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Full-Time Employees, Sales, and Assets of Selected Farmer Cooperatives: 1981 , 1986, and 1991



Abstract

Full-Time Employees, Sales, and Assets of Selected Farmer Cooperatives: 1981, 1986, and 1991

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This report examines the number of full-time employees, sales, and total assets of a selected group of 509 farmer cooperatives that had reported the number of full-time employees, sales, and assets in 1981, 1986, and 1991 in response to Agricultural Cooperative Service's (ACS) annual survey. Number, sales, and assets per full-time employee and sales-to-assets ratio are shown by asset grouping and type. Employee numbers and sales and total assets per full-time employee varied considerably by type and size over the years.

Keywords: cooperatives, full-time employees, sales, total assets, statistics

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Preface

Since 1981, Agricultural Cooperative Service (ACS) has collected data on the number of full-time employees every 5 years as part of its annual survey of farmer cooperatives. These data were published in the agency's annual statistical reports. But this is the first study of trends and changes in employee numbers.

Cooperatives were asked to report the number of full-time employees at the end of their business year. Each cooperative used its own criteria to identify full-time employees. There was no way to identify any differences in hours worked by these employees. No information was collected on part-time employees.

This report provides aggregate information on the number of full-time employees of 509 selected cooperatives for 1981, 1986, and 1991 and how numbers of and sales and total assets per full-time employee have changed by type of cooperative.

Segregating cooperatives by type and total assets provides a more homogeneous grouping for comparing changes between time periods and among types of cooperatives. It also provides information that managers, directors, and others can use for comparing the number of full-time employees in their organizations to the number of full-time employees used by the selected cooperatives of the same type and total asset category.

Data were collected by ACS's Statistics and Technical Services Staff—Celestine C. Adams, Katherine C. DeVille, Jacqueline E. Penn, Ralph M. Richardson, and John W. Stutzman.

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Highlights

Full-time employees of the 509 selected farmer cooperatives totaled 86,777 in 1981 compared with 80,873 in 1986 and 86,258 in 1991, reflecting a business upturn after the agricultural recession of the mid-1980s. In 1991, these cooperatives accounted for 50.1 percent of all farmer cooperatives' full-time employees, 52.7 percent of all cooperatives' sales, and 49.8 percent of all cooperatives' assets.

The number of full-time employees and the sales and total assets per full-time employee varied considerably by type and size during this time.

The higher number from 1986 to 1991 was due to fruit and vegetable cooperatives adding 6,843 employees. Conversely, dairy cooperatives cut 1,785 employees in the same period.

Sugar cooperatives had the most full-time employees per cooperative in 1981 and 1986, but by 1991 individual dairy cooperatives had the most with 117.

Employee numbers for dairy and smaller cotton cooperatives decreased while larger cotton cooperatives showed increases. Primarily grain, primarily farm supply, and majority farm supply significantly reduced their full-time employees in 1981-86¹. In majority grain cooperatives, however, employee numbers grew both in 1986 and 1991. While small fruit and vegetable cooperatives added employees from 1981 to 1986, larger ones cut their labor force. From 1986 to 1991, however, the largest fruit and vegetable cooperatives added 6,895 employees.

Many cooperatives with total assets of \$1 million to \$4.9 million operated with three-to-four times more employees than cooperatives with assets below \$1 million. In the category of employees per cooperative with assets from \$1 million to \$4.9 million, primarily farm supply cooperatives were more labor intensive, averaging 20.9 employees, compared with grain and fruit and vegetable cooperatives, which averaged 10.6 employees.

In cooperatives with assets less than \$10 million, there appeared to be little difference in employee numbers per cooperative between primarily and majority farm supply cooperatives. Primarily farm supply cooperatives with assets from \$10 million to \$50 million averaged at least 50 full-time employees more than the majority farm supply cooperatives. Data were not available to compare employee numbers in the largest cooperatives.

In most cases, sales per full-time employee for all selected cooperatives decreased as cooperative size increased. Sales per employee in small cooperatives were higher compared with large cooperatives. Many small

¹Cooperatives with more than 75 percent of their combined grains and farm supply sales volume from grains were called "primarily" grain. Those with 50 to 75 percent of their sales volume from grains were "majority" grain cooperatives. Farm supply cooperatives were similarly classified.

cooperatives performed bargaining functions or operated on a commission or brokerage basis with minimal assets and few full-time employees. The value of the product bargained for or handled on a commission basis was included in each cooperative's sales.

Except for sugar cooperatives, sales per full-time employee were down in 1986 compared with 1981 due to the agricultural recession of the mid-1 980s. Assets per full-time employee, however, increased in 1986, but not as much as they did from 1986 to 1991.

Total assets per employee for all selected cooperatives generally increased as cooperative size increased. Consequently, the sales-to-assets ratio generally declines as cooperatives grow. Basically, this reflects the additional assets the larger cooperatives use in processing and other value-added activities.

Full-Time Employees, Sales, and Assets of Selected Farmer Cooperatives: 1981, 1986, and 1991

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OVERVIEW

This study analyzes and compares the changes and trends in number of full-time employees in 509 farmer cooperatives. They were segregated by type and total assets to compare use of full-time employees during three time periods—1981, 1986, and 1991. Only five asset categories were used due to limited cooperative numbers in some classifications. Data from 1991 were used to place cooperatives in total asset categories, which in order to avoid disclosure were collapsed where there were fewer than three cooperatives.

Segregating cooperatives by type and total assets provided a more homogeneous grouping for comparing changes between time periods and among types of cooperatives. It also provided information that managers, directors, and others can use for comparing their full-time employee numbers with those in selected cooperatives of the same type and total-asset category.

The number of full-time employees a cooperative needs depends on the products and services provided to its members. Some cooperatives—those ginning cotton or handling fresh fruits or fresh vegetables—may only operate at full capacity during harvest. Others involved in value-added activities need more employees because they frequently operate at or near full capacity throughout the year. Many cooperatives may make significant use of part-time employees, but no data were available on them.

CLASSIFICATION OF COOPERATIVES

Data on full-time employees are presented according to a cooperative's major function or classification: marketing, farm supply, and service.

Marketing cooperatives—More than 50 percent of total business volume is derived from the sale of members' farm products. These cooperatives are further classified according to which of 13 commodity categories predominates in terms of business volume. A cooperative consistently handling a larger dollar volume of a commodity other than the one originally handled is reclassified to represent that commodity.

Farm supply cooperatives—More than half their business volume is derived from farm supply sales including farm equipment and building materials. Some also handle farm and home items such as heating oil, lawn and garden supplies and equipment, pet food, and convenience foods.

Service cooperatives—They provide specialized services to agricultural producers or cooperatives such as trucking, storing, drying, and artificial insemination. Many cooperatives handle multiple commodities and provide both marketing and farm supply services, as well as facilities and equipment, to perform related services. These associations are classified according to the predominant commodity or function, as indicated by their dollar business volumes.

Other types of service cooperatives such as those in the Farm Credit System, rural credit unions, rural electric cooperatives, and dairy herd improvement associations are not included in this study.

EMPLOYEES OF SELECTED COOPERATIVES

Complete data were not available to calculate sales per employee for all cooperatives, so a selected group of 509 farmer cooperatives that reported sales, assets, and number of full-time employees for 1981, 1986, and 1991 was studied. Their distribution versus that of all farmer cooperatives in 1991 is shown in table 1.

In 1981, employees' of the selected cooperatives accounted for 42.6 percent of all cooperatives' employees compared with 46.4 percent in 1986 and 50.1 percent in 1991. This group included many of the larger farmer cooperatives, as indicated by the fact that they accounted for only 11.3 percent of all farmer cooperatives.

Among the 509 cooperatives, dairy, fruit and vegetable, and farm supply cooperatives accounted for more than 64 percent of all employees each year.

These selected cooperatives had 86,777 employees in 1981; 80,873 in 1986; and 86,258 in 1991 (table 2). The 1981-86 decrease was greatest among farm supply cooperatives (4,130), followed by a net decrease for all marketing cooperatives (1,743). The latter mainly resulted from declining

employee numbers in grain, fruit and vegetable, and livestock/wool/poultry cooperatives.

The net increase (5,385) in total number of employees from 1986 to 1991 was largely centered in fruit and vegetable cooperatives (fig. 1). In total, marketing cooperative employees increased by 4,277. The largest decrease (1,785) was among dairy cooperatives.

For this study, grain and farm supply cooperatives were each classified into two subgroups: "primarily" or "majority." These classifications were made to better analyze differences in the use of employees in grain and farm supply cooperatives. Those with more than 75 percent of their combined grain and farm supply sales from grain were called "primarily grain." Those in the 50 to 75 percent range were identified as "majority grain."

Supply cooperatives with more than 75 percent of their combined grain and farm supply sales from farm supplies were designated "primarily farm supply." Those in the 50 to 75 percent range were classified as "majority farm supply."

By total asset grouping, cooperatives with 1991 assets of \$50 million or more accounted for more than 75 percent of all selected cooperatives'

The term "employees" throughout this report will refer to full-time employees unless otherwise stated.

Table 1 -Number of selected and all cooperatives, 1991

Principal product(s) marketed or major function	Selected co-ops	Percent of total	All co-ops	Percent of total
	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>
Cotton	9	1.8	19	.4
Dairy	66	12.9	265	5.9
Grains and oilseeds ¹	159	31.2	1,286	28.6
Fruits and vegetables	52	10.2	299	6.6
Livestock/wool/poultry	29	5.7	327	7.3
Nuts	3	.6	14	.3
Tobacco	7	1.4	26	.6
Dry beans and peas	3	.6	10	.2
Rice	6	1.2	42	.9
Sugar	9	1.8	48	1.1
Miscellaneous marketing	3	.6	48	1.1
All marketing	346	68.0	2,384	53.0
Farm supply	141	27.7	1,689	37.6
Service ²	22	4.3	421	9.4
Total	509	100.0	4,494	100.0

¹ Excludes cottonseed.

² Includes cotton ginning cooperatives.

Table 2-Number of full-time employees of selected cooperatives

Principal product(s) marketed or major function	1981	1986	1991
	<i>Number</i>		
Cotton	1,730	1,638	1,758
Dairy	28,551	28,671	26,886
Primarily grain ¹	6,488	5,379	5,253
Majority grain ²	3,116	3,125	3,748
Fruits and vegetables	13,304	12,424	19,267
Livestock/wool/poultry	11,367	10,735	10,563
Nuts	788	1,941	1,753
Tobacco	102	84	74
Dry beans and peas	85	89	160
Rice	848	829	625
Sugar	4,457	4,177	3,282
Miscellaneous marketing	<u>98</u>	<u>99</u>	<u>99</u>
All marketing	70,934	69,191	73,468
Primarily farm supply ³	11,447	8,355	9,341
Majority farm supply ⁴	4,022	2,984	3,118
Service ⁵	374	343	331
Total ⁶	86,777	80,873	86,258

¹ More than 75 percent of combined marketing and farm supply sales came from sales of grains and **oilseeds** excluding cottonseed.

² More than 50 percent but less than 76 percent of combined marketing and farm supply sales came from sales of grains and **oilseeds** excluding cottonseed.

³ More than 75 percent of combined marketing and farm supply sales came from supply sales.

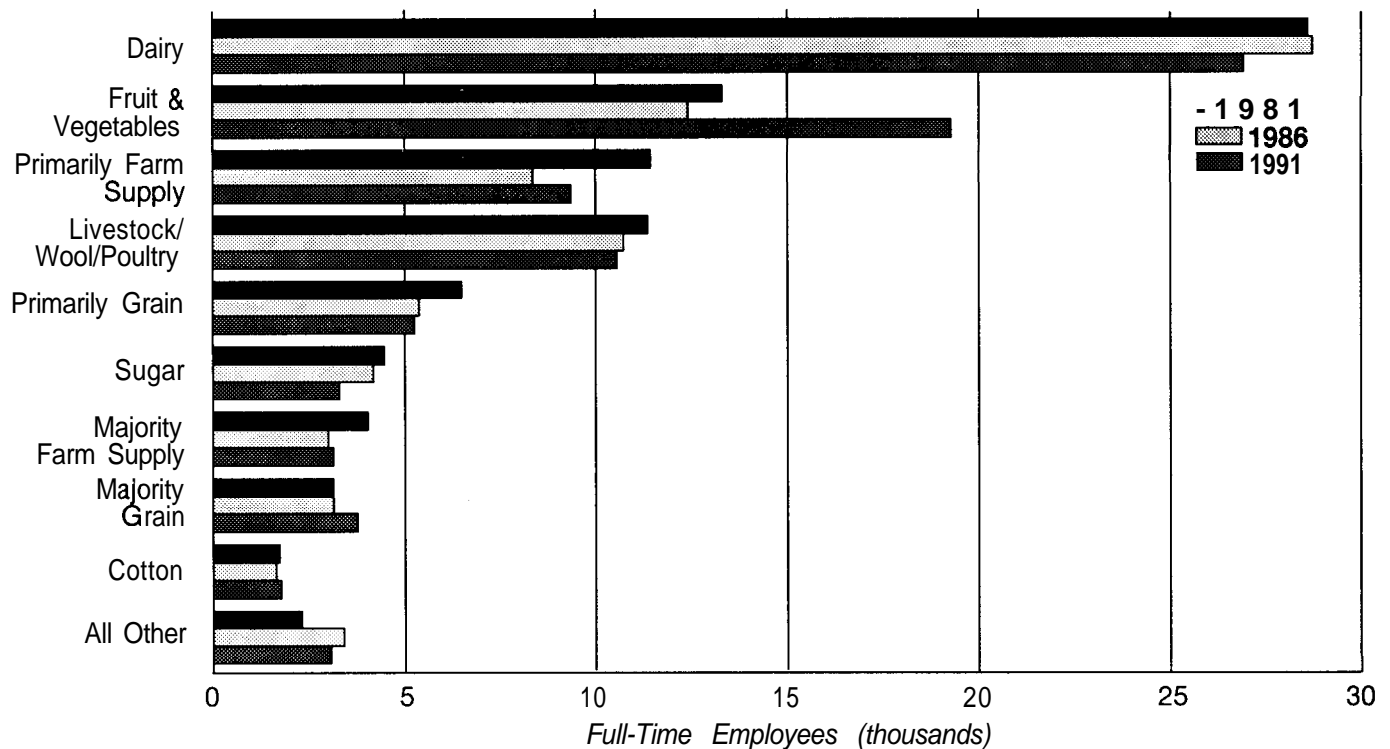
⁴ More than 50 percent but less than 76 percent of combined marketing and farm supply sales came from sales of farm supplies.

⁵ Includes cotton ginning cooperatives.

⁶ Full-time employees in all farmer cooperatives numbered 203,558 in 1981, 174,188 in 1986, and 172,062 in 1991. In 1957, full-time employees in farmer cooperatives totaled 140,764. For information on cooperative employees in 1957, see Nelda Griffin, **Number of Full-Time Employees of Farmer Cooperatives**, Gen. Rpt. 73, FCS, USDA, Wash., DC, January 1960. No other data were found on total number of cooperative employees for other years.

Figure I-Number of Full-Time Employees of Selected Cooperatives, by Type

Type of Cooperative



total assets (fig. 2). From 1981 to 1991, cooperatives with assets of less than \$1 million reduced their employee numbers. Those with assets of \$10 million to \$250 million showed increases while employees in the other total asset groupings decreased in 1986, but increased in 1991.

While 47 of the selected cooperatives had fewer than 5 employees in 1981, this increased in 1986 and 1991 (table 3). Employee numbers declined in at least 10 cooperatives during this time period. Many cooperatives bargain for their members or operate on a commission or brokerage basis with little or no physical handling of a product. Fifty percent or more in each of the 3 years had fewer than 30 employees, while 19 to 22 percent had at least 100.

Sales and Assets Per Employee

Total sales of these selected cooperatives in relation to all cooperatives increased during 1981-91 from 42 percent to nearly 53 percent. Sales, however, decreased from 1981 to 1986 for all types of selected cooperatives, except for fruit and vegetable and nut cooperatives (table 4 and fig. 3).

Marketing cooperatives' sales grew from 80.2 percent of the total in 1981, to 86.1 percent in 1986, and to 86.9 percent in 1991. Of the total marketing sales, dairy cooperatives accounted for more than 41 percent in each year.

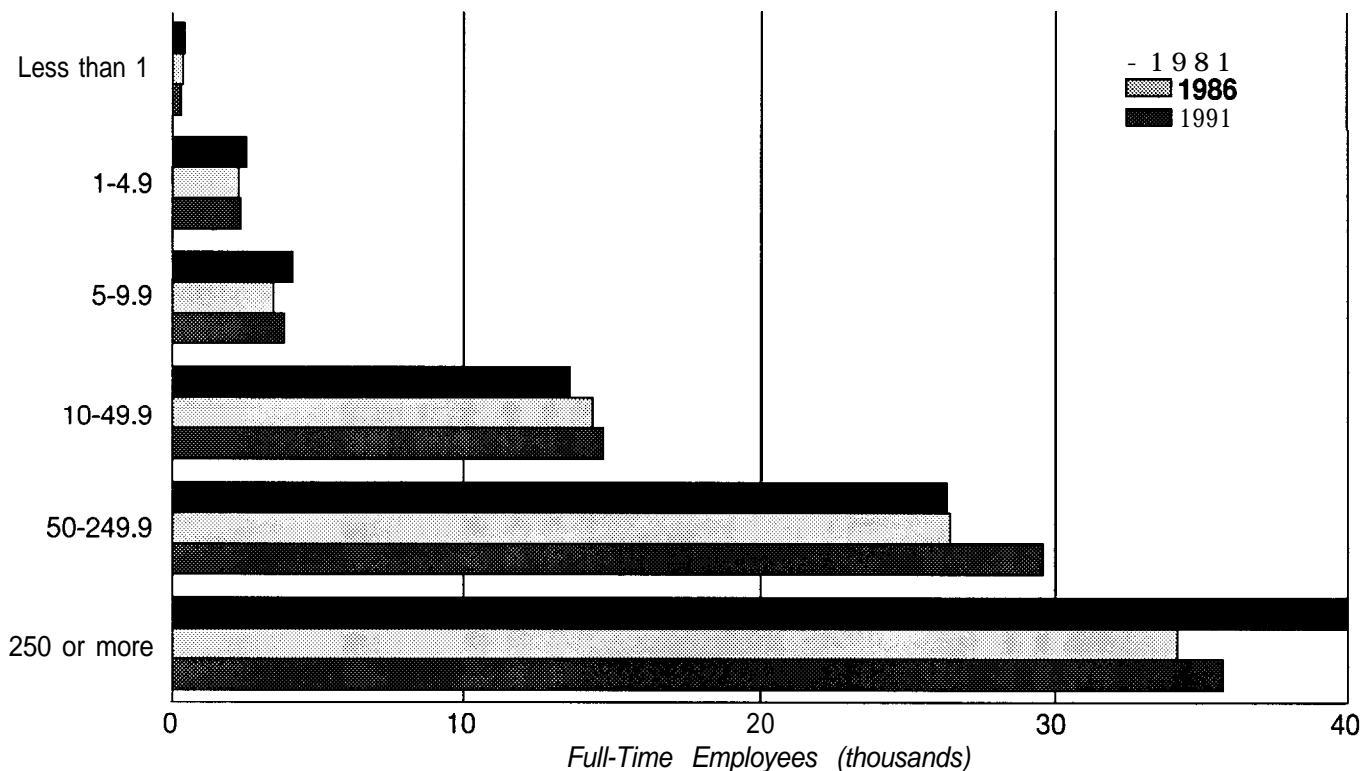
Total assets of the selected cooperatives ranged from \$12.2 billion in 1981 to \$15.6 billion in 1991 (table 5). Assets of the selected cooperatives accounted for 42.2 percent, 48.3 percent, and 49.8 percent of all cooperatives' assets in 1981, 1986, and 1991, respectively. Assets of dairy, fruit and vegetable, and "all other" cooperatives increased in 1986 and 1991 (fig. 4).

Cotton Cooperatives

Of the nine cooperatives primarily marketing cotton, only one had total assets of less than \$1 million in 1991. Five had total assets in the \$10 million-\$50 million range and three had assets of \$50 million or more. Consequently, they were grouped into cooperatives with assets less than \$50 million and those with assets of \$50 million or more (table 6).

Figure 2-Number of Full-Time Employees of Selected Cooperatives by Asset Grouping'

Assets (million dol.)



'Based on 1991 assets.

Table 3-Distribution of selected cooperatives by number of full-time employees ¹

Full-time Employees	Year		
	1981	1986	1991
	<i>Number of cooperatives</i>		
Fewer than 5	47	54	57
5 - 14	120	115	106
15-29	99	103	94
30-49	80	78	75
50 - 99	58	62	67
100 - 199	42	32	36
200 - 999	45	50	52
1,000 and more	18	15	22
Total	509	509	509

¹Represents 509 cooperatives that provided information on number of full-time employees, sales, and assets all 3 years.

Table 4—Total sales of selected farmer cooperatives

Principal product(s) marketed or major function	Year		
	1981	1986	1991
	<i>Mil. dol.</i>		
Cotton	1,885	1,196	2,309
Dairy	14,770	14,092	17,333
Primarily grain ¹	5,846	4,281	6,467
Majority grain ²	1,992	1,476	2,337
Fruits and vegetables	3,320	4,514	6,266
Livestock/wool/poultry	3,806	2,991	4,042
Nuts	342	497	542
Tobacco	337	152	405
Dry beans and peas	43	36	85
Rice	499	236	269
Sugar	1,496	1,351	1,482
Miscellaneous marketing	<u>57</u>	<u>49</u>	<u>62</u>
All marketing ³	34,393	30,871	41,599
Primarily farm supply ⁴	6,013	3,859	4,874
Majority farm supply ⁵	2,016	1,013	1,306
Service ⁶	442	121	71
Total	42,864	35,864	47,850

¹More than 75 percent of combined marketing and farm supply sales came from sales of grains and oilseeds excluding cottonseed.

²More than 50 percent but less than 76 percent of combined marketing and farm supply sales came from sales of grains and oilseeds excluding cottonseed.

³Totals may not add due to rounding.

⁴More than 75 percent of combined marketing and farm supply sales came from supply sales.

⁵More than 50 percent but less than 76 percent of combined marketing and farm supply sales came from sales of farm supplies.

⁶Includes cotton ginning cooperatives.

Smaller cooperatives reduced the number of employees over time but increased sales per employee ². The larger cooperatives increased the number of employees but sales per employee varied. Both groups showed increased assets per employee in 1986. In 1991, however, assets per employee ³ increased in the smaller grouping but decreased among the largest. The sales-to-assets ratio was consistently higher for the smaller group.

Dairy Cooperatives

This group contained 66 dairy cooperatives (table 7) of which 18 had assets of \$50 million or more in 1991. They accounted for 85 percent or more of the selected cooperatives' employees all 3 years.

Many of these cooperatives bargain with handlers and processors on price and other terms of trade for their members. Consequently, the value of the milk for which they bargain is included in sales. The effect significantly increases the sales per employee, especially for the small, strictly bargaining cooperatives.

In 1981 and 1986, sales per employee varied with size. However, in 1991, sales per employee decreased as cooperative size increased (fig. 5). Assets per employee varied considerably with size (fig. 6). In 1981, assets per employee was highest for the largest cooperatives (\$50 million or more). In 1986 and 1991, assets per employee was highest for those with assets of \$5 million to \$9.9 million.

The sales-to-assets ratios of dairy cooperatives, especially those with assets of less than \$5 million, were highest largely because of milk bargaining activities. In each time period, the ratios decreased as cooperative size increased.

Primarily Grain Cooperatives

Eighty-six cooperatives were identified as primarily grain cooperatives-more than 75

^{*}Sales per employee was calculated by dividing the marketing and farm supply sales plus service receipts and other income of each cooperative by the cooperative's number of full-time employees. Sales per employee was then summed and divided by the number of cooperatives in each grouping.

³Assets per employee was calculated by dividing total assets of each cooperative by the cooperative's number of employees. Assets per employee was then summed and divided by the number of cooperatives in each grouping.

Figure 3-Sales of Selected Cooperatives by Type

Type of Cooperative

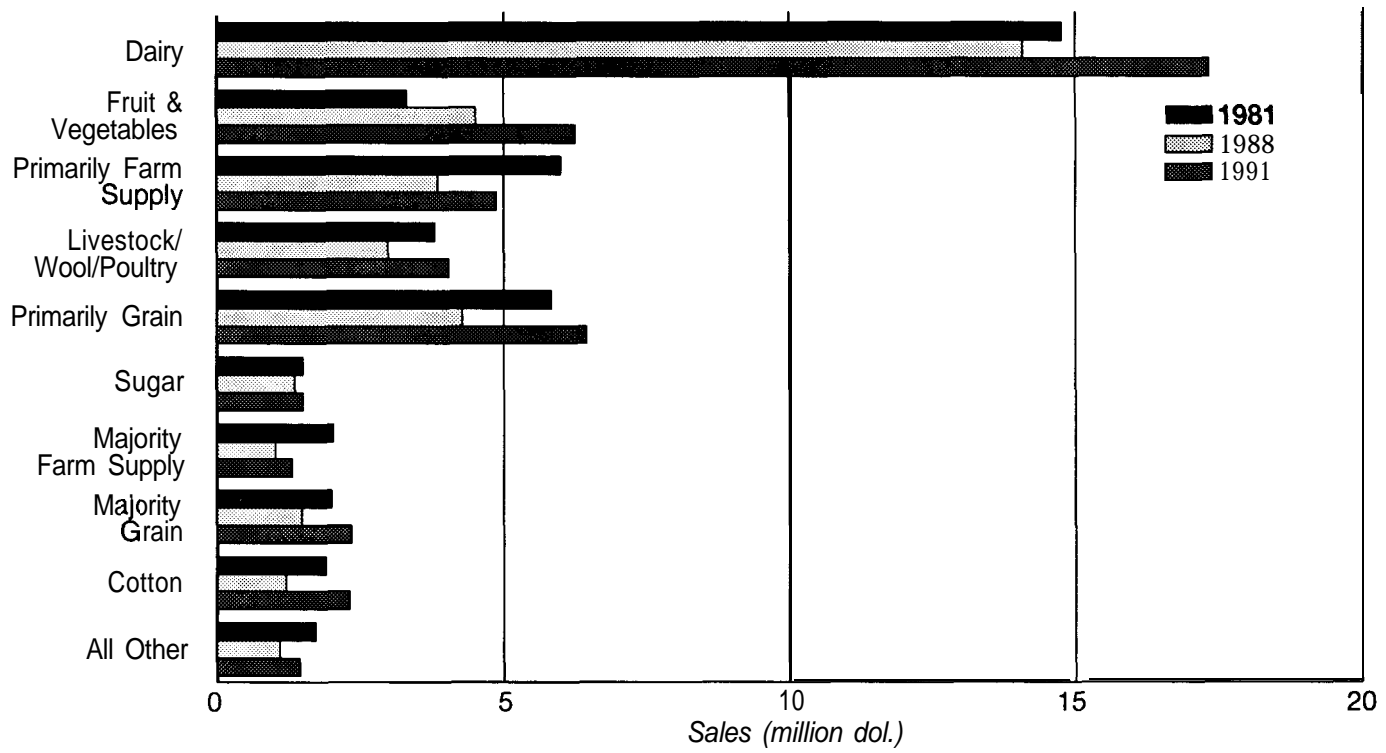


Figure 4-Assets of Selected Cooperatives by Type

Type of Cooperative

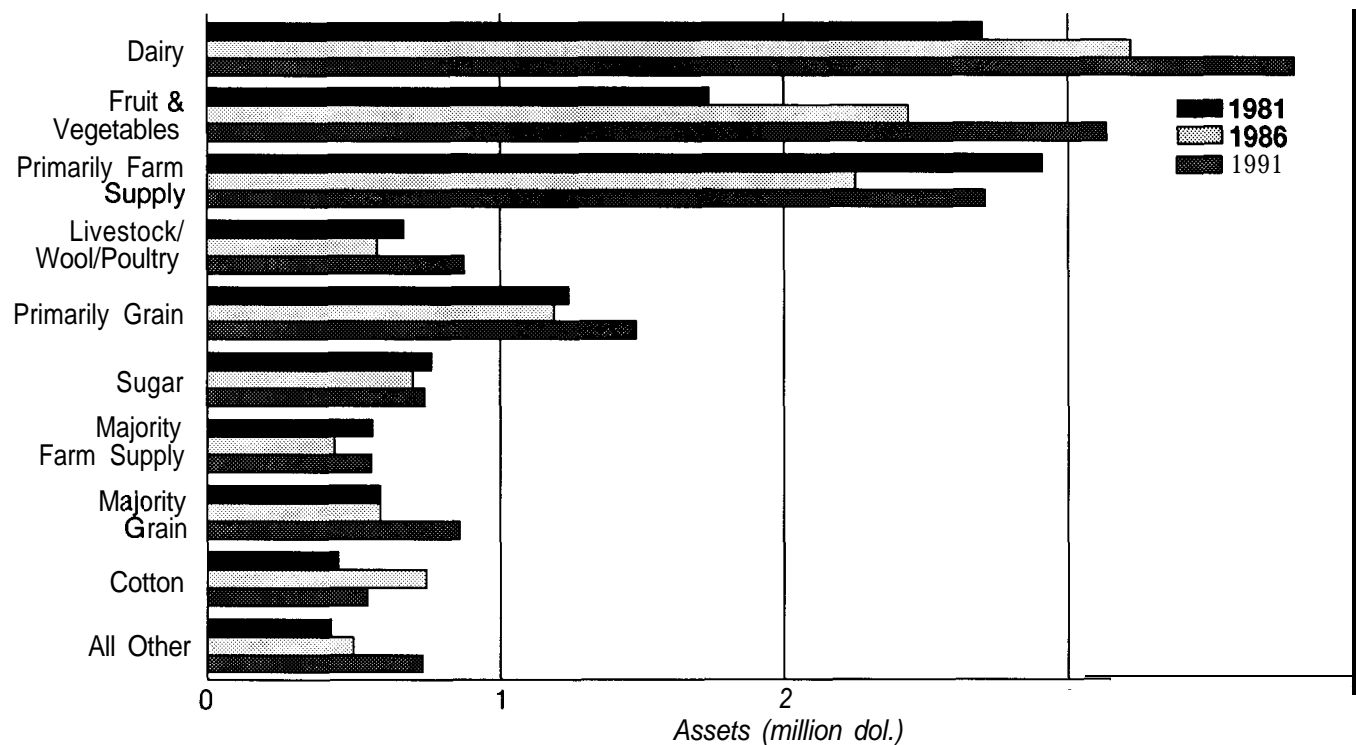


Table 5—Assets of selected farmer cooperatives

Principal product(s) marketed or major function	1981	1986	1991
	<i>Mil. dol.</i>		
Cotton	455	763	557
Dairy	2,709	3,230	3,799
Primarily grain ¹	1,263	1,213	1,501
Majority grain ²	604	604	880
Fruits and vegetables	1,756	2,451	3,144
Livestock/wool/poultry	687	594	896
Nuts	170	210	332
Tobacco	50	66	207
Dry beans and peas	13	17	27
Rice	137	149	110
Sugar	783	718	759
Miscellaneous marketing	19	16	21
All marketing ³	8,645	10,031	12,235
Primarily farm supply ⁴	2,918	2,266	2,718
Majority farm supply ⁵	575	442	571
Service ⁶	41	51	54
Total	12,179	12,790	15,579

¹ More than 75 percent of combined marketing and farm supply sales came from sales of grains and oilseeds excluding cottonseed.

² More than 50 percent but less than 76 percent of combined marketing and farm supply sales came from sales of grains and oilseeds excluding cottonseed.

³ Totals may not add due to rounding.

⁴ More than 75 percent of combined marketing and farm supply sales came from supply sales.

⁵ More than 50 percent but less than 76 percent of combined marketing and farm supply sales came from sales of farm supplies.

⁶ Includes cotton ginning cooperatives.

percent of their combined grain and farm supply sales came from grain (table 8). The two which reported assets of \$50 million or more in 1991 were combined with those with assets of \$10 million or more. As a result, the number of employees and the sales and assets per employee are larger than would be expected for cooperatives in this grouping.

In each time period, more than 83 percent of employees in the primarily grain cooperatives were accounted for by the largest cooperatives—assets of \$10 million or more. However, these cooperatives reduced employees by 1,116 by 1986 and 132 by 1991. In 1981, each of the largest cooperatives averaged 194 employees, by 1991 they averaged only 151. The reduction in employees in the mid-1980s partly reflects the agricultural recession.

Table 6—Selected cotton cooperatives by size of total assets ¹

Year	<i>Total assets (Million \$) ²</i>		Total
	Less than 50	50 or more	
Number of Cooperatives			
1981, 1986, and 1991	6	3	9
Number of Full-Time Employees			
1981	919	811	1,730
1986	779	859	1,638
1991	620	1,138	1,758
Number of Full-Time Employees Per Cooperative			
1981	153.2	270.3	192.2
1986	129.8	286.3	182.0
1991	103.3	379.3	195.3
Sales Per Full-Time Employee (\$1,000)			
1981	1,242	1,857	1,447
1986	1,921	763	1,535
1991	2,982	1,536	2,500
Assets Per Full-Time Employee (\$1,000)			
1981	195	403	264
1986	408	718	511
1991	590	467	549
Sales-to-Assets Ratio			
1981	5.12	3.94	4.73
1986	3.56	1.49	2.87
1991	7.08	3.15	5.77

¹ Represents cooperatives that provided information on number of full-time employees, sales, and assets all 3 years.

² Based on total assets reported for 1991. Assets in categories of two or less cooperatives were combined to avoid disclosure.

Even with the reduction in employee numbers, sales per employee were down for all size categories in 1986, reflecting lower sales of cooperatives that year (fig. 7). In both 1986 and 1991, sales per employee, excluding cooperatives with 1991 assets less than \$1 million, decreased as size of cooperative increased. However, in all years, sales per employee of the largest cooperatives were less than those cooperatives with assets of \$1 million to less than \$10 million.

Assets per employee for the primarily grain cooperatives was \$299,000 in 1981, \$329,000 in 1986, and \$358,000 in 1991. However, assets per employee varied by size and year. The largest cooperatives had lower assets per employee than the 25 cooperatives in the next lower asset grouping. This was true each year.

Figure 5—Sales Per Full-Time Employee of Selected Dairy Cooperatives

Assets (million dol.)

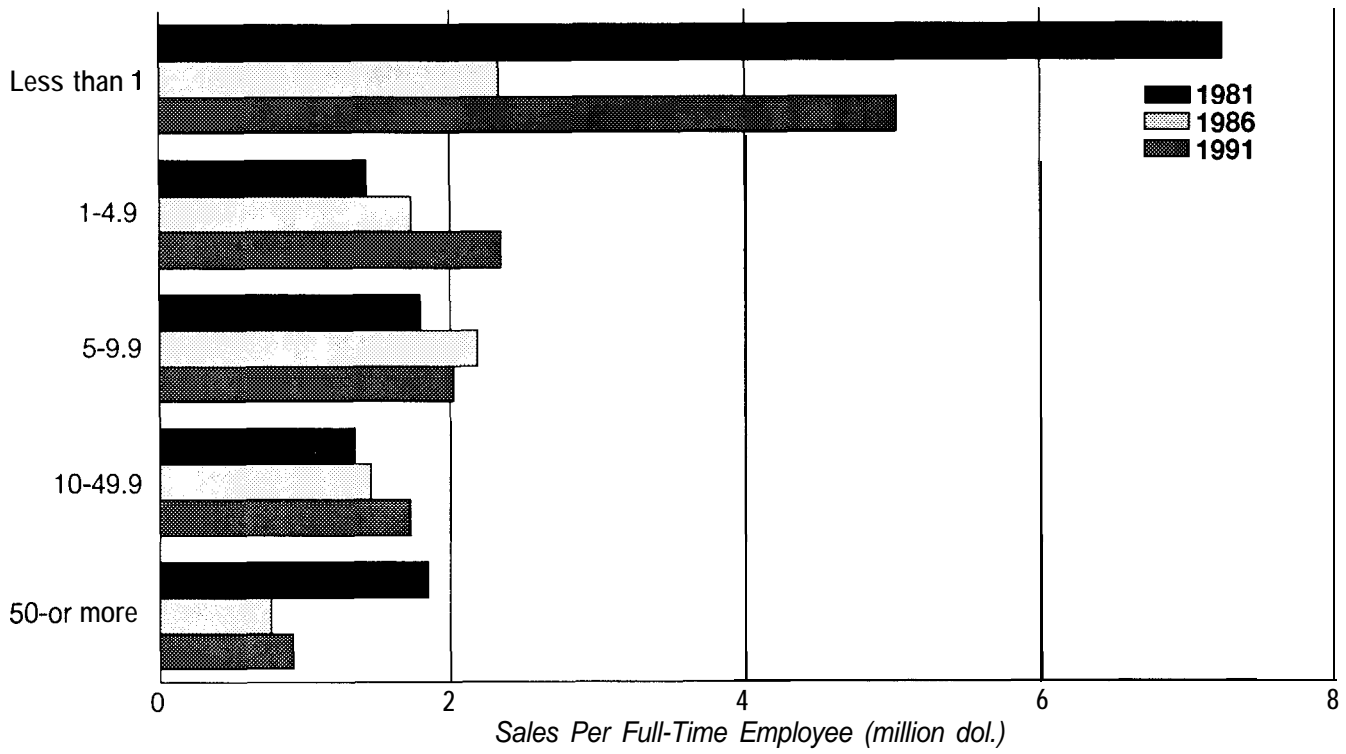


Figure 6—Assets Per Full-Time Employee of Selected Dairy Cooperatives

Assets (million dol.)

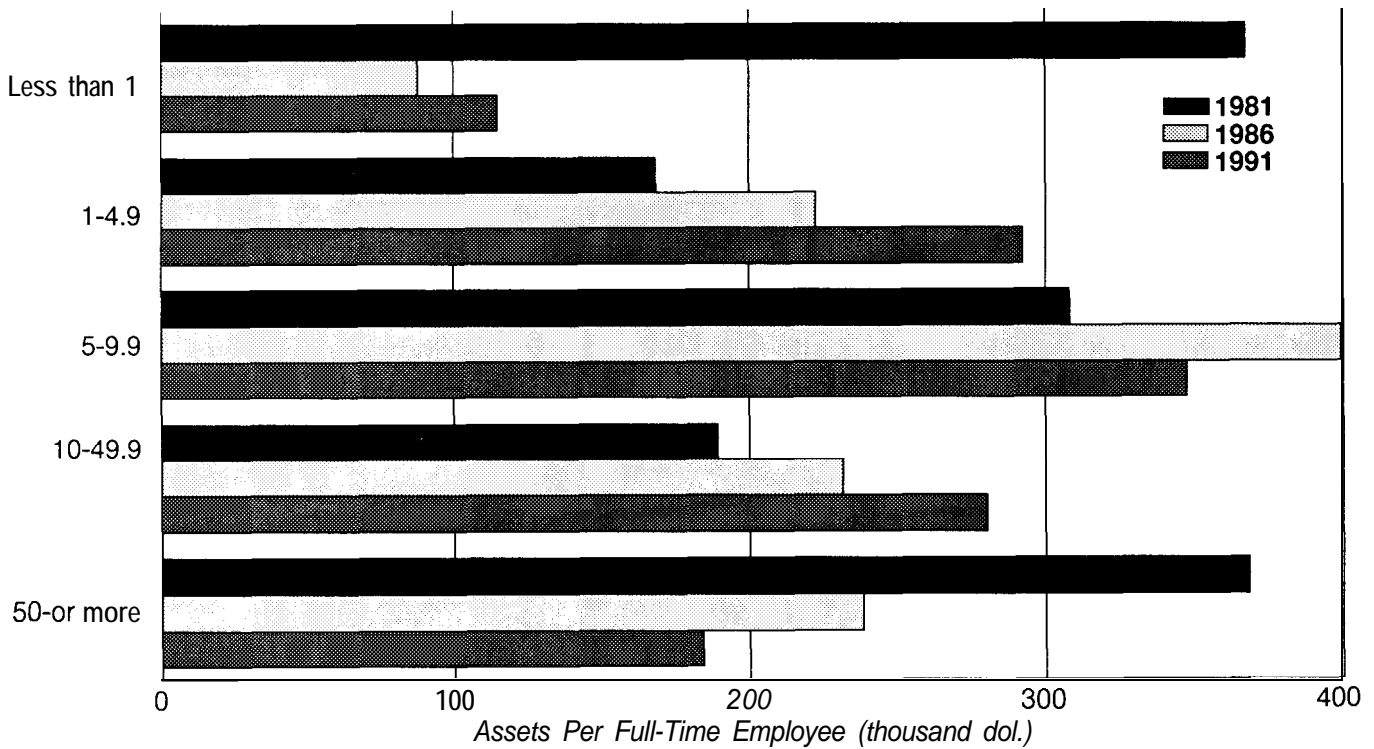


Table 7-Selected dairy cooperatives by size of total assets ¹

Year	Total assets (Million \$) ²					Total
	Less than 1	1 - 4.9	5 - 9.9	10 - 49.9	50 or more	
Number of Cooperatives						
1981, 1986, and 1991	12	14	6	16	18	66
Number of Full-Time Employees						
1981	61	183	223	2,785	25,297	28,551
1986	52	178	174	4,022	24,236	28,671
1991		195	233	2,971	23,435	26,886
Number of Full-Time Employees Per Cooperative						
1981	5.1	13.1	37.2	174.1	1,405.4	432.6
1986	5.1	12.7	29.0	251.4	1,346.4	434.4
1991	4.3	13.9	38.8	185.7	1,301.9	407.4
Sales Per Full-Time Employee (\$1,000)						
1981	7,226	1,406	1,768	1,319	1,819	2,588
1986	2,307	1,706	2,157	1,430	758	1,531
1991	5,010	2,319	1,997	1,698	901	2,242
Assets Per Full-Time Employee (\$1,000)						
1981	368	168	308	189	369	277
1986	87	222	400	231	238	220
1991	114	292	348	280	184	232
Sales-to-Assets Ratio						
1981	112.01	12.18	6.40	6.28	5.23	26.48
1986	57.18	11.30	5.72	5.09	4.08	15.66
1991	162.70	7.06	6.26	5.23	4.87	34.25

¹Represents cooperatives that provided information on number of full-time employees, sales, and assets all 3 years.

²Based on total assets reported for 1991. Assets in categories of two or less cooperatives were combined to avoid disclosure.

Most sales-to-assets ratios for the primarily grain cooperatives also decreased as cooperative size increased. The ratio for cooperatives in the \$1 million-\$4.9 million group was 6.53 compared with 6.16 for those with less than \$1 million in total assets.

Majority Grain Cooperatives

There were 73 majority grain cooperatives—50 to 75 percent of the combined grain and farm supply sales from grains. The sole cooperative with total assets of less than \$1 million was combined with those with assets of less than \$5 million (table 9).

Two majority grain cooperatives had assets of \$50 million or more, but fewer employees than the two largest primarily grain cooperatives. Data on both cooperatives, however, were combined with the 31 cooperatives with 1991 assets of \$10 million or more.

The largest majority grain cooperatives (1991 assets of \$10 million or more) accounted for nearly 64 percent of all employees in 1981. By 1991, employee numbers of these cooperatives grew by 740. Employees in the smallest size decreased from 292 in 1981 to 257 in 1986, and to 214 in 1991.

Sales per employee increased as size of the cooperative increased, both in 1981 and 1991 (fig. 8). In 1986, sales per employee for the cooperatives in the largest asset group was lower than those in the next lowest asset grouping—\$5 million to \$9.9 million. Overall, sales per employee of the majority grain cooperatives were significantly lower in 1986 than in 1981 or 1991.

Without exception, assets per employee of the majority grain cooperatives increased as cooperative size increased. As expected, the largest cooperatives showed the most assets per employee. From 1981 to 1991, however, these cooperatives' assets per employee dropped from

Table 8—Selected primarily grain cooperatives by size of total assets ¹

Year	Total assets (Million \$) ²				Total
	Less than 1	1 - 4.9	5 - 9.9	10 or more	
Number of Cooperatives					
1981, 1986, and 1991	4	28	25	29	86
Number of Full-Time Employees					
1981	18	337	503	5,630	6,488
1986	18	322	525	4,514	5,379
1991	12	298	561	4,382	5,253
Number of Full-Time Employees Per Cooperative					
1981	4.5	12.0	20.1	194.1	75.4
1986	4.5	11.5	21.0	155.7	62.5
1991	3.0	10.6	22.4	151.1	61.1
Sales Per Full-Time Employee (\$1,000)					
1981	808	1,525	1,548	1,308	1,425
1986	589	1,232	953	762	963
1991	968	1,340	1,256	1,030	1,193
Assets Per Full-Time Employee (\$1,000)					
1981	184	246	363	312	299
1986	169	362	347	305	329
1991	215	336	398	364	358
Sales-to-Assets Ratio					
1981	6.16	6.53	4.43	4.32	5.16
1986	5.42	4.20	2.81	2.70	3.35
1991	5.47	4.27	3.27	3.01	3.61

¹Represents cooperatives that provided information on number of full-time employees, sales, and assets all 3 years.

²Based on total assets reported for 1991. Assets in categories of two or less cooperatives were combined to avoid disclosure.

\$306,000 to \$264,000, reflecting the increased employee numbers.

In 1986 and 1991, the sales-to-assets ratio was highest for those cooperatives in the \$5 million to \$9.9 million asset group. The ratio usually decreases as cooperative size increases.

Compared with primarily grain cooperatives, the majority grain cooperatives had fewer employees, much lower sales and assets per employee, and overall lower sales-to-assets ratios. However, information was not available to relate what impact these variables have had on profitability.

Primarily Farm Supply Cooperatives

There were 105 cooperatives classified as primarily farm supply—more than 75 percent of their combined grain and farm supply sales from farm supplies (table 10). In 1991, nearly 62 percent

of these cooperatives had assets of less than \$5 million. Seven cooperatives had assets of \$50 million or more and accounted for 68.3 percent and 58.6 percent of the employees of primarily farm supply cooperatives in 1981 and 1991, respectively.

Cooperatives in each asset grouping reduced the number of employees from 1981 to 1986. Overall, total number of employees declined 27 percent or 3,092, again reflecting the tough economic times in agriculture. From 1986 to 1991, primarily farm supply cooperatives with assets of less than \$1 million reduced their employee numbers while cooperatives in each of the larger asset groupings increased them. The greatest increase (545) in number was by the largest primarily farm supply cooperatives.

Sales per employee decreased from 1981 to 1986 in each asset grouping except for those cooperatives with assets of \$1 million to \$4.9

Figure 7—Sales Per Full-Time Employee of Selected Primarily Grain Cooperatives

Assets (million dol.)

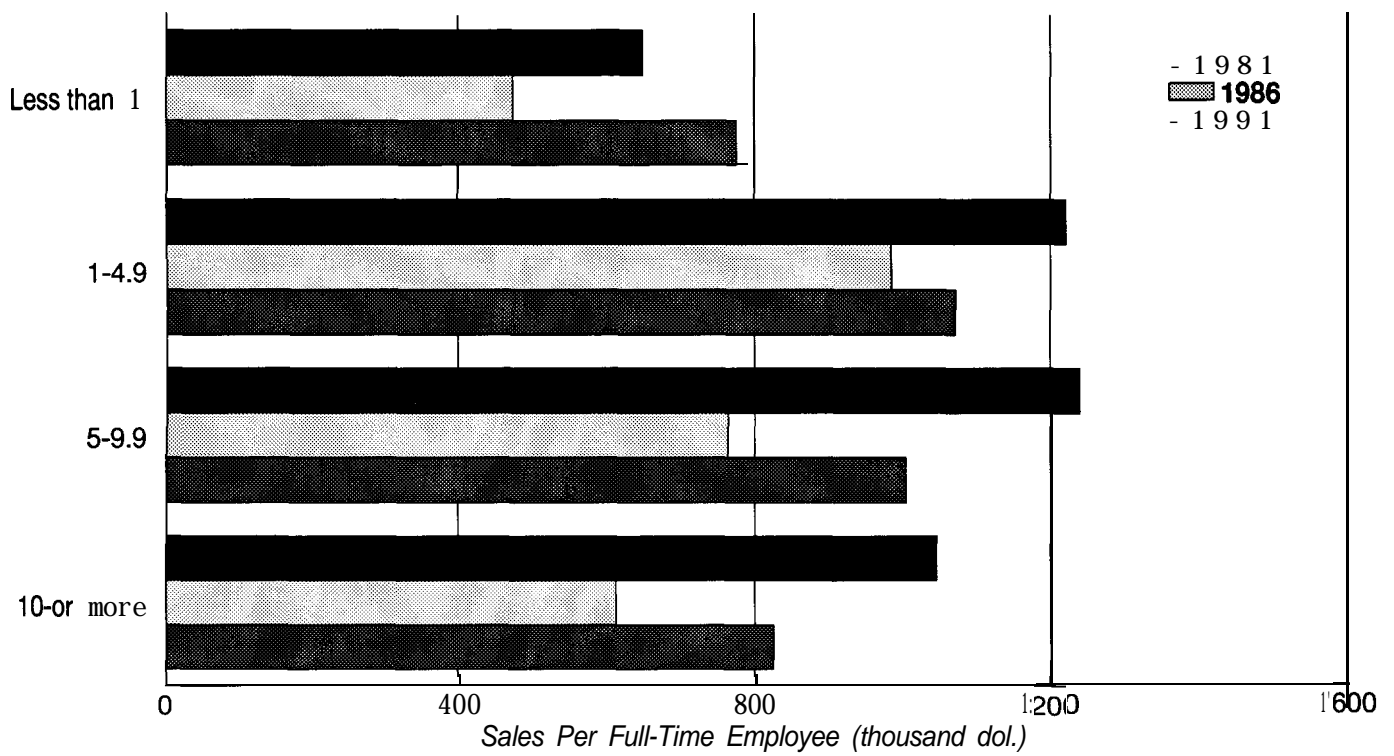


Figure 8—Sales Per Full-Time Employee of Selected Majority Grain Cooperatives

Assets (million dol.)

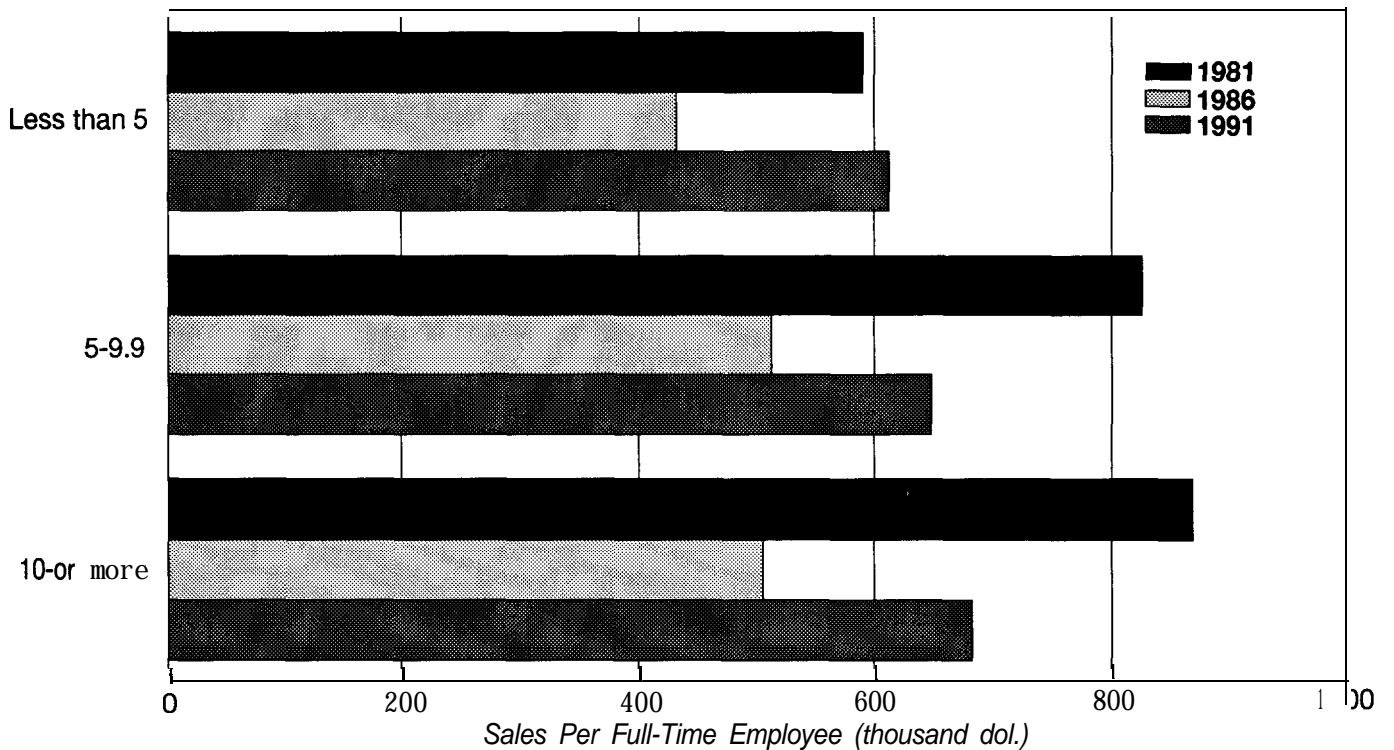


Table 9—Selected majority grain cooperatives by size of total assets¹

Year	Total assets (Million \$) ²			Total
	Less than 5	5 - 9.9	10 or more	
Number of Cooperatives				
1981, 1986, and 1991	16	24	33	73
Number of Full-Time Employees				
1981	292	833	1,991	3,116
1986	257	754	2,114	3,125
1991	214	803	2,731	3,748
Number of Full-Time Employees Per Cooperative				
1981	18.3	34.7	60.3	42.7
1986	16.1	31.4	64.1	42.8
1991	13.4	33.5	82.8	51.3
Sales Per Full-Time Employee (\$1,000)				
1981	590	825	868	793
1986	431	512	505	491
1991	612	648	682	655
Assets Per Full-Time Employee (\$1,000)				
1981	163	213	306	244
1986	185	206	220	208
1991	231	239	264	249
Sales-to-Assets Ratio				
1981	3.72	3.70	3.25	3.50
1986	2.45	2.76	2.43	2.55
1991	2.73	2.87	2.70	2.76

¹Represents cooperatives that provided information on number of full-time employees, sales, and assets all 3 years.

²Based on total assets reported for 1991. Assets in categories of two or less cooperatives were combined to avoid disclosure.

million (fig. 9). In 1991, sales per employee was similar to 1981, except for cooperatives in the smallest grouping. In general, these sales varied as cooperative size increased. Sales per employee of the largest cooperatives, however, were significantly larger than any of the smaller cooperatives.

The seven largest cooperatives were all regionals. Consequently, they may have hired a number of part-time employees which would partially explain their high sales per employee.

Examination of assets per employee of primarily farm supply cooperatives across asset categories tells a similar story. An exception occurred from 1981 to 1986 when assets per employee increased in all but one asset group.

One important aspect of these cooperatives is the relatively low, but similar, asset

turnover rate across all size groupings. In 1981, the sales-to-assets ratio ranged from 2.52 to 2.83, in 1986 from 1.60 to 2.36, and in 1991 from 2.23 to 2.66.

Majority Farm Supply Cooperatives

There were only 36 majority farm supply cooperatives (table 11). Their farm supply sales accounted for 50 to 75 percent of their combined grain and farm supply sales in 1991. Only one cooperative had total assets of less than \$1 million in 1991. It was combined with those with assets of less than \$5 million.

Two regional cooperatives in 1991 reported assets of more than \$50 million and combined with those with assets of \$10 million or more.

The majority farm supply cooperatives decreased employee numbers by 1,038 from 1981 to 1986, the largest cooperatives by 865. By 1991, majority farm supply cooperatives in each size grouping had increased the number of employees.

There was little difference in the number of employees per cooperative between the majority and primarily farm supply cooperatives with assets below \$10 million. However, the primarily farm supply cooperatives with assets of \$10 million to \$49.9 million averaged more than 50 employees compared with the majority farm supply cooperatives each year. Insufficient data did not allow comparison of employee numbers in the largest cooperatives.

Sales per employee of the majority farm supply cooperatives in 1981 varied as cooperative size increased (fig. 10). It decreased as size increased in 1986 and increased as size increased in 1991. In comparing 1981 and 1991, sales per employee in 1991 was lower for those cooperatives in the smallest and largest groups but higher for those cooperatives in the \$5 million to \$9.9 million range.

Total assets per employee were higher in 1991 for cooperatives in each asset group. Assets per employee, however, varied as cooperative size increased in 1981 and 1986, but increased as size increased in 1991.

The sales-to-assets ratio decreased as size of cooperative increased each year and in each size grouping from 1981 to 1991. This implies that the majority farm supply cooperatives have slipped in maintaining efficient use of their assets.

Table 1 O-Selected primarily farm supply cooperatives by size of total assets ¹

Year	Total assets (Million \$) ²					Total
	Less than 1	1 - 4.9	5 - 9.9	10 - 49.9	50 or more	
Number of Cooperatives						
1981, 1986, and 1991	14	51	21	12	7	105
Number of Full-Time Employees						
1981	114	1,018	1,019	1,481	7,815	11,447
1986	90	934	963	1,439	4,929	8,355
1991	80	1,066	1,142	1,579	5,474	9,341
Number of Full-Time Employees Per Cooperative						
1981	8.1	20.0	48.5	123.4	1,116.4	109.0
1986	6.4	18.3	45.9	119.9	704.1	79.6
1991	5.7	20.9	54.4	131.6	782.0	89.0
Sales Per Full-Time Employee (\$1,000)						
1981	197	350	337	375	730	355
1986	131	402	265	309	648	344
1991	271	352	341	372	711	365
Assets Per Full-Time Employee (\$1,000)						
1981	71	131	130	130	327	136
1986	84	196	123	140	339	170
1991	108	152	138	186	379	162
Sales-to-Assets Ratio						
1981	2.83	2.52	2.56	2.86	2.83	2.63
1986	1.60	2.15	2.25	2.11	2.36	2.10
1991	2.58	2.47	2.55	2.20	2.20	2.45

¹Represents cooperatives that provided information on number of full-time employees, sales, and assets all 3 years and whose farm supply sales were more than 75 percent of combined grain and farm supply sales.

²Based on total assets reported for 1991. Assets in categories of two or less cooperatives were combined to avoid disclosure.

Fruit and Vegetable Cooperatives

Among the 52 selected fruit and vegetable cooperatives, the 13 largest cooperatives had 76.6 percent of the employees in 1981, 79.9 percent in 1986, and 87.3 percent in 1991. Only the smallest cooperatives showed an increase in employee numbers in 1986 compared with 1981 (table 12). Cooperatives in the three middle asset groupings decreased employee numbers in 1986 and in 1991. The largest ones, however, significantly increased (6,895) their employees from 1986 to 1991.

Sales per employee decreased as cooperative size increased both in 1986 and 1991 (fig. 11). In 1981, however, sales per employee varied as size increased. The decreased sales per employee as size increased reflected the processing and other

value-added activities of the larger cooperatives. The significantly larger sales per employee for those in the smaller asset groups reflects the inclusion of bargaining cooperatives.

Assets per employee varied as cooperative size increased in all years. However, the range was significantly smaller than the sales per employee for the given asset categories. This would be expected because bargaining cooperatives were included. Assets per employee ranged from \$111,000 to \$198,000 in 1981, \$82,000 to \$403,000 in 1986, and \$107,000 to \$470,000 in 1991.

The sales-to-assets ratio decreased as cooperative size increased in every year. However, the ratio changed little by asset categories except for the smallest cooperative group.

Figure 9—Sales Per Full-Time Employee of Selected Primarily Farm Supply Cooperatives

Assets (million dol.)

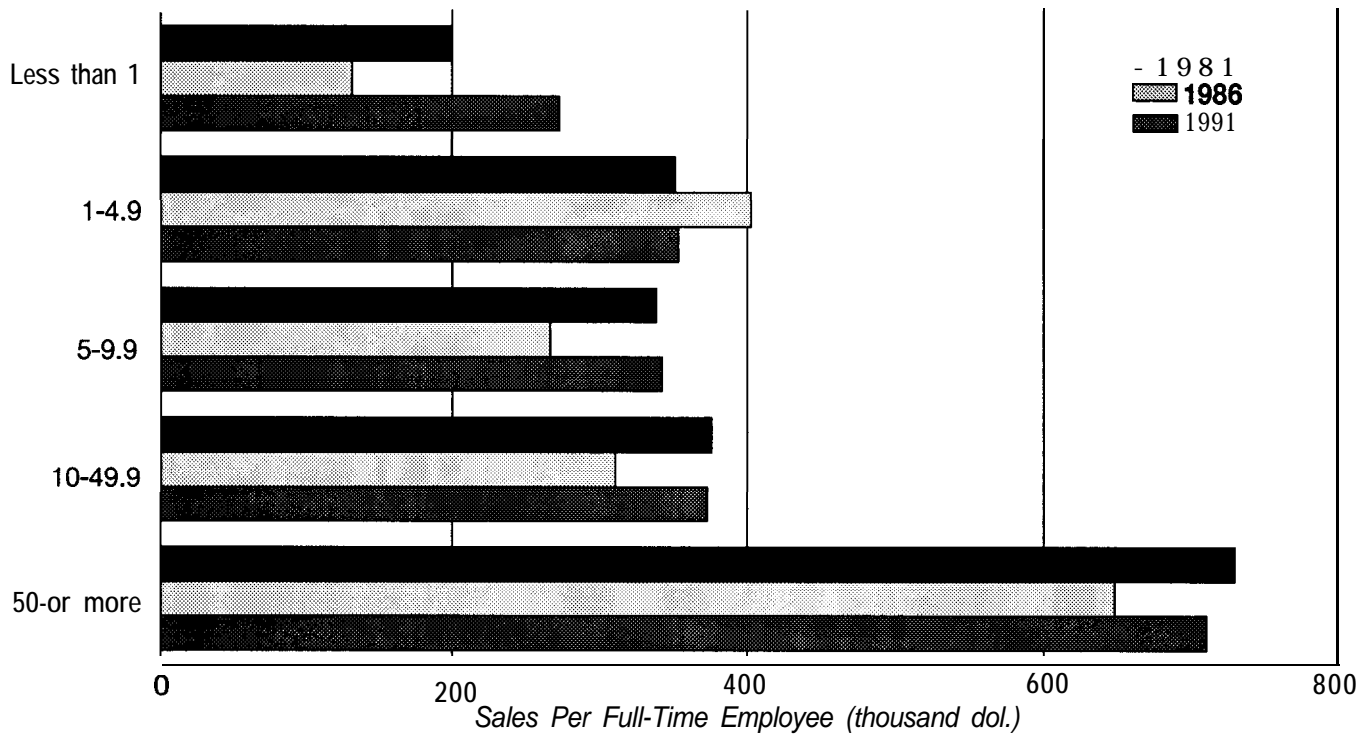


Figure 1 O—Sales Per Full-Time Employee of Selected Majority Farm Supply Cooperatives

Assets (million dol.)

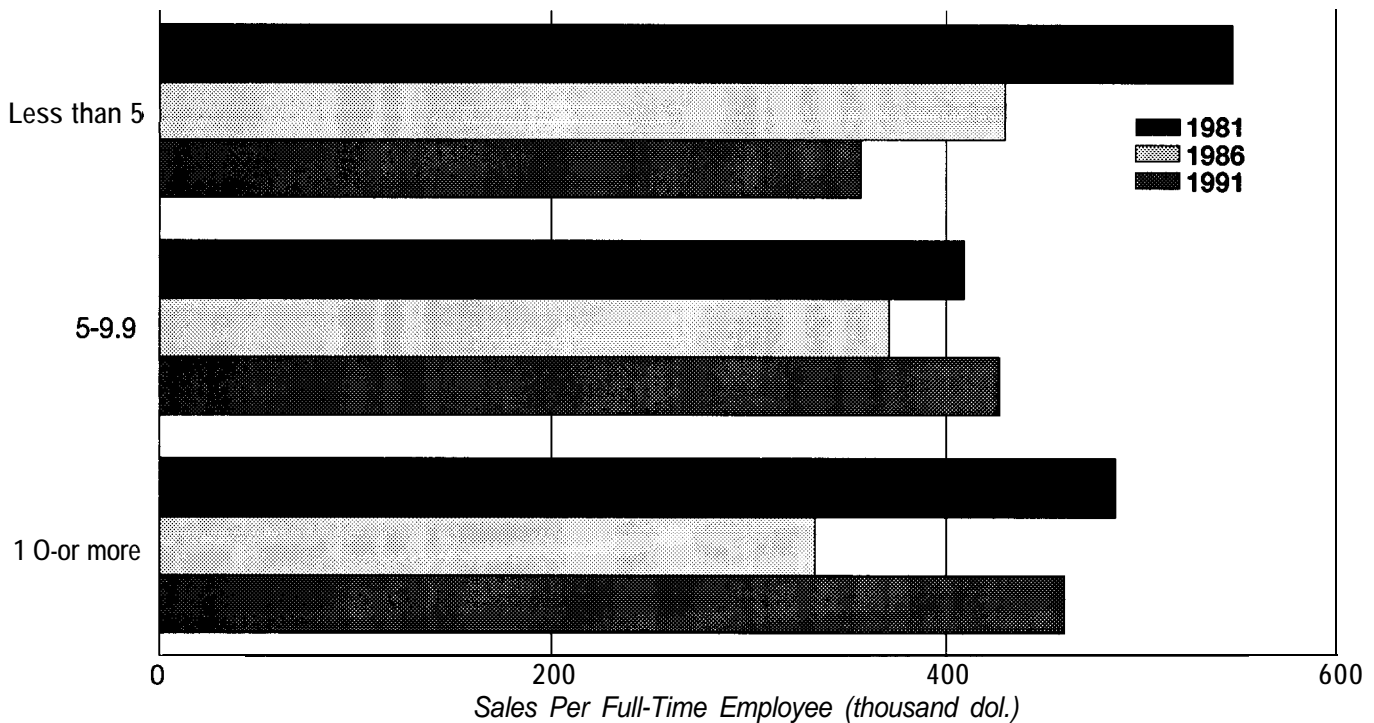


Table 11 -Selected majority farm supply cooperatives by size of total assets ¹

Year	Total assets (Million \$) ²			Total
	Less than 5	5 - 9.9	10 or more	
Number of Cooperatives				
1981, 1986, and 1991	10	12	14	36
Number of Full-Time Employees				
1981	215	625	3,182	4,022
1986	158	509	2,317	2,984
1991	184	527	2,407	3,118
Number of Full-Time Employees Per Cooperative				
1981	21.5	52.1	227.3	111.7
1986	15.8	42.4	165.5	82.9
1991	18.4	43.9	171.9	86.6
Sales Per Full-Time Employee (\$1,000)				
1981	546	409	486	477
1986	430	371	334	373
1991	357	427	460	420
Assets Per Full-Time Employee (\$1,000)				
1981	130	126	167	143
1986	135	134	161	145
1991	134	157	193	165
Sales-to-Assets Ratio				
1981	4.10	3.47	2.97	3.45
1986	3.30	2.88	2.35	2.79
1991	2.70	2.75	2.50	2.64

¹ Represents cooperatives that provided information on number of full-time employees, sales, and assets all 3 years and whose farm supply sales were from 50 to 75 percent of combined grain and farm supply sales.

² Based on total assets reported for 1991. Assets in categories of two or less cooperatives were combined to avoid disclosure.

Livestock/Wool/Poultry Cooperatives

Of the 29 livestock/wool/poultry cooperatives, 20 were classified as livestock, 4 as wool, and 5 as poultry cooperatives. They were combined to avoid disclosure of any one cooperative. Several livestock and wool cooperatives were small-total assets less than \$1 million. The eight largest livestock/wool/poultry cooperatives had 95 percent of the employees and 1991 assets of \$10 million or more (table 13). A number of the wool and livestock cooperatives marketed a relatively large dollar volume with few employees as shown by the high sales per employee. This was especially true for livestock cooperatives in the asset category of \$5 million to \$9.9 million.

Assets per employee ranged from \$39,000 to \$452,000 in 1981 and from \$117,000 to \$271,000 in 1991. Assets of many smaller cooperatives were relatively small, so their sales-to-assets ratios were relatively high. Cooperatives with 1991 assets of \$5 million to \$9.9 million had the highest ratios.

Rice Cooperatives

Three of the six rice cooperatives had 1991 assets of less than \$1 million, one had 1991 assets in the range of \$1 million to \$5 million, and two had assets exceeding \$10 million. Consequently, two of the three cooperatives grouped with assets of \$1 million or more were fairly large (table 14).

The three largest rice cooperatives accounted for most employees. From 1981 to 1986, employee numbers declined in both groups. However, from 1986 to 1991, the smaller rice cooperatives increased their number of employees while larger cooperatives reduced them. In fact, the three largest cooperatives decreased employees by 208. From 1981 to 1991, one of the larger cooperatives sold off assets while another purchased additional assets.

Sales per employee were significantly larger for the smaller cooperatives than the larger ones. The smaller cooperatives were basically merchandisers and not involved in processing. The larger cooperatives do market and their sales per employee were significantly lower.

Assets per employee were higher for the larger cooperatives. From 1981-91, assets per employee for the smallest cooperatives decreased but varied for the largest cooperatives.

The sales-to-assets ratio was significantly higher for smaller cooperatives because of the nature of their business and use of relatively few employees. The sales-to-assets ratios were the lowest in 1986.

Sugar Cooperatives

Nine sugar cooperatives were grouped according to whether their 1991 assets were above or below the \$50 million mark (table 15). In the smaller grouping, two sugar bargaining cooperatives had 1991 assets of less than \$1 million and two cooperatives had 1991 assets in the range of \$10 million to \$50 million.

Figure 1 1-Sales Per Full-Time Employee of Selected Fruit and Vegetable Cooperatives

Assets (million dol.)

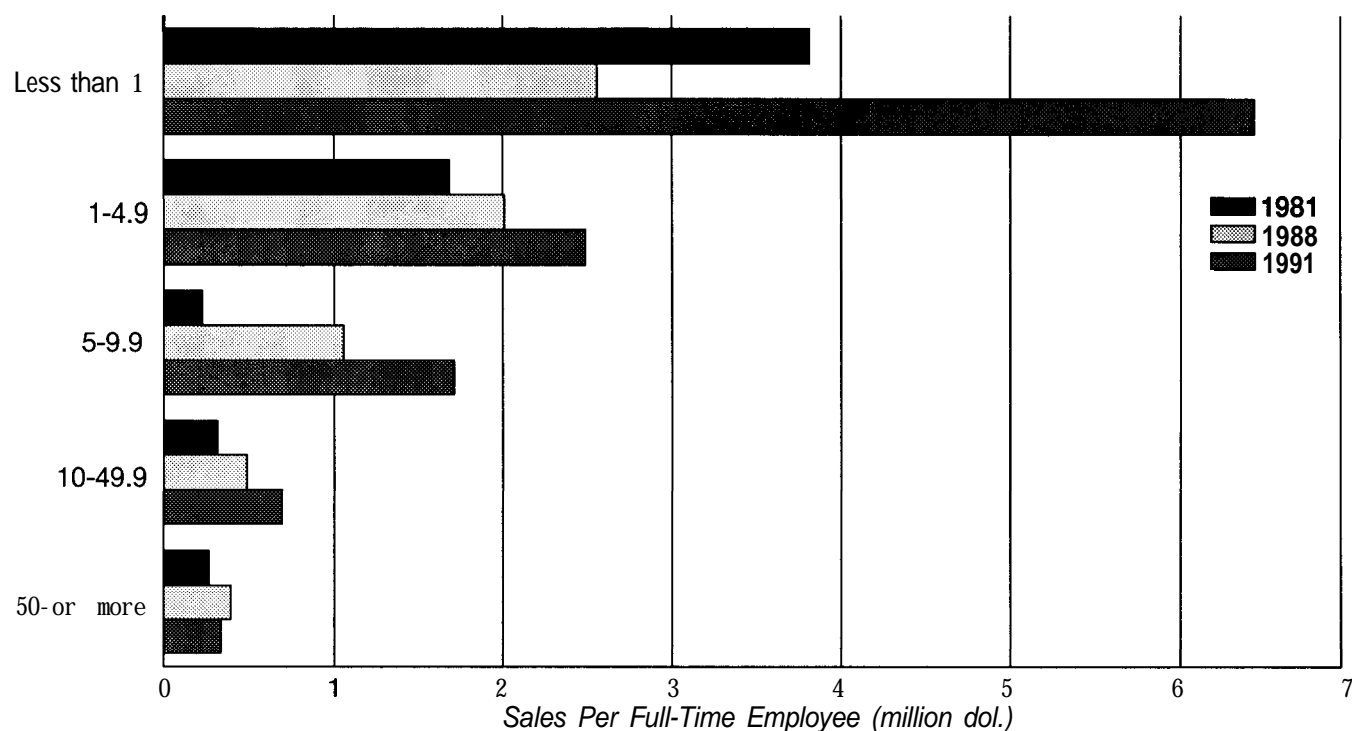


Table 12—Selected fruit and vegetable cooperatives by size of total assets ¹

Year	Total assets (Million \$) ²					Total
	Less than 1	1 - 4.9	5 - 9.9	10 - 49.9	50 or more	
Number of Cooperatives						
1981, 1986, and 1991	11	7	5	16	13	52
Number of Full-Time Employees						
1981	58	183	444	2,520	10,187	13,304
1986		74	103	2,251	9,929	12,424
1991	38		89	2,242	16,824	19,267
Number of Full-Time Employees Per Cooperative						
1981	5.3	17.4	88.8	157.5	783.6	255.8
1986	3.5	11.9	20.6	140.7	763.8	238.9
1991		10.6	17.8	140.1	1,294.2	370.5
Sales Per Full-Time Employee (\$1,000)						
1981	3,821	1,692	227	317	267	1,222
1986	2,566	2,016	1,063	491	397	1,167
1991	6,441	2,495	1,719	700	337	2,163
Assets Per Full-Time Employee (\$1,000)						
1981			182	122	198	153
1986	182	482	286	182	234	213
1991	107	326	470	263	170	235
Sales-to-Assets Ratio						
1981	596.22	8.23	2.81	2.52	1.63	128.68
1986	101.03	7.16	2.86	2.59	1.79	23.85
1991	44.94	7.34	2.71	2.37	1.98	11.98

¹Represents cooperatives that provided information on number of full-time employees, sales, and assets all 3 years.

²Based on total assets reported for 1991. Assets in categories of two or less cooperatives were combined to avoid disclosure.

Table 13—Selected livestock/wool/poultry cooperatives by size of total assets ¹

Year	Total assets (Million \$) ²				Total
	Less than 1	1 - 4.9	5 - 9.9	10 or more	
Number of Cooperatives					
1981, 1986, and 1991	10	7	4	8	29
Number of Full-Time Employees					
1981	39	139	328	10,823	11,367
1986		124	325	10,247	10,735
1991	23	107	361	10,072	10,563
Number of Full-Time Employees Per Cooperative					
1981	3.9	19.9	82.0	1,352.9	392.0
1986	---	17.7	81.3	1,280.9	370.2
1991	2.3	15.3	90.3	1,259.0	364.2
Sales Per Full-Time Employee (\$1,000)					
1981	1,396	1,803	5,786	1,748	2,197
1986	1,749	1,887	6,693	2,276	2,609
1991	2,962	2,409	4,537	998	2,504
Assets Per Full-Time Employee (\$1,000)					
1981	39	95	452	205	155
1986	129	132	128	400	204
1991	117	147	271	173	161
Sales-to-Assets Ratio					
1981	38.72	31.40	74.58	11.00	34.27
1986	34.71	15.28	51.32	8.50	25.07
1991	18.76	16.21	29.62	5.13	15.86

¹Represents cooperatives that provided information on number of full-time employees, sales, and assets all 3 years.

²Based on total assets reported for 1991. Assets in categories of two or less cooperatives were combined to avoid disclosure.

The larger group had at least 89 percent of all employees each year. Both groups, however, decreased employee numbers over time. The larger group decreased its employees by 185 from 1981 to 1986 and by 894 from 1986 to 1991. The smaller cooperatives reduced employees by 95 from 1981 to 1986 and maintained about the same number from 1986 to 1991.

Sales per employee were significantly higher for smaller cooperatives, partly because the dollar volume of bargained commodities was included. Sales per employee for the larger cooperatives ranged from \$294,000 in 1981 to \$438,000 in 1986. Sales per employee for both groups was highest in 1986. This was unusual in comparison with the decreased sales per employee shown by other types of cooperatives.

The sales-to-assets ratio dropped over the years for the smaller cooperatives, but increased for the larger ones. However, the ratio for the larger cooperatives was low compared with other types of cooperatives.

Tobacco Cooperatives

Seven tobacco cooperatives were among the selected cooperatives for 1991 (table 16). Four had assets of less than \$1 million, one was in the \$1 million to \$5 million range, another between \$5 million and \$10 million, and one had more than \$50 million. The others were grouped to avoid disclosure.

In 1981, the larger cooperatives had more than nine times the number of employees than the smaller ones, declining to more than seven times in 1991.

Sales per employee varied over the years for cooperatives in both size groupings. The large sales figures per employee in both groups resulted from the nature of the cooperative tobacco business. Stabilization cooperatives borrow money from the Federal Government to purchase tobacco from member producers. Other cooperatives operate warehouses to store tobacco if it doesn't sell at or above the Federal price support.

Table 14—Selected rice cooperatives by size of total assets ¹

Year	Total assets (Million \$) ²		Total
	Less than 1	1 or more	
Number of Cooperatives			
1981, 1986, and 1991	3	3	6
Number of Full-Time Employees			
1981	15	833	848
1986	13	816	829
1991	17	608	625
Number of Full-Time Employees Per Cooperative			
1981	5.0	277.7	141.3
1986	2.6	272.0	138.2
1991	5.7	202.7	104.2
Sales Per Full-Time Employee (\$1,000)			
1981	5,329	754	3,042
1986	2,235	274	1,255
1991	3,268	464	1,866
Assets Per Full-Time Employee (\$1,000)			
1981	230	370	300
1986	133	167	150
1991	84	207	145
Sales-to-Assets Ratio			
1981	108.94	2.60	55.77
1986	48.84	1.83	25.34
1991	62.22	2.25	32.23

¹Represents cooperatives that provided information on number of full-time employees, sales, and assets all 3 years.

²Based on total assets reported for 1991. Assets in categories of two or less cooperatives were combined to avoid disclosure.

Assets per employee increased in 1986 and in 1991 for both groups. Part of the assets could include the value of tobacco in inventory, especially for 1991.

The sales-to-assets ratio was lower in 1986 than in 1981 and 1991 for cooperatives in both groups. However, the ratio was relatively high for both groups compared with other types of cooperatives due to the nature of the tobacco business.

Service Cooperatives

Thirteen service cooperatives, excluding cotton gins, were included in the study. Although ACS includes cotton gins as service cooperatives, for this study cotton ginning cooperatives were classified separately.

Table 15—Selected sugar cooperatives by size of total assets ¹

Year	Total assets (Million \$) ²		Total
	Less than 50	50 or more	
Number of Cooperatives			
1981, 1986, and 1991	4	5	9
Number of Full-Time Employees			
1981	447	4,010	4,457
1986	352	3,825	4,177
1991	351	2,931	3,282
Number of Full-Time Employees Per Cooperative			
1981	111.8	802.0	495.2
1986	88.0	765.0	464.1
1991	87.8	586.2	364.7
Sales Per Full-Time Employee (\$1,000)			
1981	19,059	294	8,634
1986	24,965	438	11,338
1991	7,793	410	3,691
Assets Per Full-Time Employee (\$1,000)			
1981	166	227	200
1986	141	273	214
1991	169	241	209
Sales-to-Assets Ratio			
1981	181.39	1.43	81.41
1986	166.26	1.63	74.80
1991	56.00	1.68	25.82

¹Represents cooperatives that provided information on number of full-time employees, sales, and assets all 3 years.

²Based on total assets reported for 1991. Assets in categories of two or less cooperatives were combined to avoid disclosure.

These service cooperatives were relatively small. Seven had 1991 assets of less than \$1 million. Six were in the \$1 million to \$5 million range (table 17). The larger cooperatives had more than twice as many employees per cooperative as smaller ones. Employee numbers in the smaller cooperatives declined from 1986 to 1991. In the larger cooperatives, numbers were down in 1986 but up in 1991.

Sales per employee were low for smaller cooperatives but increased in 1986 and 1991. Among larger cooperatives in 1981 and 1986, these sales were \$8.8 million and \$4.5 million, respectively. However, assets per employee of \$160,000 in 1981 and \$249,000 in 1986 were not extremely high. Consequently, the sales-to-assets ratio was 60.83 in 1981, 12.80 in 1986, but only 3.45 in 1991.

Table 16—Selected tobacco cooperatives by size of total assets ¹

Year	Total assets (Million \$) ²		Total
	Less than 1	1 or more	
Number of Cooperatives			
1981, 1986, and 1991	4	3	7
Number of Full-Time Employees			
1981	10	92	102
1986	9	75	84
1991	9	65	74
Number of Full-Time Employees Per Cooperative			
1981	2.5	30.7	17.9
1986	2.3	25.0	12.0
1991	2.3	21.7	10.6
Sales Per Full-Time Employee (\$1,000)			
1981	3,289	3,348	3,314
1986	2,272	3,212	2,675
1991	3,729	5,473	4,476
Assets Per Full-Time Employee (\$1,000)			
1981	165	400	266
1986	186	642	381
1991	209	1,811	896
Sales-to-Assets Ratio			
1981	18.29	12.87	15.96
1986	12.91	6.85	10.31
1991	17.77	7.43	13.34

¹ Represents cooperatives that provided information on number of full-time employees, sales, and assets all 3 years.

² Based on total assets reported for 1991. Assets in categories of two or less cooperatives were combined to avoid disclosure.

Nut Cooperatives

Only three nut cooperatives were among the 509 cooperatives. Consequently, these cooperatives are not shown by size category. It is interesting to note, however, that the number of employees of the three nut cooperatives increased significantly from 1981 to 1986 (table 18).

Sales per employee increased from \$928,000 in 1981 to \$1.6 million in 1986 and to nearly \$2.7 million in 1991. On the other hand, assets per employee were about the same in 1986, but increased significantly in 1991. The sales-to-assets ratio was up in 1986, but down in 1991.

Table 17—Selected service cooperatives by size of assets ¹

Year	Total assets (Million \$) ²		Total
	Less than 1	1 - 4.9	
Number of Cooperatives			
1981, 1986, and 1991	7	6	13
Number of Full-Time Employees			
1981	35	67	102
1986	29	64	93
1991	25	75	100
Number of Full-Time Employees Per Cooperative			
1981	5.0	11.2	7.8
1986	4.1	10.7	7.2
1991	3.6	12.5	7.7
Sales Per Full-Time Employee (\$1,000)			
1981	86	8,813	4,114
1986	119	4,509	2,145
1991	132	155	143
Assets Per Full-Time Employee (\$1,000)			
1981	107	186	144
1986	109	290	192
1991	98	306	194
Sales-to-Assets Ratio			
1981	1.44	70.97	33.53
1986	1.59	14.94	7.75
1991	1.64	.74	1.23

¹ Represents cooperatives that provided information on number of full-time employees, sales, and assets all 3 years.

² Based on total assets reported for 1991. Assets in categories of two or less cooperatives were combined to avoid disclosure.

Dry Bean and Pea Cooperatives

The three dry bean and pea cooperatives nearly doubled their employees between 1981 and 1991 (table 18). Sales per employee from 1981 to 1991 varied, but assets per employee increased. The sales per employee and the sales-to-assets ratio were both lowest in 1986.

Miscellaneous Marketing Cooperatives

The three miscellaneous marketing cooperatives included in the study had 1991 assets ranging from less than \$1 million to those with \$10 million to \$49.9 million. Although the size of these cooperatives varied greatly, data were combined.

Table 18—Other selected cooperatives ¹

Type of co-op and number ()	Year	full-time employees		Sales per full-time employee	Assets per full-time employee	Sales to assets ratio
		Total	Per co-op			
		----- N u m b e r - -		- - - \$ 1 ,000-----		Number
Nut (3)	1981	788	262.7	928	752	1.79
	1986	1,941	647.0	1,631	748	8.26
	1991	1,753	584.3	2,655	1,868	4.91
Dry Bean and Pea (3)						
	1981	85	28.3	439	145	2.91
	1986	89	29.7	339	175	1.98
	1991	160	53.3	519	218	2.55
Miscellaneous Marketing (3)						
	1981	98	32.7	510	136	4.26
	1986	99	33.0	452	121	3.76
	1991	99	33.0	698	166	3.73
Cotton Gins (9)						
	1981	272	30.2	371	177	1.82
	1986	250	27.8	308	208	1.37
	1991	231	25.7	358	241	1.63

¹ Represents cooperatives that provided information on number of full-time employees, sales, and assets all 3 years.

The employee numbers were about the same all 3 years, but the two smaller cooperatives decreased employees while the largest cooperative increased its number.

Sales and assets per employee were down in 1986 but higher in 1991 than they were in 1981. Sales-to-assets ratio decreased from 4.26 in 1981 to 3.73 in 1991.

Cotton Ginning Cooperatives

Nine cotton ginning cooperatives in the study were grouped together. One had total assets of less than \$1 million in 1991; six were in the \$1 million to \$4.9 million range; another fell in the \$5 million to \$9.9 million group; and one had assets of \$10 million to \$49.9 million.

Employee numbers in these cotton ginning cooperatives decreased by 41 from 1981 to 1991. Employees per cooperative dropped from 30.2 in 1981 to 25.7 in 1991.

Sales per employee declined in 1986 but increased in 1991. Assets per employee, however, were up in both 1986 and 1991. This suggests these cooperatives reduced employees through use of more or improved technology.

Some Selected Cooperative Comparisons

Number of employees used by the selected cooperatives depends on the size and nature of their business and other factors. Some comparisons can be made by type of cooperative and size (total assets) where sufficient data were available.

Cooperatives with total assets of less than \$1 million in 1991 had employee numbers averaging 2.3 to 5.7 (table 19). Primarily farm supply and rice cooperatives averaged 5.7 employees.

Sales per employee of cooperatives with assets less than \$1 million ranged from \$132,000 in service cooperatives to \$6.4 million in fruit and vegetable cooperatives. Again, the high sales per employee in selected cooperatives came from activities associated with bargaining or other activities that used minimal assets.

Total assets per employee ranged from \$84,000 for rice cooperatives to \$215,000 for primarily grain cooperatives. The range in assets per employee was less extreme than for sales per employee.

Because of the wide range in sales per employee, the sales-to-assets ratio ranged from 1.64 for "other" cooperatives to 162.7 for dairy cooperatives.

Table 19—Some comparisons by type of cooperative and size of assets, 1991 ¹

Type of cooperative	Full-time employees per co-op	Sales per full-time employee	Assets per full-time employee	Sales to assets ratio
	Number	-----\$1,000-----		Number
Assets Less than \$1 Million				
Dairy	4.3	5,010	114	162.70
Primarily grain	3.0	968	215	5.47
Primarily farm supply	5.7	271	108	2.58
Fruit and vegetable	3.5	6,441	107	44.94
Livestock/wool/poultry	2.3	2,962	117	18.76
Rice	5.7	3,268	84	62.22
Tobacco	2.3	3,729	209	17.77
"Other"	3.6	132	98	1.64
Assets of \$1 Million to \$4.9 Million				
Dairy	13.9	2,319	292	7.06
Primarily grain	10.6	1,340	336	4.27
Majority grain	13.4	612	231	2.73
Primarily farm supply	20.9	352	152	2.47
Majority farm supply	18.4	357	134	2.70
Fruit and vegetable	10.6	2,495	326	7.34
Livestock/wool/poultry	15.3	2,409	147	16.21
"Other"	12.5	155	306	0.74
Assets of \$5 Million to \$9.9 Million				
Dairy	38.8	1,997	348	6.26
Primarily grain	22.4	1,256	398	3.27
Majority grain	33.5	648	239	2.87
Primarily farm supply	54.4	341	138	2.55
Majority farm supply	43.9	427	157	2.75
Fruit and vegetable	17.8	1,719	470	2.71
Livestock/wool/poultry	90.3	4,537	271	29.62

¹ Represents cooperatives that provided information on number of full-time employees, sales, and assets for 1981, 1986, and 1991.

Many cooperatives with assets of \$1 million to \$4.9 million had three to four times more employees than those with assets of less than \$1 million. The number of employees per cooperative with assets of \$1 million to \$4.9 million ranged from 10.6 (primarily grain and fruit and vegetable) to 20.9 (primarily farm supply). Farm supply cooperatives were more labor intensive than their grain marketing counterparts.

Average sales per employee ranged from \$155,000 for "other" cooperatives to nearly \$2.5 million for fruit and vegetable cooperatives. Of interest is the comparison of primarily grain with majority grain cooperatives and primarily farm supply with majority farm supply cooperatives. Average sales per employee of the primarily grain cooperatives were more than twice that of the majority grain cooperatives. But there was little difference between primarily and majority farm supply cooperatives.

Assets per employee of cooperatives at the \$1 million to \$4.9 million level ranged from \$134,000 for majority farm supply cooperatives to \$336,000 for primarily grain cooperatives. Total assets per employee of the primarily grain cooperatives was nearly one-third larger than the average assets of the majority grain cooperatives. Primarily farm supply cooperatives' assets averaged \$18,000 higher than those of majority farm supply cooperatives.

The sales-to-assets ratios of cooperatives with assets of \$1 million to \$4.9 million ranged from 0.74 for "other" cooperatives to 16.21 for livestock/wool/poultry cooperatives. As expected, primarily grain cooperatives had a higher ratio than majority ones. The ratio for the majority farm supply cooperatives was 2.70 compared with 2.47 for the primarily farm supply cooperatives.

Cooperatives with assets of \$5 million to \$9.9 million had significantly more employees than those with \$1 million to \$4.9 million in assets. Employees ranged from 17.8 in fruit and vegetable cooperatives to 90.3 in livestock/wool/poultry cooperatives. Primarily farm supply cooperatives averaged 54.4 compared with 22.4 employees in primarily grain cooperatives.

Sales per employee were lowest in the primarily farm supply cooperatives and highest in the livestock/wool/poultry cooperatives. Sales per employee in the primarily grain cooperatives were nearly twice those in the majority grain cooperatives. The majority farm supply cooperatives had higher sales per employee than those in the primarily farm supply cooperatives.

Assets per employee of cooperatives in the \$5 million to \$9.9 million category ranged from \$138,000 for primarily farm supply cooperatives to \$470,000 for fruit and vegetable cooperatives. Grain cooperatives had higher assets per employee than farm supply cooperatives.

The sales-to-assets ratio for cooperatives with assets of \$5 million to \$9.9 million ranged from 2.55 for primarily farm supply cooperatives to 29.62 for livestock/wool/poultry cooperatives. Dairy cooperatives had a ratio of 6.26.

SOME IMPLICATIONS

The total number of employees of farmer cooperatives increased from the late 1950s to the early 1980s, but has been declining since then. The sharp decrease was directly related to the agricultural recession in the mid-1980s. Employee numbers in farmer cooperatives probably peaked in the early 1980s.

Given the trend toward declining numbers of cooperatives but larger surviving operations, there will be a need for more full- and part-time employees per cooperative plus skilled managers to guide larger organizations.

In most cases, sales per employee as well as the sales-to-assets ratio decreased as cooperative size increased. Cooperative leaders need to examine how, or if, they can improve these measures as the size of cooperatives grows.

Cooperatives should examine how well their cooperatives are performing in comparison with other cooperatives of similar type and size. Although this study did not include part-time employees or the net income of cooperatives, it does show some changes and trends that should be considered in planning for the future.

Appendix

Appendix Table 1—All selected cooperatives by size of total assets ¹

Year	<i>Total assets (Million \$)</i> ²					Total
	Less than 1	1 - 4.9	5 - 9.9	10- 49.9	500rmore	
Number of Cooperatives						
1981, 1986, and 1991	72	148	100	132	57	509
Number of Full-Time Employees						
1981	414	2,503	4,082	13,495	66,283	86,777
1986	356	2,246	3,430	14,252	60,589	80,873
1991	291	2,310	3,794	14,613	65,250	86,258
Number of Full-Time Employees Per Cooperative						
1981	5.8	16.9	40.8	102.2	1,162.9	170.5
1986	4.9	15.2	34.3	108.0	1,063.0	158.9
1991	4.0	15.6	37.9	110.7	1,144.7	169.5
Sales Per Full-Time Employee (\$1,000)						
1981	3,609	1,219	1,098	885	1,065	1,429
1986	2,817	1,050	948	735	623	1,150
1991	3,233	995	1,052	885	875	1,281
Assets Per Full-Time Employee (\$1,000)						
1981	149	172	234	227	325	212
1986	116	238	229	236	318	227
1991	128	230	271	277	398	254
Sales-to-Assets Ratio						
1981	132.14	8.87	6.75	4.12	3.31	24.03
1986	42.81	5.08	4.83	3.07	2.66	9.58
1991	44.53	4.23	4.20	3.15	3.06	9.51

¹ Represents 509 cooperatives that provided information on number of full-time employees, sales, and assets all 3 years.

² Based on total assets reported for 1991. Assets in categories of two or less cooperatives were combined to avoid disclosure.

**U.S. Department of Agriculture
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