in 2010 that had been in operation since prior to 1992 was similar among the size groups. Yet, the small cooperatives had the largest proportion (71.9 percent) of cooperatives in continuous operation since prior to 1992 that were still in the same size category in 2010 as in 2000. Barely over one-half of the medim and large cooperatives (54.2 and 53.6 percent, respectively) had been operating since prior to 1992 and were still within the same size category as in 2000. Furthermore, a number of the newer medium and large cooperatives had changed size category over the 2000-10 decade.

At the end of the decade, almost all of the small cooperatives were niche marketing and bargaining-only cooperatives, with three out of four small cooperatives being the latter (where the operating modes and size categories are based on 2007 survey data; appendix table 1). Conversely, a majority of the large cooperatives were diversified cooperatives (60.7 percent), while 35.7 percent were bargaining-only cooperatives. The medium-size category was dominated by bargaining-only cooperatives (84.7 percent). There were no small diversified cooperatives or large niche marketing cooperatives by 2010.

Finally, a majority of dairy cooperatives in every region except the Western and South Atlantic regions had been in operation since prior to 1992 (table 6). The West North Central and North Altantic regions had the largest proportion of cooperatives that had been in operation since prior to 1992 (84.2 and 79.6 percent, respectively). In contrast, one-fourth of the dairy cooperatives in the Western region, and 40.0 percent in the South Atlantic, had entered during 2000-10. Also, nearly one-fourth of the cooperatives (22.9 percent) in the East North Central region had entered during 2000-10.

Financial performance

Agricultural marketing cooperatives with a majority of their sales from milk and dairy products averaged nearly $400 million annually over 2000-09 in total net income before taxes (NIBT). In 2009, cooperatives with a majority of their sales from milk and dairy products reported a decade-high $742.9 million in net income. Furthermore, 2008 total NIBT of $533.3 million

Table 5—Dairy cooperatives, by length of time in operation, mode of operation and size, 2010

	Mode of operation					Size category		
	All	Diversified	Fluid	Niche	Bargaining only	Small	Medium	Large
	Number of cooperatives							
Dairy cooperatives, 2010	151	22	3	19	107	64	59	28
Continuous operation[1]								
Mode changed [2]	19	10	2	4	3	1	11	5
Same mode [3]	91	6	1	8	76	46	32	15
Total, continuous operation	110	16	3	12	79	47	43	20
Newer[4]								
Mode changed [2]	4	2	0	0	2	0	2	2
Same mode [3]	14	3	0	2	9	5	4	5
Total, newer	18	5	0	2	11	5	6	7
Entries 2000-10	23	1	0	5	17	12	10	1
	Percent of 2010 cooperatives							
Continuous operation[1]								
Mode changed [2]	12.6	45.5	66.7	21.1	2.8	1.6	18.6	17.9
Same mode [3]	60.3	27.3	33.3	42.1	71.0	71.9	54.2	53.6
Total, continuous operation	72.8	72.7	100.0	63.2	73.8	73.4	72.9	71.4
Newer[4]								
Mode changed [2]	2.6	9.1	0.0	0.0	1.9	0.0	3.4	7.1
Same mode [3]	9.3	13.6	0.0	10.5	8.4	7.8	6.8	17.9
Total, newer	11.9	22.7	0.0	10.5	10.3	7.8	10.2	25.0
Entries 2000-10	15.2	4.5	0.0	26.3	15.9	18.8	16.9	3.6

[1] Cooperatives in existence since prior to 1992 and in continuous operation through 2010.
[2] Mode of operation (size category) changed during 2000-10.
[3] Operated with same mode of operation (size category) during 2000-10.
[4] Cooperatives entering during 1992-99 and in operation through 2010.

Table 6—Dairy cooperatives, by length of time in operation and region, 2010

	North Atlantic	South Atlantic	East North Central	West North Central	South Central	Western
	Number of cooperatives					
Continuous operation[1]	43	2	24	32	2	7
Newer [2]	4	1	3	4	1	5
Entries 2000-10[3]	7	2	8	2	0	4
2010 coops	54	5	35	38	3	16
	Percent of 2010 cooperatives					
Continuous operation[1]	79.6	40.0	68.6	84.2	66.7	43.8
Newer [2]	7.4	20.0	8.6	10.5	33.3	31.3
Entries 2000-10 [3]	13.0	40.0	22.9	5.3	0.0	25.0
2010 coops	100.0	100.0	100.0	100.0	100.0	100.0

[1] Cooperatives in existence since prior to 1992 and in continuous operation through 2010.
[2] Cooperatives entering during 1992-99 and in operation through 2010.
[3] Cooperatives beginning operations in 2000-10 period, including cooperatives formed by merger of existing cooperatives when the new entity operated under a new name.

was the second highest for dairy cooperatives in the years 2000-10 (figure 12). The low NIBT was $283.6 million in 2002.

Extra Value

The "extra value" measure was developed by USDA Rural Development Cooperative Programs staff. This measure allows the evaluation of cooperatives' use of member-supplied funds—whether members' capital is earning more, or less, than it could in alternative investments. A positive extra value indicates that a cooperative has created value by its operations, while a negative extra value means that a cooperative has actually diminished the value of members' investment.

The diverse operations of dairy cooperatives require different levels of capital usage. One way to neutralize the effect of this diversity of cooperative operations is to express extra value as a ratio. Extra value divided by the cooperative's operating capital indicates the rate at which a cooperative is creating extra value. Operating capital represents the financial resources available to cooperative management to run the business.

Extra value is calculated by subtracting an interest charge on equity from net savings. The interest charge on equity is found by multiplying member equity by a charge for member equity. "LIBOR plus 2" is used to represent the charge for member equity because the charge is not commonly found on cooperatives' balance sheets. The LIBOR-plus-2 rate used is the December average British Banker's Association's London Inter-Bank Offered Rate (BBA Libor for U.S. dollar loans with a 12-month maturity) plus 200 basis points. Libor plus 2 represents the commonly held opinion that banks in the United States generally will extend loans to a firm with a better-than-average credit rating, at an interest rate of about 200 basis points above the LIBOR. This is the same charge for equity capital that was used in previous applications of the extra value measure.

The Extra Value Index (EVI) is calculated by dividing the extra value by operating capital. Operating capital is simply fixed assets plus net working capital (current assets minus current liabilities).

For this report, sufficient financial information for the extra value to be calculated was available for only a portion of the dairy cooperatives. Nonetheless, the results indicate that on average, both the manufacturing/processing cooperatives (diversified, fluid processing, and niche marketing cooperatives) and bargaining-only cooperatives generated positive extra value for their members for almost the entire decade (fig 13). (Bargaining-only cooperatives together averaged a slightly negative EVI in 2005.) Dairy cooperative earnings, on average, were able to cover a nominal charge for their use of member-supplied capital throughout the decade.

Individual cooperatives' EVI were also averaged for 2000-04 and for 2005-09 to get a picture of dairy cooperatives' performance during the decade. For the 2000-04, EVI was calculated for 141 cooperatives with sufficient data, while for 2005-09, the EVI could be calculated for 110 cooperatives. Table 7 shows the number of cooperatives with positive average EVI for 2000-04 and 2005-09, and the individual cooperatives' rankings can be found in appendix table 2.

Most manufacturing/processing cooperatives operating in 2010 that had been in continuous operations since prior to 1992 had positive EVI for both halves of the 2000-10 decade. In fact, only one of these manufacturing/processing cooperative had negative average EVI for 2005-09. Likewise, a majority of the bargaining-only cooperatives operating in 2010 that had been in continuous operation since prior to 1992 had positive average EVI during the decade, but the proportion was smaller than for manufacturing/processing cooperatives.

The cooperatives that dissolved had smaller proportions with positive average EVI. In particular, just one-third and one-fourth of the bargaining-only cooperatives that dissolved averaged positive extra value for 2000-04 and 2005-09, respectively. In contrast, a majority of the cooperatives that merged averaged positive EVI whether manufacturing/processing or bargaining only.

Only two manufacturing/processing cooperatives were in the top 10 percent of the EVI ranking of all cooperatives for 2000-04. One of these was a cooperative operating in 2010 that had been in continuous operation since prior to 1992 and the other a cooperative that dissolved prior to 2010. The same manufacturing/processing cooperative also ranked in the top 10 percent for 2005-09. Meanwhile, there was just one manufacturing/processing cooperative that ranked in the bottom 10 percent, and it was a cooperative operating in 2010 that had been in continuous operation since prior to 1992, and ranked in the bottom 10 percent for 2005-09 only.

Most of the cooperatives ranking in the top or bottom 10 percent by average EVI were bargaining-only cooperatives for both 2000-04 and 2005-09. In 2000-04, six bargaining-only cooperatives operating in 2010 that had been in continuous operation since prior

Table 7—Dairy cooperatives with positive average Extra Value Index, 2000-04 and 2005-09

Type/status	2000-04			2005-09		
	Cooperatives [1]	Average EVI > 0		Cooperatives [2]	Average EVI > 0	
	Number of co-ops	Number of co-ops	Percent	Number of co-ops	Number of co-ops	Percent
Manufacturing/processing cooperatives						
Continuous operation[3]	25	21	84.0	24	23	95.8
Newer [4]	5	4	80.0	7	4	57.1
Entries 2000-10	n/a	n/a	n/a	1	1	100.0
Merged [5]	6	5	83.3	2	1	50.0
Dissolved [6]	5	3	60.0	n/a	n/a	n/a
	41	33	80.5	34	29	85.3
Bargaining-only cooperatives						
Continuous operation[3]	58	42	72.4	51	33	64.7
Newer [4]	5	4	80.0	5	4	80.0
Entries 2000-10	3	2	66.7	11	7	63.6
Merged [5]	15	10	66.7	5	4	80.0
Dissolved [6]	19	6	31.6	4	1	25.0
	100	64	64.0	76	49	64.5

[1] 141 cooperatives had sufficient data for Extra Value Index (EVI) calculation.
[2] 110 cooperatives had sufficient data for EVI calculation.
[3] Cooperatives in existence since prior to 1992 and in continuous operation through 2010.
[4] Cooperatives entering during 1992-99 and in operation through 2010.
[5] Cooperatives that went out of business by merger between 2000 and 2010.
[6] Cooperatives that went out of business between 2000 and 2010, not including those that merged.

to 1992 and five bargaining-only cooperatives that merged by 2010 were in the top 10 percent of the cooperatives, according to average EVI. Alternatively, for 2005-09, five new bargaining-only cooperatives ranked in the top 10 percent, according to average EVI. The relatively large number of bargaining-only cooperatives ranking in the top or bottom 10 percent may be due in part to the nature of the bargaining-only operations. Many of the bargaining-only cooperatives had relatively few assets, which resulted in rather large EVIs when a moderate amount of extra value was divided by a relatively small value for operating capital.

Finally, some 90 cooperatives had data for both time periods—30 manufacturing/processing cooperatives and 60 bargaining-only cooperatives. Of these, 23 of the manufacturing/processing cooperatives and 45 of the bargaining-only cooperatives were cooperatives operating in 2010 that had been in continuous operation since prior to 1992. Seventy percent of these manufacturing/processing cooperatives had higher average EVI in 2005-09 over 2000-04, and none averaged negative EVI for 2005-09. In contrast, less than one-half of the bargaining-only cooperatives operating in 2010 that had been in continuous operation since prior to 1992 saw an improvement in their average EVI for 2005-09 compared to 2000-04. On top of that, a smaller proportion of these bargaining-only cooperatives had positive average EVI for 2005-09 than for 2000-04 (Table 8). One bargaining-only cooperative operating in 2010 that had been in continuous operation since prior to 1992 ranked in the top 10 percent of all cooperatives for both 2000-04 and 2005-09, (as did one enduring manufacturing/processing cooperative, mentioned above.)

It appears that many cooperatives of both types (manufacturing/processing and bargaining-only cooperatives) were able to perform well in volatile economic times, with manufacturing/processing cooperatives perhaps a bit better off in the second half of the decade.

The new entries and newer dairy cooperatives had mixed results. Some had their average EVI improve between 2000-04 and 2005-09, while at the same time fewer had positive extra value in 2005-09 compared to 2000-04. However, the newer bargaining-only cooperatives had the same number with positive extra value for both time periods.

Only one of the bargaining-only cooperatives that merged saw an improvement in average EVI between 2000-04 and 2005-09, and none of those that dissolved had positive average EVI for 2005-09.

These results indicate that for cooperatives that merged, poor financial performance was not an obvious reason for their exit. In fact, a strong position may have made them attractive merger candidates. But it should be noted that only one cooperative that merged saw its average EVI improve for 2005-09 over 2000-04.

On the other hand, for the bargaining-only cooperatives that dissolved over 2000-10, poor financial performance may have been a contributing factor. Just one-third of the bargaining-only cooperatives that dissolved had positive extra value for 2000-04 and none had positive EVI for 2005-09.

Summary

The changes outlined in this report reveal dairy cooperatives to be flexible, responsive organizations that adapt to members' needs in the marketplace and continue to take a variety of paths in marketing members' milk. Some dairy cooperatives have long-endured. Others continued in operation by significantly altering their operations. And also, new dairy cooperatives formed during 2000-10.

Like their dairy-farmer owners, dairy cooperatives declined in number even as the amount of milk they produced and marketed continued to grow. Small cooperatives declined to less than one-half of the Nation's dairy cooperatives, even though a majority of the North Atlantic cooperatives continue to be small. Much of the adjustment in dairy cooperative numbers was in the small category where a majority went out of business, but quite a few merged or grew into medium-sized cooperatives.

Modes of operation that were successful in previous decades have given way to alternative operating types. Some dairy cooperatives adapted to a changed marketplace by shifting out of bargaining-balancing operations and from a limited hard-product manufacturing focus over the 2000-10 time period. Other dairy cooperatives left manufacturing-processing operations behind altogether whereas others added plant operations over the decade. Bargaining-only cooperatives were perhaps the most flexible operating type as evidenced by the numerous entries and exits. This could be in part due to their having few fixed assets.

On the other hand, over one-half of the niche marketing cooperatives in existence in 2000 went out of business or out of niche marketing operations by 2010, while over one-fourth of the 2010 niche marketing cooperatives had adopted niche marketing operations during the decade.

At the same time that some dairy cooperatives have made marked adaptations to their marketing

Table 8—Comparison of dairy cooperatives average Extra Value Index for 2000-04 and 2005-09, by operating mode and status[1]

Operating mode/status	Cooperatives	Extra value index: 2000-2004 EVI>0	Extra value index: 2005-2009 EVI>0	Extra value index: EVI improved
		Number of cooperatives		
Manufacturing/processing cooperatives				
Continuous operation [2]	23	20	23	16
Newer [3]	5	4	2	2
Merged [4]	2	2	1	0
	30	26	26	18
Bargaining-only cooperatives				
Continuous operation [2]	45	32	30	22
Newer [3]	4	3	3	2
Entries 2000-10	3	2	1	2
Merged [4]	5	3	4	1
Dissolved [5]	3	1	0	0
	60	41	38	27
		Percent of cooperatives in category		
Manufacturing/processing cooperative				
Continuous operation [2]		87.0	100.0	69.6
Newer [3]		80.0	40.0	40.0
Merged [4]		100.0	50.0	0.0
Bargaining-only cooperatives				
Continuous operation [2]		71.1	66.7	48.9
Newer [3]		75.0	75.0	50.0
Entries 2000-10		66.7	33.3	66.7
Merged [4]		60.0	80.0	20.0
Dissolved [5]		33.3	0.0	0.0

[1] Includes only those dairy cooperatives with data for both time periods (2000-04 and 2005-09).
[2] Cooperatives in existence since prior to 1992 and in continuous operation through 2010.
[3] Cooperatives entering during 1992-99 and in operation through 2010.
[4] Cooperatives that went out of business by merger between 2000 and 2010.
[5] Cooperatives that went out of business between 2000 and 2010, not including those that merged.

situations, many cooperatives have long-endured within a particular marketing mode or size category. That is not to say that they have not made adjustments to address changes in the marketplace. These cooperatives have modernized their plants and equipment, built or acquired new plants, expanded product lines, entered joint ventures, and/or broadened member services, even as they continued with the same general type of operations.

While the dairy cooperative sector is buffeted by the same economic storms as the broader economy and impacted by changes in milk production, the financial performance data suggests that dairy cooperatives on average are able to use member capital effectively. However, the economic environment, to the extent that is common to all dairy cooperatives, may impact each cooperative's performance differently. In the distressful economic times of the later part of the decade, some dairy cooperatives made additional payments to their members to help them through the difficulties of record-low pay prices and record-high input costs. This type of assistance boosted members' bottom lines but likely reduced the cooperatives' NIBT.

All this attests to the viability of the cooperative model in dairy marketing while at the same time highlighting that there is no one ideal mode of dairy cooperative operation. The fact that dairy cooperatives have been able to thrive using a variety of operating modes and under a broad range of economic conditions indicates that dairy cooperatives are likely to continue as the marketing organizations of choice for many dairy farmers in the years to come.

Box 1–U.S. milk production, 2000-10

Fig 1–U.S. milk marketed by producers and milk cow inventory, 2000-10

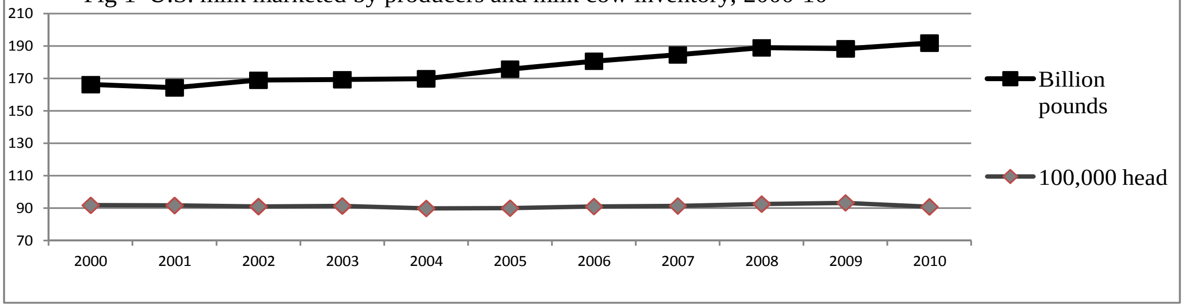


Fig 2–U.S. licensed dairy herds; cooperative memberships, 2000-10

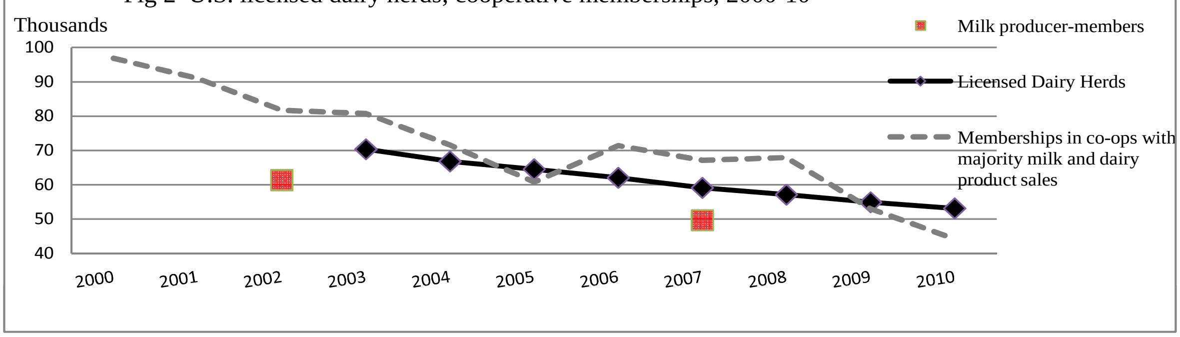
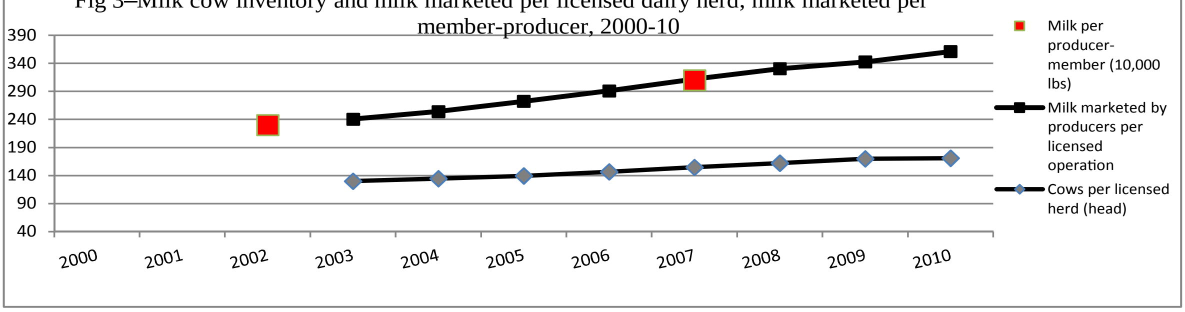


Fig 3–Milk cow inventory and milk marketed per licensed dairy herd; milk marketed per member-producer, 2000-10



Notes: Dairy cooperative memberships numbers are from RBS's annual survey of farmer cooperatives and include all voting members in cooperatives where 50 percent or more of their sales came from milk and dairy products—so some members may not be milk producers. The milk producer-members numbers are gathered by RBS's survey of dairy cooperative marketing operations, conducted in 5-year intervals, and reflect the milk producing members of all cooperatives that handled milk and had producer-members. Data for licensed dairy herds not available prior to 2003.

Sources:

USDA/National Agricultural Statistics Service, Quick Stats Operations with Milk Cows, Milk Production
http://quickstats.nass.usda.gov/results/F57EF7D3-3F2D-3BB6-B257-851485453586

USDA/Rural Business-Cooperative Service, Marketing Operations of Dairy Cooperatives–Historical Summaries
http://www.rurdev.usda.gov/rbs/coops/dairy.htm

USDA/Rural Business-Cooperative Service, Cooperative Programs National Data
http://www.rurdev.usda.gov/rbs/coops/data.htm

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Box 2–U.S. dairy product production and use, 2000-10

Fig 4–Cheese

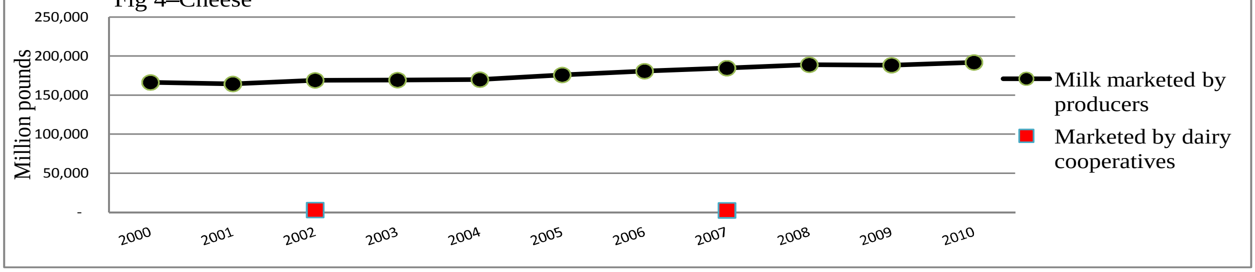


Fig 5–Nonfat dry milk

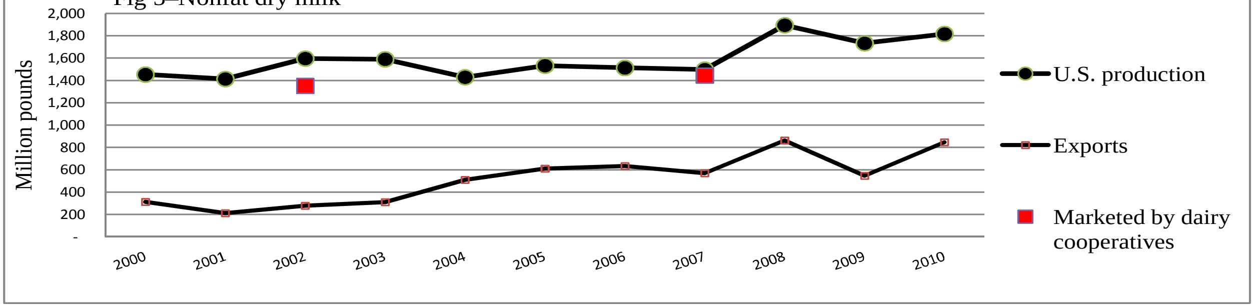


Fig 6–Butter

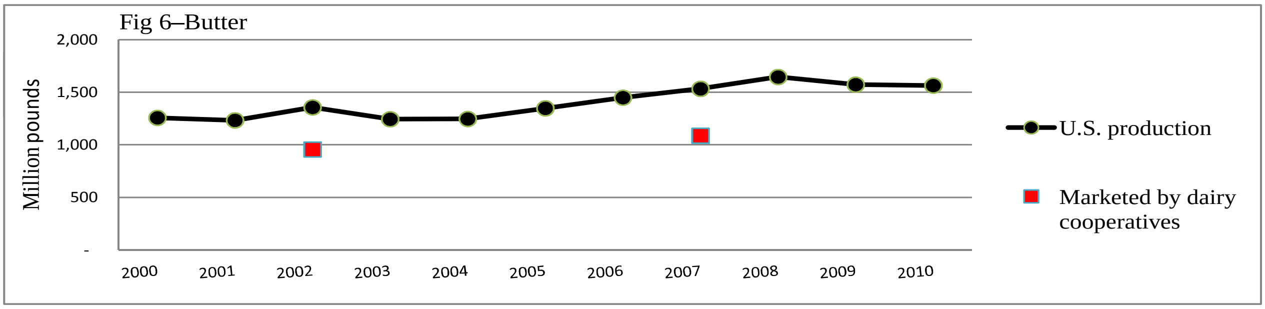


Fig 7–Fluid milk

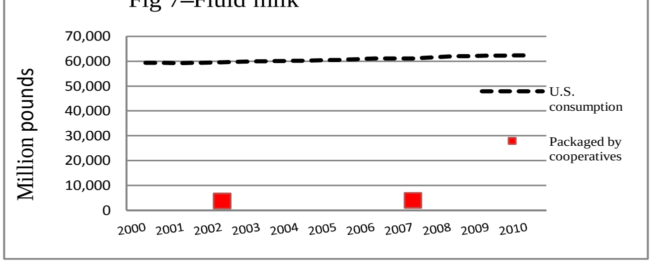
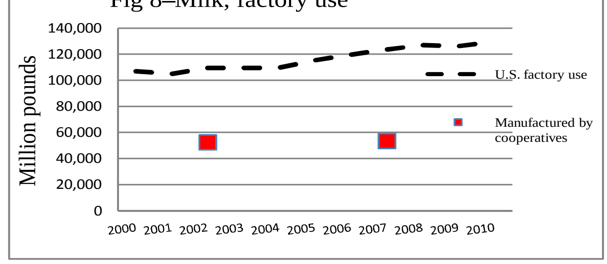


Fig 8–Milk, factory use



Sources:
USDA Foreign Agricultural Service
http://www.fas.usda.gov/psdonline/psdDownload.aspx
USDA/Rural Business-Cooperative Service–Marketing Operations of Dairy Cooperatives-Historical Summaries
http://www.rurdev.usda.gov/rbs/coops/dairy.htm
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Box 3–Milk marketing–economic data, 2000-10

Fig. 9–Average monthly prices received for all milk, United States

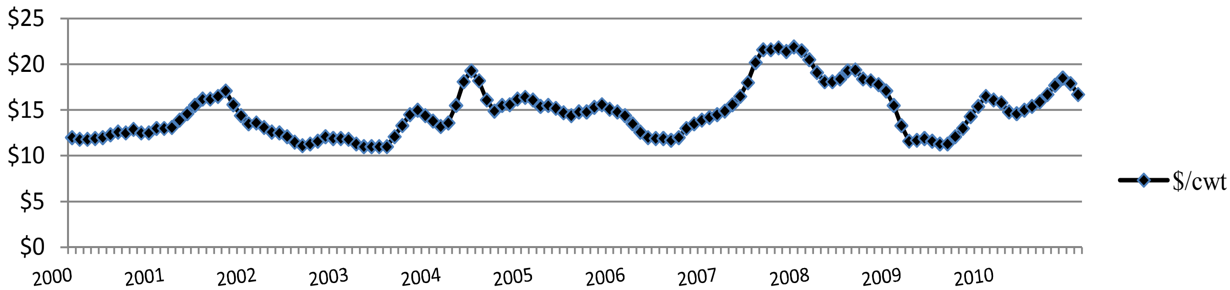


Fig.10–Milk production income and feed costs

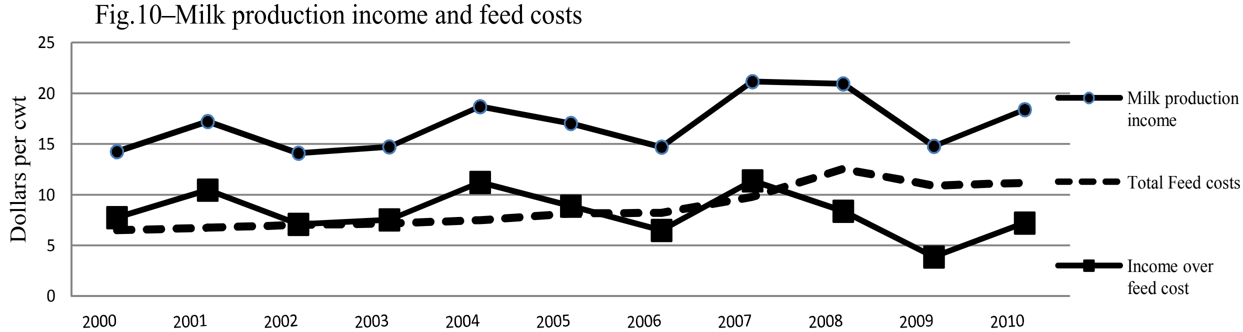
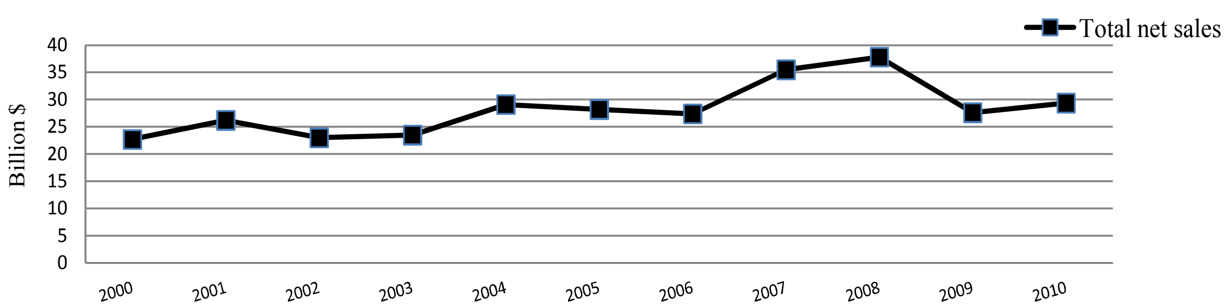


Fig. 11–Dairy cooperatives, total net sales [1/]



[1/] Total sales excluding sales between cooperatives.

Source: USDA/National Agricultural Statistics Service Quick Stats National Milk Price Received, $/CW Downloaded 9/14/2011

http://quickstats.nass.usda.gov/results/F0FEA479-A822-31C6-A3AE-F4CC3E930261

Source: Economic Research Service

http://www.ers.usda.gov/Data/CostsAndReturns/testpick.htm Downloaded 09/19/11

Source: USDA/Rural Business Cooperative Service

http://www.rurdev.usda.gov/rbs/coops/data.htm Downloaded 09/21/11

Net business volume excludes sales between cooperatives.

Box 4–Dairy cooperative financial performance, 2000-10

Fig. 12–Net income before taxes for dairy cooperatives

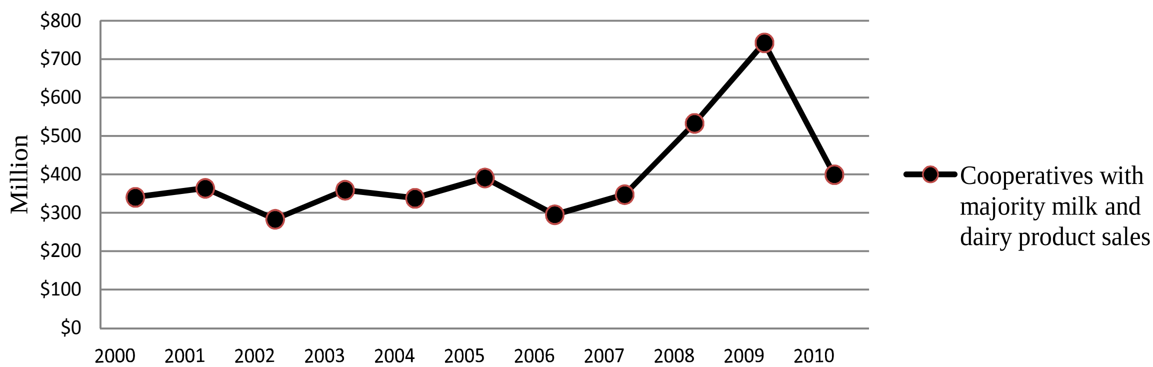
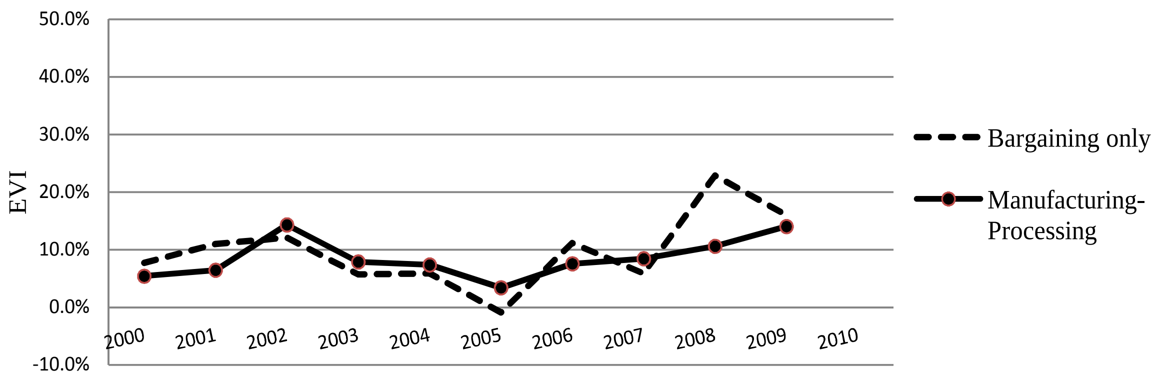


Fig. 13–Dairy cooperatives[1] average extra value index



[1] Cooperatives with producer-member milk.

Source: USDA/Rural Business-Cooperative Service
http://www.rurdev.usda.gov/rbs/coops/data.htm Downloaded 09/21/11

Appendix table 1—2010 dairy cooperative by operating mode, status, size, and region

	Small	Medium	Large	Total	Small	Medium	Large	Small	Medium	Large
	Number of cooperatives				Operating mode, distribution by size			Size, distribution by operating mode		
					Percent			Percent		
Continous operation[1]										
Operating mode:	31	19	4	54	57.4	35.2	7.4	48.4	32.2	14.3
Diversified	0	5	11	16	0.0	31.3	68.8	0.0	11.6	55.0
Fluid	1	1	1	3	33.3	33.3	33.3	2.1	2.3	5.0
Niche	9	3	0	12	75.0	25.0	0.0	19.1	7.0	0.0
Bargaining only	37	34	8	79	46.8	43.0	10.1	78.7	79.1	40.0
Total, enduring	47	43	20	110	42.7	39.1	18.2	100.0	100.0	100.0
Newer cooperatives[2]										
Operating mode:										
Diversified	0	0	5	5	0.0	0.0	100.0	0.0	0.0	71.4
Fluid	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0
Niche	2	0	0	2	100.0	0.0	0.0	40.0	0.0	0.0
Bargaining only	3	6	2	11	27.3	54.5	18.2	60.0	100.0	28.6
Total, newer	5	6	7	18	27.8	33.3	38.9	100.0	100.0	100.0
Entries 2000-10[3]										
Operating mode:										
Diversified	0	0	1	1	0.0	0.0	100.0	0.0	0.0	100.0
Fluid	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0
Niche	5	0	0	5	100.0	0.0	0.0	41.7	0.0	0.0
Bargaining only	7	10	0	17	41.2	58.8	0.0	58.3	100.0	0.0
Total, new	12	10	1	23	52.2	43.5	4.3	100.0	100.0	100.0
2010 dairy cooperatives										
Operating mode:										
Diversified	0	5	17	22	0.0	22.7	77.3	0.0	8.5	60.7
Fluid	1	1	1	3	33.3	33.3	33.3	1.6	1.7	3.6
Niche	16	3	0	19	84.2	15.8	0.0	25.0	5.1	0.0
Bargaining only	47	50	10	107	43.9	46.7	9.3	73.4	84.7	35.7
Total	64	59	28	151	42.4	39.1	18.5	100.0	100.0	100.0

Continued—

Appendix table 1 (*cont.*)—2010 dairy cooperatives, by operating mode, status, size, and region

	Small	Medium	Large	Total	Small	Medium	Large	Small	Medium	Large
	Number of cooperatives				Region, distribution by size			Size, distribution by region		
					Percent			Percent		
Regions										
North Atlantic	31	19	4	54	57.4	35.2	7.4	48.4	32.2	14.3
South Atlantic	0	3	2	5	0.0	60.0	40.0	0.0	5.1	7.1
East North Central	16	12	7	35	45.7	34.3	20.0	25.0	20.3	25.0
West North Central	16	15	7	38	42.1	39.5	18.4	25.0	25.4	25.0
South Central	0	2	1	3	0.0	66.7	33.3	0.0	3.4	3.6
Western	1	8	7	16	6.3	50.0	43.8	1.6	13.6	25.0
All regions	64	59	28	151	42.4	39.1	18.5	100.0	100.0	100.0

Notes: Small: handled less than 50 million pounds of milk per year; Medium: handled 50 to 999 million pounds of milk per year; Large: handled 1 billion or more pounds of milk per year.
Mode of operation and size category based on 2007 marketing operations survey data.

[1] Cooperatives in existence since prior to 1992 and in continuas operation through 2010.

[2] Cooperatives entering during 1992-99 and in operation through 2010.

[3] Includes cooperatives formed by merger of existing cooperatives when the new entity operated under a new name.

Appendix table 2—Ranking of manufacturing/processing[1] dairy cooperatives by the Extra Value Index

	First half of decade (2000-04)				Second half of decade (2005-09)			
Status/coop code	Extra value index	Rank among mfg/proc. coops [2]	Rank among all coops [3]	Top/ bottom 10%	Extra value index	Rank among mfg/proc. coops [2]	Rank among all coops [3]	Top/ bottom 10%
Continuous operation [4]								
E-MP 1	+	2	14	TOP	+	1	3	TOP
E-MP 17	+	5	26	.	+	22	61	.
E-MP 4	+	6	35	.	+	8	26	.
E-MP 7	+	7	36	.	+	11	36	.
E-MP 19	+	8	37	.	+	24	68	.
E-MP 18	+	9	40	.	+	23	65	.
E-MP 6	+	10	42	.	+	10	33	.
E-MP 9	+	12	45	.	+	13	41	.
E-MP 13	+	13	46	.	+	17	52	.
E-MP 5	+	14	47	.	+	9	32	.
E-MP 2	+	15	48	.	+	4	16	.
E-MP 16	+	17	60	.	+	20	57	.
E-MP 14	+	18	63	.	+	18	54	.
E-MP 11	+	19	66	.	+	15	48	.
E-MP 8	+	20	67	.	+	12	40	.
E-MP 22	+	21	71	.	+	28	74	.
E-MP 15	+	23	78	.	+	19	56	.
E-MP 10	+	24	79	.	+	14	46	.
E-MP 20	+	25	81	.	+	25	69	.
E-MP 26	+	27	85	.				
E-MP 21	+	30	91	.	+	27	73	.
E-MP 3	-	34	102	.	+	7	25	.
E-MP 23	-	37	110	.	+	29	78	.
E-MP 12	-	39	119	.	+	16	50	.
E-MP 25	-	41	125	.				
E-MP 24					-	34	101	BOTTOM

Continued—

Appendix table 2 (con't)—Ranking of manufacturing/processing[1] dairy cooperatives by the Extra Value Index

Status/coop code	First half of decade (2000-04) Extra value index	Rank among mfg/proc. coops [2]	Rank among all coops [3]	Top/ bottom 10%	Second half of decade (2005-09) Extra value iindex	Rank among mfg/proc. coops [2]	Rank among all coops [3]	Top/ bottom 10%
Newer [5]								
NR-MP 1	+	3	15	.	+	2	14	.
NR-MP 2	+	11	43	.	+	3	15	.
NR-MP 6	+	28	86	.	-	31	85	.
NR-MP 7	+	32	93	.	-	32	86	.
NR-MP 5	-	35	103	.	-	30	81	.
NR-MP 3					+	6	22	.
NR-MP 4					+	21	59	.
Entries 2000-10								
NEW-MP 7					+	5	20	.
Merged [6]								
M-MP 4	+	4	20	.				
M-MP 1	+	16	55	.	+	26	72	.
M-MP 2	+	22	76	.	-	33	97	.
M-MP 5	+	26	83	.				
M-MP 3	+	31	92	.				
M-MP 6	-	38	112	.				
Dissolved [7]								
D-MP 1	+	1	12	TOP				
D-MP 2	+	29	90	.				
D-MP 3	+	33	97	.				
D-MP 4	-	36	104	.				
D-MP 5	-	40	121	.				

[1] Includes diversified, fluid processing and niche marketing cooperatives.
[2] 5-year average EVI rank among all manufacturing/processing cooperatives with EVI data.
[3] 5-year average EVI rank among all 141 cooperatives for 2000-04 and all 110 cooperatives for 2005-09.
[4] Cooperatives in existence since prior to 1992 and in continuous operation through 2010.
[5] Cooperatives entering during 1992-99 and in operation through 2010.
[6] Cooperatives that went out of business by merger between 2000 and 2010.
[7] Cooperatives that went out of business between 2000 and 2010, not including those that merged.

Appendix table 3—Ranking of bargaining-only dairy cooperatives by the Extra Value Index

Status/coop code	First half of decade (2000-04)				Second half of decade (2005-09)			
	Extra value index	Rank among bargaining-only co-ops [1]	Rank among all co-op [2]	Top/ bottom 10%	Extra value index	Rank among bargaining-only co-ops [1]	Rank among all co-ops [2]	Top/ bottom 10%
Continuous operation [3]								
E-BO 33	+	1	1	TOP	+	49	77	.
E-BO 64	+	5	5	TOP				
E-BO 63	+	6	6	TOP				
E-BO 2	+	8	8	TOP	+	8	9	TOP
E-BO 59	+	10	10	TOP				
E-BO 56	+	12	13	TOP				
E-BO 7	+	16	19	.	+	14	18	.
E-BO 5	+	17	21	.	+	11	12	.
E-BO 45	+	19	23	.	-	63	95	.
E-BO 52	+	20	24	.				
E-BO 54	+	21	25	.				
E-BO 16	+	22	27	.	+	28	39	.
E-BO 14	+	23	28	.	+	26	37	.
E-BO 60	+	24	29	.				
E-BO 18	+	29	34	.	+	31	44	.
E-BO 13	+	30	38	.	+	25	35	.
E-BO 12	+	31	39	.	+	23	31	.
E-BO 28	+	32	41	.	+	43	66	.
E-BO 49	+	33	44	.	-	69	103	BOTTOM
E-BO 20	+	35	50	.	+	33	47	.
E-BO 47	+	39	54	.	-	66	99	.
E-BO 39	+	40	56	.	-	55	87	.
E-BO 46	+	41	57	.	-	65	98	.
E-BO 10	+	42	58	.	+	18	24	.
E-BO 9	+	43	59	.	+	17	23	.
E-BO 29	+	44	61	.	+	44	67	.
E-BO 57	+	45	62	.				
E-BO 26	+	46	64	.	+	41	63	.
E-BO 30	+	47	65	.	+	46	71	.
E-BO 22	+	48	68	.	+	35	51	.
E-BO 23	+	49	69	.	+	36	53	.

Continued—

Appendix table 3 (*cont.*)—Ranking of bargaining-only dairy cooperatives by the Extra Value Index

	First half of decade (2000-04)				Second half of decade (2005-09)			
Status/coop code	Extra value index	Rank among bargaining-only co-ops [1]	Rank among all co-ops [2]	Top/ bottom 10%	Extra value index	Rank among bargaining-only co-ops [1]	Rank among all co-ops [2]	Top/ bottom 10%
E-BO 6	+	51	72	.	+	13	17	.
E-BO 19	+	52	73	.	+	32	45	.
E-BO 58	+	53	74	.				
E-BO 32	+	54	75	.	+	48	76	.
E-BO 3	+	55	77	.	+	9	10	TOP
E-BO 25	+	56	80	.	+	39	60	.
E-BO 34	+	58	84	.	-	50	79	..
E-BO 31	+	59	87	.	+	47	75	.
E-BO 53	+	60	88	.				
E-BO 38	+	63	95	.	-	54	84	.
E-BO 4	+	64	96	.	+	10	11	TOP
E-BO 40	-	66	99	.	-	57	89	.
E-BO 61	-	67	100	.				
E-BO 36	-	68	101	.	-	52	82	.
E-BO 17	-	69	105	.	+	29	42	.
E-BO 62	-	70	106	.				
E-BO 27	-	75	113	.	+	42	64	.
E-BO 21	-	76	114	.	+	34	49	.
E-BO 44	-	78	116	.	-	62	94	.
E-BO 24	-	79	117	.	+	37	55	.
E-BO 42	-	80	118	.	-	60	92	.
E-BO 48	-	85	126	.	-	67	100	BOTTOM
E-BO 43	-	87	128	BOTTOM	-	61	93	.
E-BO 50	-	91	132	BOTTOM	-	71	105	BOTTOM
E-BO 55	-	94	135	BOTTOM				
E-BO 51	-	95	136	BOTTOM	-	72	106	BOTTOM
E-BO 15	-	97	138	BOTTOM	+	27	38	.
E-BO 1					+	1	1	TOP
E-BO 11					+	22	30	.
E-BO 35					-	51	80	.
E-BO 37					-	53	83	.
E-BO 41					-	59	91	.
E-BO 8					+	15	19	.

Continued—

Appendix table 3 (*cont.*)—Ranking of bargaining-only dairy cooperatives by the Extra Value Index

	First half of decade (2000-04)				Second half of decade (2005-09)			
Status/coop code	Extra value index	Rank among bargaining-only co-ops [1]	Rank among all co-ops [2]	Top/ bottom 10%	Extra value index	Rank among mfg/proc. co-ops [1]	Rank among all co-ops [2]	Top/ bottom 10%
Newer [4]								
NR-BO 1					+	7	8	TOP
NR-BO 2	+	14	17	.	+	30	43	.
NR-BO 3	+	34	49	.	+	24	34	.
NR-BO 4	+	36	51	.				
NR-BO 5	+	50	70	.	+	38	58	.
NR-BO 6	-	83	123	.	-	68	102	BOTTOM
Entries 2000-10								
NEW-BO 2	+	27	32	.	+	3	4	TOP
NEW-BO 11	+	37	52	.	-	75	109	BOTTOM
NEW-BO 8	-	86	127	.	-	56	88	.
NEW-BO 1					+	2	2	TOP
NEW-BO 3					+	4	5	TOP
NEW-BO 4					+	5	6	TOP
NEW-BO 5					+	6	7	TOP
NEW-BO 6					+	12	13	.
NEW-BO 7					+	40	62	.
NEW-BO 9					-	58	90	.
NEW-BO 10					-	70	104	BOTTOM
Merged [5]								
M-BO 1	+	3	3	TOP				
M-BO 2	+	4	4	TOP				
M-BO 3	+	7	7	TOP				
M-BO 4	+	9	9	TOP	+	16	21	.
M-BO 5	+	11	11	TOP				
M-BO 6	+	25	30	.	+	21	29	.
M-BO 7	+	26	31	.	+	20	28	.
M-BO 8	+	38	53	.				

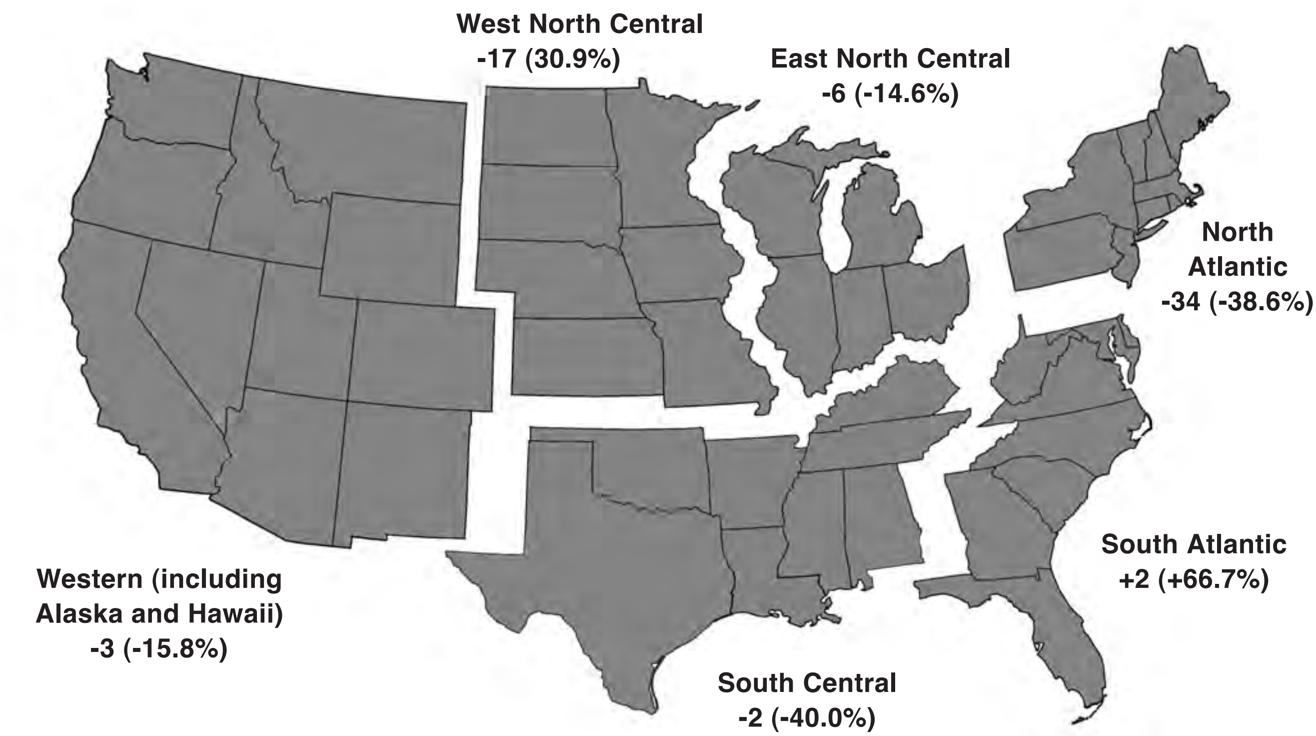
Continued—

Appendix table 3 (*cont.*)—Ranking of bargaining-only dairy cooperatives by the Extra Value Index

	First half of decade (2000-04)				Second half of decade (2005-09)			
Status/coop code	Extra value index	Rank among bargaining-only co-ops [1]	Rank among all co-ops [2]	Top/bottom 10%	Extra value index	Rank among bargaining-only co-ops [1]	Rank among all co-ops [2]	Top/bottom 10%
M-BO 8	+	38	53	.				
M-BO 9	+	57	82	.				
M-BO 10	+	61	89	.				
M-BO 11	-	72	108	.	-	73	107	BOTTOM
M-BO 12	-	74	111	.				
M-BO 13	-	89	130	BOTTOM				
M-BO 14	-	98	139	BOTTOM	+	19	27	.
M-BO 15	-	99	140	BOTTOM				
Dissolved [6]								
D-BO 1	+	2	2	TOP				
D-BO 2	+	13	16	.	-	76	110	BOTTOM
D-BO 3	+	15	18	.				
D-BO 4	+	18	22	.				
D-BO 5	+	28	33	.				
D-BO 6	+	62	94	.				
D-BO 7	0	65	98	.				
D-BO 8	-	71	107	.	-	64	96	.
D-BO 9	-	73	109	.				
D-BO 10	-	77	115	.				
D-BO 11	-	81	120	.	-	74	108	BOTTOM
D-BO 12	-	82	122	.				
D-BO 13	-	84	124	.				
D-BO 14	-	88	129	BOTTOM				
D-BO 15	-	90	131	BOTTOM				
D-BO 16	-	92	133	BOTTOM				
D-BO 17	-	93	134	BOTTOM				
D-BO 18	-	96	137	BOTTOM				
D-BO 19	-	100	141	BOTTOM				
D-BO 20					+	45	70	.

[1] 5-year average EVI rank among all bargaining-only cooperatives with EVI data.
[2] 5-year average EVI rank among all 141 cooperatives for 2000-04 and all 110 cooperatives for 2005-09.
[3] Cooperatives in existence since prior to 1992 or in continuous operation through 2010.
[4] Cooperatives entering during 1992-99 and in operation through 2010.
[5] Cooperatives that went out of business by merger between 2000 and 2010.
[6] Cooperatives that went out of business between 2000 and 2010, not including those that merged.

Map—Change in Number of Dairy Cooperatives Between 2000 and 2010 by Headquarters Region



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Rural Business–Cooperative Service (RBS) provides research, management, and educational assistance to cooperatives to strengthen the economic position of farmers and other rural residents. It works directly with cooperative leaders and Federal and State agencies to improve organization, leadership, and operation of cooperatives and to give guidance to further development.

The cooperative segment of RBS (1) helps farmers and other rural residents develop cooperatives to obtain supplies and services at lower cost and to get better prices for products they sell; (2) advises rural residents on developing existing resources through cooperative action to enhance rural living; (3) helps cooperatives improve services and operating efficiency; (4) informs members, directors, employees, and the public on how cooperatives work and benefit their members and their communities; and (5) encourages international cooperative programs. RBS also publishes research and educational materials and issues Rural Cooperatives magazine.
