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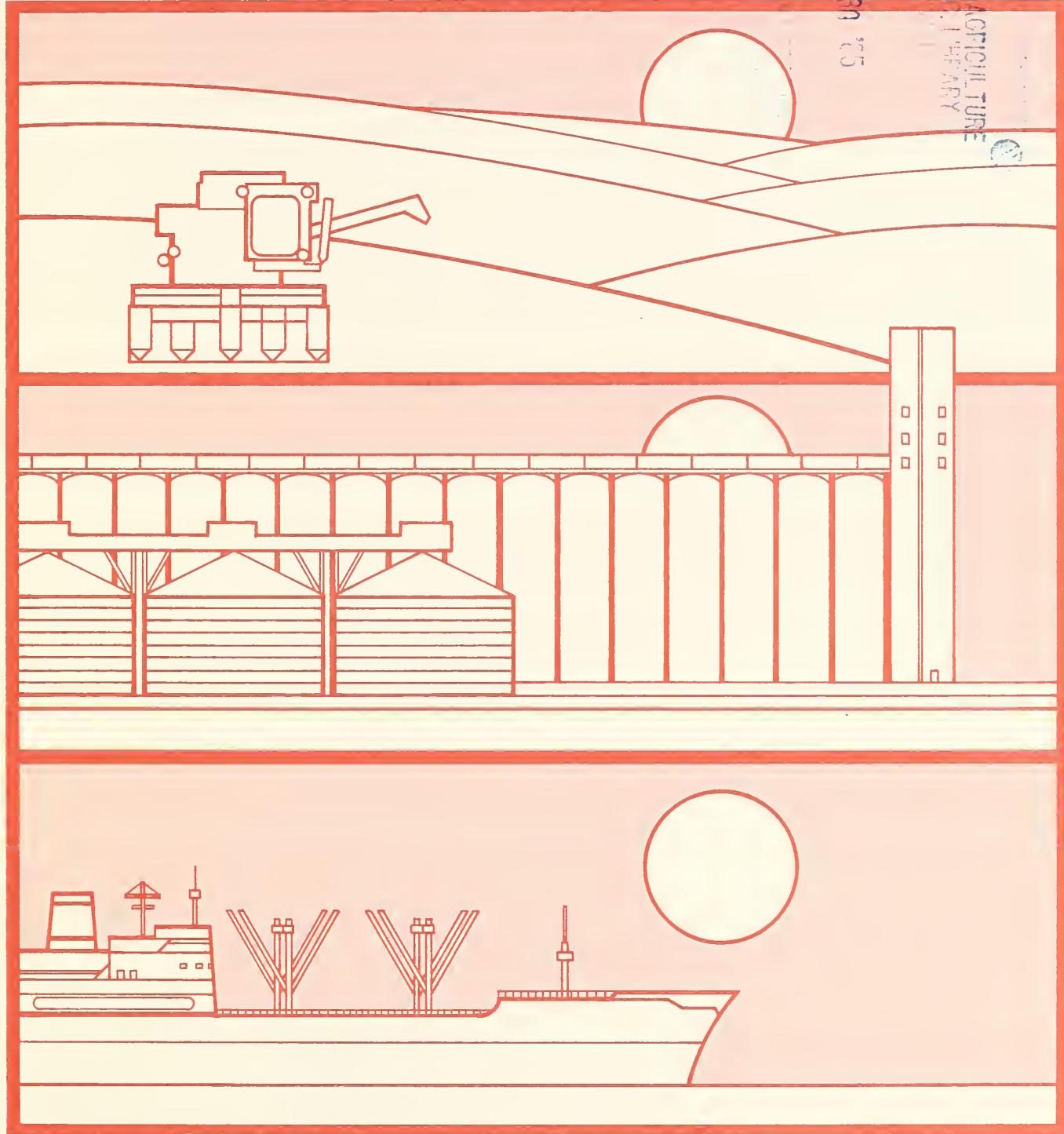
Agricultural
Cooperative
Service

ACS
Research Report
Number 37

Growth and Trends in Cooperative Operations, 1951-81

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**Growth and Trends in Cooperative
Operations, 1951-81**
Lloyd Biser and Lyden O'Day

Abstract

Thirty years ago, about 10,000 cooperative associations marketed farm products and sold farm supplies worth \$10 billion. By 1981, sales volume from 6,200 cooperatives had reached \$71 billion, \$53 billion from marketing farm products, \$17 billion from farm supplies, and \$1 billion from services. Cooperative share of market increased from 20 percent in 1951 to 30 percent in 1981. During this 30-year period, cooperative marketing grew at a 19-percent annual rate while total farm marketings increased at an 11-percent annual rate. Cooperatives sold 12 percent of production supplies to farmers in 1951 and increased their share of the market to 20 percent by 1981. Cooperative growth increased during this period at a 26-percent annual rate while cash expenditures for production supplies increased at a 15-percent annual rate. Measured in sales volume, annual growth, or market share, cooperative performance over the period proved effective for farmers.

Key Words: Product marketing,
production supplies, market share,
cooperative growth.

Preface

Farmer cooperative statistics are compiled annually to provide information on progress and trends in growth and development. Total dollar volumes were broadly grouped according to the major activity of each association while membership and business were credited to the States in which the headquarters were located. Receipts from rent, interest, and similar revenue from other than marketing or supply operations were included in total dollar volume of each association.

The 1950-51 survey was the first to collect and identify commodities handled and services performed by farmer cooperatives in multistate areas. Membership is allocated to the State in which the member is located and business is credited to the State in which the patron resides. Only receipts from marketing farm products, selling farm supplies, or performing service operations related to marketing are included in total dollar volume of each association.

A previous report, *Cooperative Growth, 1951 through 1970*, FCS Information 87, by Martin A. Abrahamson, March 1973, dealt with trends, comparisons, and strategy of total cooperative operations from 1951 through 1970. It also analyzed functional types of cooperatives to show relative increases in net cooperative business and percentage distribution of marketing, supply, and service activities, changes in number of cooperatives and cooperative memberships, selected industrywide comparisons, industrial companies, and elements to develop strategy for cooperative growth.

This report offers basic information on cooperative marketings and supply sales at the national, regional, and State levels. Total cooperative marketings and cooperative supply sales are compared with total farm marketings and total production expenditures in State and region to determine a cooperative's performance. In another section, cooperative marketing sales are scaled down to represent cooperative payments to farmers and compared with farm cash receipts to determine cooperative share of farm commodities marketed. Similarly, cooperative supply sales to farmers are compared with farm production expense to determine cooperative share of the farm supply market. Cooperative activities in States and regions are presented in more detail for 1951 and 1981 to measure growth and effective operations at those levels.

Gross cooperative sales are reported by cooperatives to ACS. Intercooperative sales and/or duplications are eliminated to determine net cooperative sales. Commodities purchased by cooperatives from sources other than farmers are deducted from sales. Added value from product change and marketing costs are deducted to determine cooperative payments to farmers. Thus, cooperative payments to farmers, after these deductions from cooperative sales are compared with cash receipts to farmers for all farm marketings. They provide a basis for determining cooperatives' share of market, referred to in the report as market share.

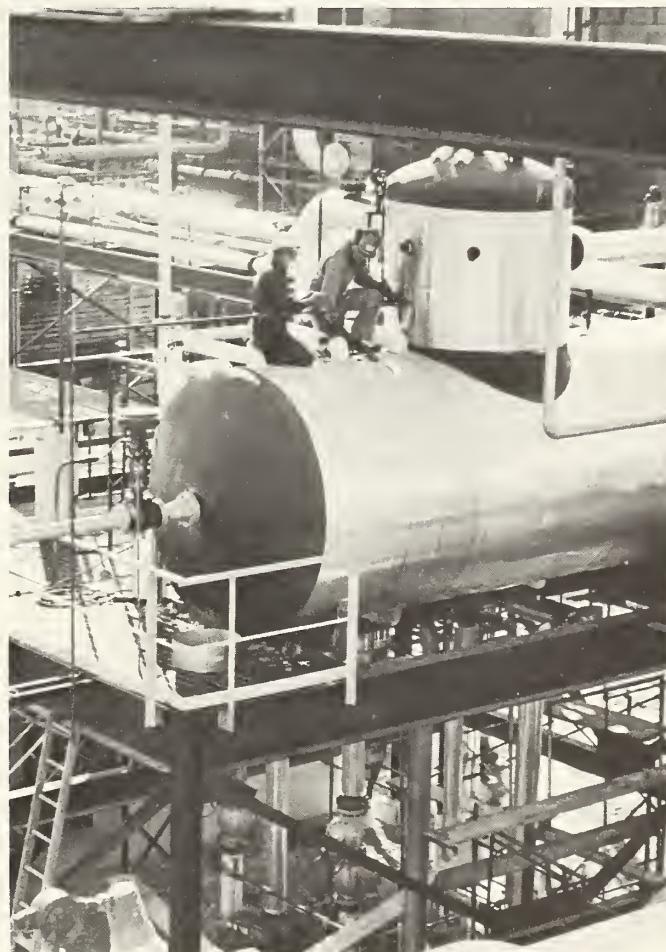
Cooperative supply sales include sales both to farmers and nonfarmers. Nonfarmer sales are deducted from supply sales to determine cooperative supply sales to farmers. These sales are then compared with total farm production expenditures to determine cooperatives' market share of supply sales.

Objective information is needed by cooperative leaders, teachers of cooperation in universities and other colleges, Federal and State policymakers, and supporters and researchers. With this information they can analyze and evaluate strengths and weaknesses in cooperative operations and suggest improvements.



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Highlights

In 1951, about 10,000 cooperative associations marketed farm products and sold production supplies to farmers. About 60 percent of the 6,000 marketing associations also handled farm supplies and about 20 percent of the 4,000 supply associations marketed farm products in 1951. Their combined business volume of \$8.7 billion came from services to more than 7 million farmer memberships. By 1981, net sales of 6,200 cooperatives reached \$69.3 billion.

Cooperative payments to farmers (after operating costs) were \$6.4 billion in 1951 and rose to \$42.3 billion in 1981. This rise amounted to an annual growth rate of 19 percent, while cash receipts for all farm marketings grew at an annual rate of 11 percent.

Cooperative net sales of production supplies to farmers increased from \$1.6 billion in 1951 to \$14.3 billion in 1981 for an annual growth rate of 26 percent. Total farm production expenditures increased from \$12.9 billion to \$71.7 billion for an annual growth rate of 15 percent. It showed that farmers substantially increased their use of cooperatives for purchasing supplies.

High dollar volume increases in cooperative sales and cash receipts from farm marketings reflect inflationary prices of the period. Cooperative sales of grains and soybeans jumped from \$3.7 billion in 1971 to \$19.8 billion in 1981 and helped raise cooperative market share to 30 percent. Total farm production expenditures increased nearly three times, while cooperative sales of production supplies increased almost four times. This increase brought the cooperative share of production supply sales to 20 percent in 1981.

In 1951, 52 percent of cooperative marketings came from 12 States in the East and West North Central regions. By 1981, cooperatives in the two regions accounted for 57 percent of all cooperative marketings. In the Southeast, cooperative marketing increased from 6 percent to 7 percent, held even in the South Central at 11 percent, fell from 10 percent to 6 percent in the Northeast, and from 21 percent to 19 percent in the Western region.

- Cooperative marketing growth was greatest in the West North Central region where grains and soybeans accounted for 62 percent of total cooperative marketings in 1981—up from 43 percent in 1951.

- Grains, soybeans, and milk accounted for 80 percent of cooperative marketings in 1981—up from 52 percent in 1951.

- Milk accounted for 71 percent in 1951 and 73 percent of total cooperative marketings in the Northeast in 1981, while fruits and vegetables increased from 10 percent to 19 percent.

- Poultry made up 11 percent of cooperative marketings in the Northeast in 1951 and fell to 2 percent in 1981 in the shift of poultry production to the South.

- Cotton made up 32 percent of cooperative marketings in the South Central region in 1951 and fell to 15 percent in 1981 in the shift of cotton production to the Western region.

- Farmers in Vermont marketed 45 percent of their products through cooperatives in 1951; in Massachusetts and North Dakota, 40 percent; in Minnesota, 36 percent; and in Wisconsin, 34 percent.

- By 1981, cooperatives marketed 52 percent of farm products in both Vermont and Massachusetts, 50 percent in Minnesota, 48 percent in Wisconsin, 45 percent in Ohio, and 43 percent in Iowa.

Cooperative sales of production supplies in 1951 amounted to \$1.8 billion or 14 percent of the total supplies. Feed made up 44 percent of total sales, petroleum 20 percent, supplies 13 percent, fertilizer 10 percent, equipment 7

percent, seed 5 percent, and farm chemicals 1 percent.

By 1981, supply sales to farmers increased to \$14.3 or 20 percent of total production expenditures. Cooperative market share for feed held about even at 18 percent. Petroleum nearly doubled from 19 percent in 1951 to 35 percent in 1981. Fertilizer more than doubled from 16 percent to 36 percent in 1981. Cooperative chemical sales jumped from \$22 million in 1951 to \$1.2 billion in 1981, tripling in market share from 11 percent in 1951 to 34 percent in 1981.

Trends in cooperative supply sales generally followed trends in total cash expenditures for production items. Percent of cash expenditures increased at a slower rate in the Northeast, East North Central, and Western regions from 1951 to 1981 as did the percent of cooperative supply sales. Percent of cash expenditures increased in the West North Central and South Central regions and percent of cooperative sales also increased. Only in the Southeast did farm expenditures increase faster than cooperative supply sales.

- Substantial increases in supply sales in Iowa and Minnesota led the West North Central region to account for 36 percent of total cooperative supply sales in 1981.
- Cooperative sales of petroleum and fertilizer in 1981 exceeded feed sales, which led in 1951.
- Petroleum sales of 44 percent in the Northeast and 31 percent in the Western region helped make petroleum the leading production item sold by cooperatives in 1981.
- Supply sales in the East and West North Central regions accounted for 49 percent of cooperative supply sales in 1981.
- Seven of eight States in the South Central region doubled their market share from 1951 to 1981 and led the region to the highest rate of growth.
- Highest market shares in New York, New Hampshire, and Massachusetts (more than 50-percent share) led the Northeast region to highest market share of 26 percent in 1951 and 41 percent in 1981.
- West North Central region cooperatives were first in supply volume, but second to Northeast cooperatives in market share, and second to South Central cooperatives in rate of growth in 1981.

Cooperatives marketed one-third of total farm products and sold one-fifth of production supplies to farmers in 1981. They reached this performance level by increasing marketing volume at twice the annual rate of the competition, 22 percent annually from 1951 to 1981, while total farm marketings were increasing 11 percent annually. They increased sales of production supplies at nearly twice the annual rate of the competition, 28 percent to 15 percent annually. While they stumbled here and there, cooperative performance over the period proved effective for farmer impact in the marketplace.



Growth and Trends in Cooperative Operations, 1951-81

Lloyd C. Biser and Lyden C. O'Day

Agricultural Economists

COOPERATIVE PERFORMANCE

Cooperative performance is discussed in terms of measuring cooperative operations with total marketing and supply operations of farmers. Net cooperative marketing sales (after intercooperative sales have been eliminated) are compared with receipts from all farm marketing in discussing regional and State activities. Average annual rate of growth¹ for cooperatives as well as that for total marketing is compared. Market share, as used in this report, is more a performance standard than a precise measurement. It is, however, as accurate as data will permit, because cooperative marketing sales are adjusted downward to cooperative payments to farmers for products marketed and compared with total cash receipts received by farmers for all products marketed.

The downward adjustment of net cooperative marketing sales to cooperative payments to farmers includes deductions for cooperative marketing and operating costs and value added in the handling and sale of products. Thus, cooperative payments to farmers for products marketed can be compared directly with cash receipts received by all farmers. The percentage share of farm products marketed by

cooperatives on this basis indicates a cooperative standard of performance in any time period.

Likewise, cooperative sales of farm supplies to both farmers and nonfarmers are compared with production expenditures in discussing regional and State activities. But in discussing the cooperative share of the farm supply market, cooperative sales to nonfarmers are excluded. From total farm expenditures, capital or nonsupply items (such as livestock, taxes, interest, labor, and services) are also excluded. Thus, cooperative supply sales to farmers can be compared with farm production expenditures to determine the cooperative share of farm supplies sold to farmers.

Cooperative Growth Summary, 1951-81

In 1931, less than 3 million farmers patronized about 12,000 cooperatives with a gross business volume of \$2.5 billion. By 1951, about 6,000 cooperatives marketed farmers' products and about 4,000 handled supplies and services. About 6 million members patronized cooperatives with a gross business volume of more than \$10 billion.

In 1951, about 60 percent of all associations that marketed farm products also handled farm supplies and about 20 percent of farm supply cooperatives marketed farm products.

¹Average annual rate of growth was used rather than compounded rate as commodity and supply growth relationships showed in better proportion to real growth.

Gross volume and supplies purchased in 1951 was \$10 billion and included business transactions among cooperatives. Net volume of \$8 billion represented the business done with farmers.

Of the 6,000 associations marketing farm products in 1951, milk and dairy products accounted for \$1.9 billion, livestock and products for \$1.4 billion, grains and soybeans for \$1.4 billion, fruits and vegetables for \$700 million, and all other products for about \$1.5 billion.

Marketing

From cooperatives' net sales of \$6.9 billion in 1951, cooperatives paid farmers \$6.4 billion for the products they marketed. By 1981, cooperatives' net sales had increased to \$52.4 billion from which cooperatives paid farmers \$42.3 billion for products marketed (table 1). The increase in cooperative payments to farmers from \$6.4 billion in 1951 to \$42.3 billion in 1981 equaled an annual growth rate of 19 percent over the 30-year period (table 1).

On the other hand, total cash receipts to farmers for all products marketed amounted to \$32.4 billion in 1951 and \$143.4 billion in 1981 (table 2). Thus, total cash receipts to all farmers increased 11 percent annually while cooperative payments to farmer-members increased 19 percent annually over the period.

Farm Supplies

Cooperative net sales of farm production supplies increased from \$1.8 billion in 1951 to \$16.9 billion in 1981. After deducting sales to nonfarmers, cooperative sales to farmers increased from \$1.6 billion in 1951 to \$14.3 billion in 1981. Over this period, cooperative sales to farmers of farm production supplies increased from 12 percent in 1951 to 20 percent of the farm production supply market in 1981.

Table 1—Trend in cooperative payments to farmers for products marketed, 1951-81

Farm products	Paid to farmers				Annual growth
	1951	1961	1971	1981	
- - - - - Million dollars - - - - -					
Grain and soybeans	1,425.9	2,048.1	3,504.7	14,826.5	31
Milk and products	1,943.7	2,864.8	4,747.1	12,944.5	19
Livestock products	1,443.8	1,418.8	2,147.4	4,969.5	8
Fruits and vegetables	551.5	709.4	1,218.2	3,282.0	17
Cotton and products	297.7	488.0	368.2	1,352.0	12
Sugar crops	103.1	203.9	383.9	986.5	29
Poultry and eggs	233.6	304.8	414.4	833.3	9
Special crops	402.6	454.6	1,001.3	3,136.9	23
Total	6,401.9	8,492.4	13,785.2	42,331.2	19

Table 2—Trend in cash receipts to farmers, 1951-81

Farm products	Total cash receipts				Annual growth
	1951	1961	1971	1981	
- - - - - Million dollars - - - - -					
Grain and soybeans	4,132.5	6,301.4	10,174.8	39,792.2	29
Milk and products	4,249.9	4,911.4	6,795.7	18,104.2	11
Livestock products	11,458.7	11,250.9	20,089.3	40,730.0	9
Fruits and vegetables	2,729.5	3,180.3	4,858.0	13,338.6	13
Cotton and products	2,861.8	2,511.1	7,488.5	4,552.2	2
Sugar crops	174.8	356.4	596.6	1,850.0	32
Poultry and eggs	3,549.0	3,237.0	3,952.9	9,646.6	6
Special crops	3,290.4	3,584.9	4,717.6	15,409.0	12
Total	32,446.6	35,333.4	52,673.4	143,422.8	11

Table 3—Trend in cooperative sales of farm production supplies to farmers, 1951-81

Farm supplies	Sales to farmers				Annual growth
	1951	1961	1971	1981	
- - - - - Million dollars - - - - -					
Feed	739.2	904.2	1,362.8	3,424.7	12.3
Fertilizer	166.9	340.9	793.5	3,639.5	69.4
Petroleum	234.5	374.9	603.9	3,274.7	43.2
Chemicals	22.7	58.8	215.2	1,262.3 ³	182.0
Equipment ¹	116.9	159.7	292.1	784.3	19.0
Field seeds	92.1	101.3	164.5	574.8	17.5
Supplies ²	246.7	239.1	566.1	1,317.7	14.5
Total	1,619.0	2,208.9	3,998.1	14,278.0	26.1

¹Includes hardware, farmstead, and light farm equipment.

²Includes building supplies, containers, and miscellaneous items.

³Unusual rate of growth due to low chemical sales of cooperatives in 1951 compared to very high sales in 1981.

Table 4—Total farm expenditures for production supplies, 1951-81

Farm supplies	Production expenditures				Annual growth
	1951	1961	1971	1981	
----- Million dollars -----					
Feed	4,144.3	4,963.2	8,049.5	18,904.6	12
Fertilizer	1,065.4	1,437.4	2,633.6	10,073.5	28
Petroleum	1,250.2	1,508.5	1,722.8	9,298.1	21
Chemicals	195.3	380.6	1,086.7	3,726.7	60
Equipment	2,835.5	3,452.3	5,024.7	12,607.0	11
Field seeds	551.5	645.1	1,072.2	3,956.0	21
Supplies	2,953.3	2,980.0	5,189.4	13,120.5	11
Total	12,995.5	15,367.1	24,778.9	71,676.4	15

Table 5—Receipts from cooperative marketing, total farm marketings, and share of market, 1951

Farm products	Marketing		Total cash receipts	Share of market
	Net sales	Paid to farmers		
----- Million dollars -----				
Grain and soybeans	1,485.4	1,425.9	4,132.5	34.5
Milk and products	2,067.8	1,943.7	4,249.9	45.7
Livestock products ¹	1,519.8	1,443.8	11,458.7	12.6
Fruits and vegetables	648.8	551.5	2,729.5	20.2
Cotton and products	350.2	297.7	2,861.8	10.4
Sugar crops	147.3	103.1	174.8	58.9
Poultry and eggs	292.0	233.6	3,549.0	6.6
Special crops ²	447.3	402.6	3,290.4	12.2
Total	6,958.6	6,401.9	32,446.6	19.7

¹Includes wool. ²Includes rice, tobacco, dry beans and peas, peanuts, and tree nuts.**Table 6—Receipts from cooperative marketing, total farm marketings, and share of market, 1961**

Farm products	Marketing		Total cash receipts	Share of market
	Net sales	Paid to farmers		
----- Million dollars -----				
Grain and soybeans	2,133.4	2,048.1	6,301.4	32.5
Milk and products	3,331.2	2,864.8	4,911.4	58.3
Livestock products ¹	1,493.5	1,418.8	11,250.9	12.6
Fruits and vegetables	971.8	709.4	3,180.3	22.3
Cotton and products	610.6	488.0	2,511.1	19.4
Sugar crops	291.3	203.9	356.4	57.2
Poultry and eggs	423.4	304.8	3,237.0	9.4
Special crops ²	534.8	454.6	3,584.9	12.7
Total	9,790.0	8,492.4	35,333.4	24.0

¹Includes wool. ²Includes rice, dry beans and peas, peanuts, tree nuts, tobacco, and other.

Feed was the leading item sold by cooperatives in 1951, but was second to fertilizer volume by 1981. Petroleum and chemicals were other heavy volume items in 1981, (table 3).

Total farm expenditures for production supplies increased from \$13 billion in 1951 to \$71.7 billion in 1981 (table 4). This was an increase in growth of 15 percent annually compared with 26 percent for cooperatives' sales of similar production supplies to farmers.

Cooperative Growth, 1951-61

Marketing

Total cash receipts to farmers for products marketed in 1951 were \$32.4 billion. Cooperatives paid farmers \$6.4 million for products marketed, which was equal to 20 percent of all farm products marketed for farmers in 1951 (table 5).

By 1961, the cooperative share of all products marketed had increased from 20 percent to 24 percent. The cooperative share of milk marketed increased to 58 percent, grain and soybeans fell slightly to 33 percent, and livestock held even at 13 percent for 1961 (table 6). The cooperative share of fruits and vegetables marketed increased to 22 percent while sugar crops fell slightly to 57 percent.

Farm Supplies

Total farm expenditures for production supplies in 1951 were \$13 billion (table 7). Of this amount, cooperatives sold \$1.6 billion, or 12 percent.

Feed, petroleum, fertilizer, and production supplies were the leading items sold to farmers by cooperatives. In 1951, cooperatives sold 18 percent of feed, 19 percent of petroleum, 16 percent of fertilizer, and 17 percent of field seeds.

By 1961, cooperatives sold 26 percent of fertilizer, 25 percent of petroleum, 18

Table 7—Cooperative supply sales to farmers compared with total farm production expenditures and share of market, 1951

Item	Supply sales	Sales to farmers	Total farm expenditures for supply item	Share of market
- - - - Million dollars - - - -				
Feed	746.7	739.2	4,144.3	17.8
Fertilizer	168.6	166.9	1,065.4	15.7
Petroleum	390.8	234.5	1,250.2	18.8
Chemicals	22.9	22.7	195.3	11.6
Equipment ¹	119.3	116.9	2,835.5	4.2
Field seeds	92.1	92.1	551.5	16.7
Supplies ²	265.7	246.7	2,953.3	8.4
Total	1,806.1	1,619.0	12,995.5	12.5

¹Includes hardware, farmstead, and light farm equipment.

²Includes building supplies, containers, and miscellaneous items.

Table 8—Cooperative supply sales to farmers compared with total farm production expenditures and share of market, 1961

Item	Supply sales	Sales to farmers	Total farm expenditures for supply item	Share of market
- - - - Million dollars - - - -				
Feed	913.3	904.2	4,963.2	18.2
Fertilizer	374.6	370.9	1,437.4	25.8
Petroleum	624.9	374.9	1,508.5	24.9
Chemicals	59.4	58.8	380.6	15.5
Equipment ¹	168.1	159.7	3,452.3	4.6
Field seeds	101.3	101.3	645.1	15.7
Supplies ²	252.6	239.1	2,980.0	8.2
Total	2,494.2	2,208.9	15,367.1	14.4

¹Includes hardware, farmstead, and light farm equipment.

²Includes building supplies, containers, and miscellaneous items.

percent of feed, 17 percent of field seeds, 16 percent of pesticides and chemicals, and 8 percent of other production supplies (table 8).

Cooperative sales of \$1.6 billion in 1951 increased 4 percent annually to \$2.2 billion in 1961, while total farm expenditures for similar production items increased 2 percent annually.

Cooperative Growth, 1961-71

Marketing

The cooperative share of farm products marketed for farmers increased from 24 percent in 1961 to 26 percent in 1971. The cooperative share for milk and dairy products was up from 58 percent in 1961 to 70 percent in 1971, grain and

soybeans were up slightly to 34 percent, fruits and vegetables up 3 percent to 25 percent, and cotton was up from 19 percent in 1961 to 25 percent in 1971 (table 9).

Cooperative marketing sales increased from \$9.8 billion in 1961 to \$16 billion in 1971 while cooperative payments increased from \$8.5 billion in 1961 to

Table 9—Receipts from cooperative marketing, total farm marketings, and cooperative share of market, 1971

Farm products	Volume		
	Net sales	Paid to farmers	Total cash receipts
- - - - Million dollars - - - -			
Grain and soybeans	3,728.4	3,504.7	10,174.8
Milk and products	5,651.3	4,747.1	6,795.7
Livestock products ¹	2,260.4	2,147.4	20,089.3
Fruits and vegetables	1,668.7	1,218.2	4,858.0
Cotton products	460.3	368.2	1,488.5
Sugar crops	548.5	353.9	596.6
Poultry and eggs	575.5	414.4	3,952.9
Special crops ²	1,112.6	1,031.3	4,717.6
Total	16,005.7	13,785.2	52,673.4
			26.2

¹Includes wool.

²Includes rice, dry beans and peas, peanuts, tree nuts, tobacco, and other.

Table 10—Cooperative supply sales to farmers compared with total farm production expenditures and share of market, 1971

Farm supplies	Supply sales	Sales to farmers	Total farm expenditures for supply item	Share of market
- - - - Million dollars - - - -				
Feed	1,376.6	1,362.8	8,049.5	16.9
Fertilizer	801.5	793.5	2,633.6	30.1
Petroleum	1,041.2	603.9	1,722.8	35.1
Chemicals	217.4	215.2	1,086.7	19.8
Equipment ¹	307.5	292.1	5,024.7	5.8
Field seeds	164.5	164.5	1,072.2	15.3
Supplies ²	597.2	566.1	5,189.4	10.9
Total	4,505.9	3,998.1	24,778.9	16.1

¹Includes hardware, farmstead, and light farm equipment.

²Includes building supplies, containers, and miscellaneous items.

\$13.8 billion in 1971. During that time, cooperative payments to farmers increased 6 percent annually while total cash receipts to farmers increased 5 percent annually.

Farm Supplies

Cooperative supply sales increased 80 percent from \$2.5 billion in 1961 to \$4.5 billion in 1971, while cooperative sales to farmers increased 81 percent during the decade. Total farm expenditures increased 61 percent during the period, bringing the cooperative share of supply sales to farmers from 14 percent in 1961 to 16 percent in 1971 (table 10).

Cooperative Growth, 1971 to 1981

Marketing

This decade was a period of higher than usual prices leading to inflated dollar sales volumes beyond an increase in unit sales. For example, cooperative sales of grain and soybeans jumped from \$3.7 billion in 1971 to \$19.8 billion in 1981. This increase in dollar volume represented a 43-percent annual increase in sales volume. But only soybeans showed a noticeable increase in unit sales. Total cash receipts to farmers for grain and soybeans expanded four times during the period, while sugar volume and livestock receipts doubled.

Grain and soybean payments to farmers of \$14.8 billion from cooperative sales of \$19.8 billion in table 11 reflect added purchases from other firms and brokers. Even with the noncooperative purchases deducted, cooperatives still made payments to farmers for 37 percent of the total grain and soybeans marketed in 1981 while actually marketing 48 percent of these crops. The 37-percent grain and soybean market share in 1981 was up from 34 percent in 1971.

Farm Supplies

Total farm expenditures increased dramatically in the decade, from \$24.8 billion in 1971 to \$71.7 billion in 1981.

Table 11—Receipts from cooperative marketing, total farm marketings, and share of market, 1981

Farm products	Marketing		Total cash receipts	Share of market
	Net sales	Paid to farmers		
----- <i>Million dollars</i> -----				
Grain and soybeans	19,777.4	14,826.5	39,792.2	37.3
Milk and products	15,051.8	12,944.5	18,104.2	71.5
Livestock products	5,231.3	4,969.5	40,730.0	12.2
Fruits and vegetables	4,495.9	3,282.0	13,338.6	24.6
Cotton products	1,690.0	1,352.0	4,552.2	29.7
Sugar crops	1,565.9	986.5	1,850.0	53.3
Poultry and eggs	1,157.4	833.3	9,646.6	8.6
Special crops ¹	3,447.2	3,136.9	15,409.0	20.4
Total	52,416.9	42,331.2	143,422.8	29.5

¹Includes rice, tobacco, dry beans and peas, peanuts and tree nuts.

Table 12—Cooperative supply sales to farmers compared with total farm production expenditures and share of market, 1981

Farm supplies	Supply sales	Sales to farmers	Total farm expenditures for supply items	Share of market
Feed	3,530.6	3,424.7	18,904.6	18.1
Fertilizer	3,676.3	3,639.5	10,073.5	36.1
Petroleum	5,646.0	3,274.7	9,298.1	35.2
Chemicals	1,275.0	1,262.3	3,726.7	33.9
Equipment ¹	825.6	784.3	12,607.0	6.2
Field seeds	574.8	574.8	3,956.0	14.5
Supplies ²	1,387.1	1,317.7	13,120.5	10.0
Total	16,915.4	14,278.0	71,676.4	19.9

¹Includes hardware, farmstead, and light farm equipment.

²Includes building supplies, containers, and miscellaneous items.

Cooperative sales of supply items increased nearly four times from \$3.9 billion in 1971 to \$14.3 billion in 1981 (table 12). Thus, the cooperative share of the farm supply market increased from 16 percent of supply sales in 1971 to 20 percent in 1981.

Total expenditures by farmers for petroleum, along with cooperative sales to farmers, reflected sharp price increases from 1971 to 1981. In each case, with total farm expenditures and cooperative sales to farmers, dollar volume increased more than five times.

Thus, cooperative share of petroleum sales held at 35 percent of the farm market in both 1971 and 1981.

Performance Summary, 1951-81

Cooperative payments to farmers and total cash receipts are comparable when marketing costs and selling expenses are deducted from net cooperative sales. Thus, cooperative marketing performance can be measured by the share of farm products marketed by cooperatives.



Cooperative marketing in 1951 totaled \$8 billion. Net marketing sales amounted to \$6.9 billion and cooperative payments to farmers were \$6.4 billion. By 1961, cooperative payments for farm products increased to \$8.5 billion, rose to \$13.8 billion in 1971 and to \$42.3 billion in 1981 for an annual rate of 19 percent.

Cooperatives picked up market share in grain and soybeans, dairy products, fruits and vegetables, sugar crops, cotton, and special crops to gain their 8-percent annual growth rate advantage.

Cooperative sales of farm production supplies to farmers amounted to \$1.6 billion in 1951, grew 4 percent annually to \$2.2 billion in 1961 and 8 percent annually to \$3.9 billion in 1971. In the 10 years from 1971 to 1981, cooperative supply sales increased 27 percent annually to \$14.3 billion. Over the 30-year period, cooperative sales to farmers grew at an annual rate of 26 percent.

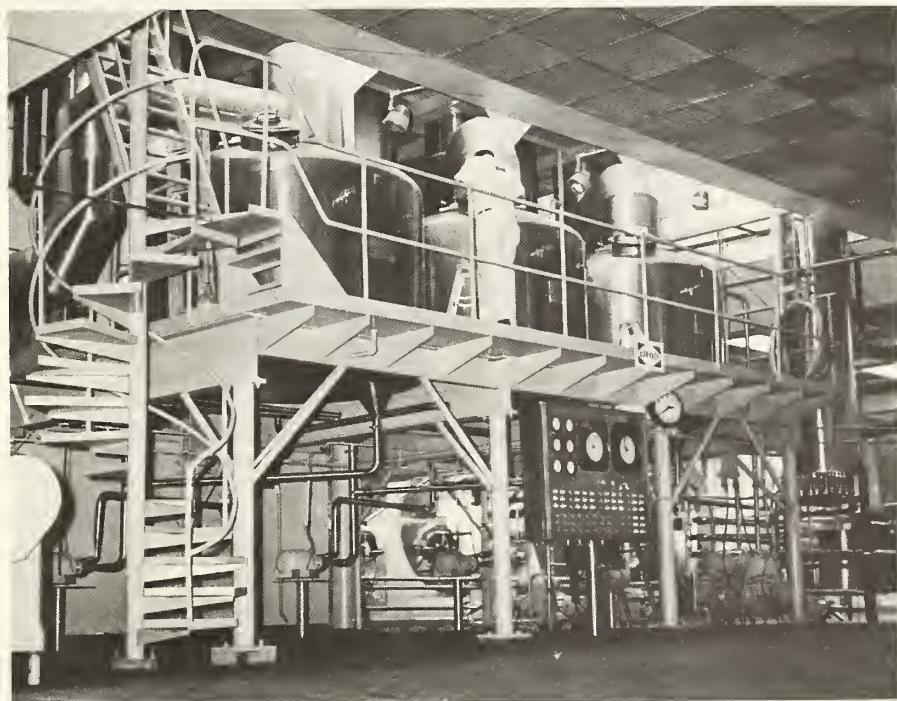
p1 Total farm expenditures for production supplies increased 2 percent annually from \$13 billion in 1951 to \$15.4 billion in 1961 and increased another 6 percent annually to \$24.8 billion in 1971. From 1971 to 1981, production expenditures tripled to \$71.7 billion, increasing at the annual rate of 19 percent. Over the 30-year period, farm production expenditures increased at an annual rate of 15 percent.

The leading production items sold by cooperatives and exceeding the annual average growth rate of 26 percent in sales were chemicals and pesticides, fertilizer, and petroleum. These items accounted for 57 percent of total cooperative supply sales in 1981.

Over the period 1951 to 1981, cooperatives averaged annual growth of 26 percent in sales of supply items to farmers, while total farm production expenditures were averaging annual growth rates of 15 percent. During this period cooperatives increased their share of the production supply market from 12 percent in 1951 to 20 percent in 1981 (table 13).

Table 13—Trend in cooperative share of commodities marketed for farmers and supplies purchased by farmers, 1951-81

Functional group and commodity	1951	1961	1971	1981
<i>Percent</i>				
Products marketed:				
Grain and soybeans	34.5	32.5	34.4	37.3
Milk and products	45.7	58.3	69.9	71.5
Livestock products	12.6	12.6	10.7	12.2
Fruits and vegetables	20.2	22.3	25.1	24.6
Cotton and products	10.4	19.4	24.7	29.7
Sugar crops	58.9	57.2	64.4	53.3
Poultry and eggs	6.6	9.4	10.5	8.6
Special crops	12.2	12.7	21.2	20.4
Average	19.7	24.0	26.2	29.5
Farm supplies purchased:				
Feed	17.8	18.2	16.9	18.1
Fertilizer	15.7	25.8	30.1	36.1
Petroleum	18.8	24.9	35.1	35.2
Chemicals	11.6	15.5	19.8	33.9
Equipment	4.2	4.6	5.8	6.2
Field seeds	16.7	15.7	15.3	14.5
Supplies	8.4	8.2	10.9	10.0
Average	12.5	14.4	16.1	19.9



REGIONAL TRENDS IN COOPERATIVE AND COMMODITY MARKETING

Changes in commodity marketing and shifts in commodity production and marketing from one region to another have special significance to growth in cooperative operations in a region. For example, the decline of poultry production in the Northeast from 1951 to 1981 not only affected the operations of cooperatives in the Northeast, but contributed to the cooperative's operations in the Southeast and South Central regions where poultry production increased. Thus, a short discussion of changes in commodity marketing by region may aid perspective in evaluating cooperatives' growth over the period.

Commodity Marketing

Northeast Region

Farmers in the Northeast marketed commodities worth \$2.8 billion in 1951 and increased marketings to \$7.7 billion in 1981. Dairy and poultry were the leading products marketed in 1951, while dairy, fruits and vegetables, and special crops led in 1981. Northeast farmers accounted for 9 percent of total farm marketings in the United States in 1951 (table 14) but slipped to 6 percent in 1981 (table 15).

Southeast Region

The value of farm commodities marketed by farmers in the Southeast amounted to nearly \$3.5 billion in 1951 and rose to nearly \$16 billion in 1981. Special crops, poultry, and cotton led product marketing in the Southeast in 1951, while special crops, poultry, livestock, and fruits and vegetables were the leading products marketed in 1981. Southeast farmers accounted for 10 percent of total farm marketings in 1951 (table 14) and 11 percent in 1981 (table 15).

South Central Region

Farmers in the South Central region marketed products worth nearly \$6 billion in 1951 and nearly \$27.2 billion in 1981. Cotton and livestock led product marketing in 1951, while livestock, grains, and soybeans were far ahead of special crops, poultry, and cotton in 1981. Some cotton production had shifted to the Western region. South Central farmers accounted for 18 percent of farm marketings in 1951 (table 14) and 19 percent in 1981 (table 15).

East North Central Region

Farm products valued at \$6 billion were marketed by farmers in the East North Central region in 1951 and \$23 billion in 1981. Livestock, dairy, and grains and soybeans were the main products marketed in 1951. Grains and soybeans replaced livestock as the main commodity marketed in 1981 followed by livestock and dairy. East North Central farmers marketed 19 percent of all farm products in 1951 (table 14) but slipped to 16 percent in 1981 (table 15).

West North Central Region

The value of farm products marketed by farmers in the West North Central region amounted to just over \$8 billion in 1951 and rose to \$39.3 billion in 1981. Livestock and grains and soybeans were the main products marketed in the region in 1951. In 1981 they held the same positions, although the value of livestock marketed increased four times from 1951 and grains and soybeans, nine times to 1981. West North Central farmers marketed 25 percent of all farm products in 1951 (table 14) and increased their total marketings to 27 percent in 1981 (table 15).

Western Region

Western region farmers marketed farm products worth nearly \$6.1 billion in 1951 and \$29.8 billion in 1981. Livestock and fruits and vegetables were the leading products marketed in 1951 and

in 1981, fruits and vegetables replaced livestock in value followed by special crops, grains and soybeans, dairy, and cotton. Western region farmers marketed 19 percent of all farm products in 1951 (table 14) and 21 percent in 1981 (table 15).

West North Central farmers marketed products with highest regional values including 42 percent of livestock and 42 percent of grains and soybeans in the United States in 1981. Western farmers marketed products second in value with 54 percent of all fruits and vegetables, 50 percent of sugar crops, and 33 percent of cotton. South Central region farmers were third in value of products marketed with 62 percent of cotton and 33 percent of poultry marketed. East North Central farmers marketed 27 percent of grains and soybeans and 27 percent of dairy products. Southeast farmers marketed 33 percent of poultry and Northeast farmers marketed 19 percent of dairy products in 1981 (table 15).

Cooperative Share of Market, 1951 and 1981

Northeast

Marketing milk and milk products dominated cooperative marketing in the nine States of the Northeast in 1951. All States marketed milk, though New York and Pennsylvania supplied the bulk of it to cooperatives. In Vermont and New Hampshire, milk accounted for more than 90 percent of cooperative marketing. In Maine, milk and fruits and vegetables were most important, while Massachusetts shared evenly in milk, poultry, and fruits and vegetables. New York, New Jersey, and Pennsylvania added livestock and grains and soybeans to cooperative marketing in 1951.

In the Northeast, milk accounted for 71 percent, poultry 11 percent, and fruits and vegetables 10 percent of cooperative marketing in 1951. By 1981, milk increased to 73 percent, fruits and vegetables to 19 percent, while poultry fell to 2 percent (table 16). Percentages

Table 14—Value of farm commodities marketed by farmers and percentage distribution, by region, 1951

Commodity	Region						Total U.S.
	N E	S E	S C	ENC	WNC	W	
<i>Million dollars</i>							
Grain and soybeans	76.7	148.4	409.2	1,239.8	1,794.8	701.2	4,360.1
Milk and products	957.5	319.3	476.9	1,311.7	757.8	581.8	4,405.0
Livestock products	322.6	432.8	1,713.6	2,215.0	4,358.8	1,705.1	10,747.9
Fruits and vegetables	446.8	492.6	183.8	275.0	94.5	1,382.9	2,875.6
Cotton and products	0	448.6	1,885.9	0	73.8	526.4	2,934.7
Sugar crops	4.3	11.8	33.9	11.1	19.9	58.4	139.4
Poultry and eggs	773.2	556.6	473.0	607.9	670.0	465.5	3,547.2
Special crops	279.5	1,070.2	771.4	417.3	266.8	631.6	3,436.8
Total	2,860.6	3,480.3	5,947.7	6,077.8	8,027.4	6,052.9	32,446.7
<i>Percent</i>							
Grain and soybeans	2	4	9	28	41	16	100
Milk and products	22	7	11	30	17	13	100
Livestock products	3	4	16	20	41	16	100
Fruits and vegetables	16	17	6	10	3	48	100
Cotton and products	0	15	64	0	3	18	100
Sugar crops	3	8	24	8	15	42	100
Poultry and eggs	22	16	13	17	19	13	100
Special crops	8	31	23	12	8	18	100
Average	9	10	18	19	25	19	100

Table 15—Value of farm commodities marketed by farmers and percentage distribution by region, 1981

Commodity	Region						Total U.S.
	N E	S E	S C	ENC	WNC	W	
<i>Million dollars</i>							
Grain and soybeans	422.1	1,983.3	5,930.6	10,624.8	16,868.1	3,963.3	39,792.2
Milk and products	3,515.8	1,448.0	1,775.2	4,928.9	2,975.2	3,461.1	18,104.2
Livestock products ¹	904.8	2,165.8	8,736.0	5,025.4	16,898.2	6,999.8	40,730.0
Fruits and vegetables	1,138.7	2,822.8	798.8	991.4	328.9	7,258.0	13,338.6
Cotton and products	—	151.7	2,831.0	—	66.1	1,503.4	4,552.2
Sugar crops	17.6	234.2	154.8	96.5	414.9	932.0	1,850.0
Poultry and eggs	762.1	3,182.5	3,132.7	658.1	714.3	1,196.9	9,646.6
Special crops ²	952.0	3,995.8	3,799.3	1,116.5	1,046.1	4,499.3	15,409.0
Total	7,713.1	15,984.1	27,158.4	23,441.6	39,311.8	29,813.8	143,422.8
<i>Percent</i>							
Grain and soybeans	1	5	15	27	42	10	100
Milk and products	19	8	10	27	17	19	100
Livestock products ¹	2	5	22	12	42	17	100
Fruits and vegetables	9	21	6	7	3	54	100
Cotton and products	0	3	62	0	2	33	100
Sugar crops	1	13	9	5	22	50	100
Poultry and eggs	8	33	33	7	7	12	100
Special crops ²	6	26	25	7	7	29	100
Average	6	11	19	16	27	21	100

¹Includes wool.

²Includes rice, dry beans and peas, peanuts, tree nuts, tobacco, and other.

Table 16—Percentage distribution of farm products marketed by cooperatives in regions, 1951 and 1981

Farm products and year	Regions						Product total
	NE	SE	SC	ENC	WNC	W	
<i>Percent</i>							
1951:							
Grain and soybeans	2	3	10	22	43	14	21
Milk and products	71	24	13	40	23	17	30
Livestock and products	5	4	15	34	30	16	22
Fruits and vegetables	10	31	1	1	0	28	9
Cotton products	0	6	32	0	0	4	5
Sugar crops	0	0	1	0	0	8	2
Poultry and eggs	11	8	1	2	3	6	4
Special crops	1	24	27	1	1	7	7
Total	100	100	100	100	100	100	100
1981:							
Grain and soybeans	2	11	30	41	62	15	38
Milk and products	73	35	24	40	18	22	29
Livestock products	3	2	5	13	16	4	10
Fruits and vegetables	19	19	1	4	0	26	8
Cotton products	0	0	15	0	0	8	3
Sugar crops	0	6	3	0	3	6	3
Poultry and eggs	2	16	4	1	1	1	2
Special crops	1	11	18	1	0	18	7
Total	100	100	100	100	100	100	100

in table 16 represent net cooperative sales in 1951 and 1981 and not cooperative market share.

Table 17 represents cooperative share of total farm products marketed in each State and region. Marketing and operating costs were deducted from net cooperative sales to determine the amounts cooperatives paid farmers for their products. The dollar amount farmers receive from cooperatives can be rightfully compared with total cash receipts to farmers for all products marketed at the State or national level and will reflect the cooperative share of farm products marketed.

Cooperative share of marketing increased in all but one of the nine States in the Northeast in 1981. In Maine, cooperative share declined from 10.6 percent in 1951 to 7.3 percent in 1981. Healthy increases in Vermont were attributed to heavy increases in cooperative milk marketing and in

Massachusetts, New York, and Pennsylvania to heavy increases in cooperative fruit and vegetable marketing. The cooperative share of marketing farm products increased for the nine States in the Northeast from 23 percent in 1951 to 32 percent in 1981.

Southeast

The Southeast represents diversified farming and cooperative marketing of almost every farm product, differing greatly from the Northeast where dairy dominated cooperative marketing in 1981. Southeast cooperatives marketed general farm crops, livestock, cotton, sugar crops, tobacco, peanuts, and fruits and vegetables. Special crops fell from 24 percent in 1951 to 11 percent in 1981 and cooperative marketing of poultry increased from 8 percent in 1951 to 16 percent in 1981 (table 16). Seven of eight States in the area increased the cooperative share of marketing in 1981. Only Delaware fell below its 1951 share.

Maryland led States in 1951 with 18 percent of products marketed cooperatively while West Virginia led in 1981 with 32 percent (table 17). Combined, the States raised the cooperative market share from 11 percent in 1951 to 19 percent in 1981.

South Central

Cotton was the leading product marketed by cooperatives in the area and in Mississippi and Texas in 1951. Oklahoma with general crops and cotton added to total cooperative marketing. Special crops, including rice in Arkansas and Louisiana and tobacco in Kentucky and Tennessee, were second to cotton in 1951.

Grains and soybeans replaced cotton in cooperative marketing volume in 1981. Both dairy and special crop volume exceeded cotton in 1981, when cotton fell to 15 percent from 32 percent in 1951 (table 16). Grains and soybeans led cooperative marketing in Texas followed by cotton, dairy, and rice, while grains and soybeans were first in Oklahoma and second to cotton in Mississippi. Poultry in Oklahoma and dairy in Tennessee and Kentucky led cooperative marketing in those States in 1981.

Cooperative marketing was as diversified as crop and livestock production in this area, where most States marketed products from seven of eight product categories. Diversified marketing tended to lower the average market share similar to cooperative marketing in States in the Southeast. However, market share doubled and tripled for several States from 1951 to 1981 (table 17). Poultry and grain increases boosted cooperative marketing in Alabama, while rice in Arkansas, sugar cane and rice in Louisiana, and grain and dairy in Tennessee contributed to much higher market shares in 1981. Louisiana reported more cooperative milk than cash receipts to farmers in 1981 because milk was imported into the State for processing.

Table 17—Cooperative share of farm products marketed, by State and region, 1951 and 1981

State and region	1951			1981		
	Cooperatives paid to farmers	U.S. cash receipts	Cooperative share of market	Cooperatives paid to farmers	U.S. cash receipts	Cooperatives share of market
	<i>----- Million dollars -----</i>					<i>Percent</i>
Maine	20.8	197.2	10.6	34.1	464.7	7.3
New Hampshire	13.2	67.4	19.6	26.1	97.2	26.9
Vermont	52.4	116.2	45.1	204.8	395.9	51.7
Massachusetts	35.3	201.5	17.5	172.6	332.8	51.9
Rhode Island	5.4	25.9	20.1	7.0	33.7	20.8
Connecticut	26.4	169.3	15.6	58.2	303.1	19.2
New York	271.3	913.5	29.7	1,024.4	2,720.8	37.7
New Jersey	67.0	344.4	19.5	120.3	459.3	26.2
Pennsylvania	160.5	825.2	19.5	854.3	2,905.6	29.4
NE region	652.3	2,860.6	22.8	2,501.8	7,713.1	32.4
Delaware	6.7	112.1	6.0	22.2	392.5	5.7
Maryland	47.3	259.7	18.2	238.5	1,061.3	22.5
Virginia	76.7	508.2	15.1	401.4	1,643.6	24.4
West Virginia	8.2	131.0	6.3	69.4	217.1	31.9
North Carolina	71.6	950.1	7.5	417.6	4,236.3	9.9
South Carolina	8.9	376.2	2.4	108.3	1,117.3	9.7
Georgia	80.1	632.1	12.7	622.1	3,277.5	18.9
Florida	84.7	510.9	16.6	1,130.5	4,038.5	27.9
SE region	384.2	3,480.3	11.0	3,009.0	15,984.1	18.8
Kentucky	94.9	620.2	15.3	348.8	2,782.6	12.5
Tennessee	36.4	524.5	6.9	252.5	1,835.6	13.8
Alabama	15.5	442.4	3.5	378.0	2,210.8	17.1
Mississippi	82.9	545.6	15.2	473.5	2,246.2	21.1
Arkansas	42.7	570.9	7.5	687.9	3,436.4	20.0
Louisiana	31.5	383.9	8.2	417.3	1,713.7	24.4
Oklahoma	105.4	624.1	16.9	644.5	2,878.6	22.4
Texas	265.5	2,236.1	11.9	1,858.3	10,054.5	18.5
SC region	674.8	5,947.7	11.4	5,060.8	27,158.4	18.6
Ohio	333.3	1,064.9	31.3	1,550.4	3,447.1	44.9
Indiana	232.1	1,106.3	20.9	1,237.1	4,317.5	28.7
Illinois	472.9	2,034.5	23.2	2,867.3	7,644.9	37.5
Michigan	184.5	735.0	25.1	1,168.8	2,780.2	41.9
Wisconsin	391.5	1,137.1	34.4	2,532.3	5,242.9	48.3
ENC region	1,614.3	6,077.8	26.6	9,355.9	23,441.6	39.9
Minnesota	462.3	1,277.3	36.2	3,453.9	6,912.1	49.9
Iowa	367.7	2,316.3	11.1	4,614.4	10,715.5	43.1
Missouri	178.0	1,090.8	16.3	1,733.8	4,224.0	41.1
North Dakota	209.7	527.3	39.8	1,180.4	2,802.8	42.1
South Dakota	119.3	565.9	21.1	603.4	2,789.3	21.6
Nebraska	198.9	1,171.6	16.9	1,770.0	6,376.0	27.8
Kansas	185.9	1,078.1	17.2	1,440.1	5,492.1	26.2
WNC region	1,721.8	8,027.3	21.5	14,796.0	39,311.8	37.6
Montana	68.4	408.5	16.7	233.7	1,483.3	15.8
Idaho	100.5	367.8	27.3	383.3	2,278.2	16.8
Wyoming	24.6	177.6	13.9	27.9	615.8	4.5
Colorado	126.8	565.4	24.2	527.7	3,085.3	17.1
New Mexico	19.5	225.7	8.6	34.6	843.9	4.1
Arizona	17.2	349.6	4.9	450.1	1,706.6	26.4
Utah	58.9	183.6	32.1	226.7	554.9	40.9
Nevada	3.5	56.0	6.3	18.4	213.9	8.6
Washington	168.7	535.6	31.5	1,118.4	2,905.1	38.5
Oregon	107.4	424.6	25.3	531.2	1,714.7	30.9
California	649.0	2,758.5	23.5	3,824.3	13,903.2	27.5
Alaska and Hawaii	—	—	—	231.4	508.9	45.5
W region	1,354.5	6,052.9	22.4	7,607.7	29,813.8	25.5
U.S. total	6,401.9	32,446.6	19.7	42,331.2	143,422.8	29.5

East North Central

Dairy, livestock, and grains and soybeans were the main farm products marketed cooperatively in 1951. Wisconsin was high in milk and Illinois was high both in livestock and grains and soybeans. Cooperative marketing was heavy for all three products in Ohio and Indiana in 1951.

Grain and soybeans edged dairy in cooperative marketing in 1981 followed by livestock and fruits and vegetables (table 16). The increase in fruits and vegetables from Wisconsin and Michigan added a fourth main product to cooperative marketing in 1981. Wisconsin was dominant in milk, and Illinois held on to first in grains and soybeans. Indiana added poultry and Ohio added sugar beets and tobacco to products marketed cooperatively in 1981.

The five States averaged 26.6 percent cooperative market share in 1951, the highest for any group of States, and with hefty increases in main products marketed cooperatively raised their market share to 39.9 percent in 1981 (table 17). Wisconsin led the way in cooperative marketing, increasing its market share from 34 percent in 1951 to 48 percent in 1981, due mostly to the large volume of milk marketed in 1981 of \$2.6 billion. Illinois marketed more than \$2.3 billion in grain, raising its market share to 37.5 percent in 1981. Both Ohio and Michigan had shares of more than 40 percent while Indiana was low for the group with 29 percent. Illinois and Michigan reported more cooperative milk than cash receipts to farmers in 1981 because milk was imported into the States for processing.²

West North Central

Grains and soybeans were first in farm products marketed by cooperatives in the West North Central States in 1951. Livestock and dairy followed and, along with grain and soybeans, accounted for 96 percent of cooperative marketing in

the area. Poultry accounted for 3 percent and special crops 1 percent (table 16). All but one State marketed products cooperatively from five of eight product groupings in 1951.

Grains and soybeans accounted for 62 percent of all cooperative marketings in the West North Central States in 1981. Milk at 18 percent and livestock at 16 percent made up the other main products. These products accounted for 96 percent of cooperative marketings in the area. This is similar to the East North Central States where the same three products accounted for 94 percent of cooperative marketings in 1981.

Minnesota led in cooperative marketing of dairy and sugar beets. Iowa led in grains and soybeans, livestock, and fruits and vegetables. North Dakota was second in sugar beets and fruits and vegetables, and Nebraska first in special crops and second in livestock. Kansas was third in grains and soybeans, Missouri third in livestock, and South Dakota was second in special crops.

Cooperative market share for these States in 1951 was 21.5 percent, fourth in the six major areas. By 1981, their market share had increased to 37.6 percent, second only to the East North Central States. In 1951, Iowa's market share was lowest at only 11 percent, but rose to 43 percent because of the heavy increases in grain and soybean marketing and processing. Minnesota had the highest market share in 1981 at 50 percent, followed by Iowa, North Dakota, and Missouri, all with more than 40 percent (table 17)³. Minnesota, Iowa, and Missouri reported more cooperative milk than cash receipts to farmers in 1981 because milk was imported for processing.

Western

Fruits and vegetables, led by California production, were the major farm products marketed by cooperatives in the Western States in 1951. Dairy, livestock, and grains and soybeans

followed in that order. Sugar crops, special crops, poultry, and cotton were also marketed in 1951. Colorado was second to California in marketing of livestock and sugar beets, and Idaho was second to California in marketing of milk. Washington led in grains and soybeans and was second to California in fruits and vegetables.

Diversified cooperative marketing in the Western States continued in 1981. Fruits and vegetables were the number one product, followed by dairy, grains and soybeans, cotton, special crops, sugar crops, and livestock. California led in fruits and vegetables, dairy, special crops, cotton, sugar beets, and poultry. Washington led in grains and soybeans and was second to California in fruits and vegetables. Colorado led in livestock and was second to Washington in grains and soybeans. Arizona was second to California in cotton and Utah was second to California in poultry in 1981.

The diversity of cooperative marketing in 1951 was evident. Fruits and vegetables accounted for 28 percent of the total, milk 17 percent, livestock 16 percent, and grains and soybeans 14 percent for 75 percent of total cooperative marketing. The other 25 percent included sugar crops 8 percent, special crops 7 percent, poultry and eggs 6 percent, and cotton 4 percent (table 16).

Cooperative marketing, while still diverse, changed in proportion of products handled in 1981. Dairy increased to 22 percent, grains and soybeans to 15 percent, special crops to 18 percent, and cotton to 8 percent. Fruits and vegetables declined slightly to 26 percent—still the leading product—while livestock declined from 16 percent in 1951 to 4 percent in 1981. Sugar crops fell to 6 percent and poultry to 1 percent of the total volume in the Western States in 1981 (table 16).

Cooperative marketing in 11 Western States went up from a 22-percent share in 1951 to 26 percent in 1981. While the

market share of 22 percent was about 3 percent above the national average in 1951, the 26-percent share in 1981 was about 4 percent below the national average of 30 percent.

Cooperative market share declined from 1951 to 1981 in five of the Mountain States mostly because of the sharp decline in livestock marketing. Arizona increased its total market share in 1981 with heavy increases in cotton marketing, while the three Pacific States increased cooperative marketings in dairy, grains and soybeans, fruits and vegetables, and special crops to increase their market shares more than 5 percent each in 1981.

Data for Alaska and Hawaii were not available for 1951. Cooperative marketing in Hawaii, except for sugar crops, was light in 1981.⁴ Oregon and Utah reported more cooperative milk than cash receipts to farmers in 1981 because milk was imported for processing.

Market Share Summary, 1951-81

More than half (52 percent) of cooperative marketings originated in the 12 States of the East and West North Central regions in 1951. The main products marketed by cooperatives were grains and soybeans, milk, livestock, and poultry. The Western States contributed 21 percent of cooperative marketings of sugar crops, fruits and vegetables, and poultry (table 18). Cotton and special crops accounted for 11 percent of cooperative products marketed by the South Central States in 1951. Special crops and fruits and vegetables accounted for 6 percent of cooperative products marketed by States in the Southeast. Northeast States supplied 10 percent of cooperative marketings in 1951, mostly due to milk and poultry. Cooperatives marketed 20 percent of all farm products in the United States in 1951.

In 1981, cooperatives marketed 30 percent of all farm products in the United States. While the volume of total

farm product marketings grew at an annual rate of 11 percent from 1951 to 1981, cooperative marketings over the same period grew at an annual rate of 19 percent. Cooperative marketing growth was greatest in the West North Central States, rising to 35 percent in 1981 from 27 percent in 1951. These States provided 57 percent of the grains and soybeans, 55 percent of the livestock, 34 percent of the sugar crops, and 22 percent of the milk marketed by cooperatives in 1981.

States in the East and West North Central areas, which accounted for 52 percent of cooperative marketings in 1951, raised the total to 57 percent in 1981. They account for 81 percent of the grains and soybeans, 83 percent of livestock, and 52 percent of milk (table 18).

Cooperative marketing in Northeast States declined from 10 percent in 1951 to 6 percent in 1981. Cooperative

marketing also declined on a percentage basis in the Western States, going from 21 percent in 1951 to 19 percent in 1981. Cooperative marketings in the South Central States remained at 11 percent in both 1951 and 1981. There was a sharp decline in cotton marketing and slight declines in special crops but these were overcome by a sharp increase in poultry marketing and slight increases in grains and soybeans and milk. Southeast States increased their share of cooperative marketing from 6 percent in 1951 to 7 percent in 1981 with sharp increases in poultry, sugar crops, and milk (table 18).

Table 19 shows the percentage distribution of cash receipts to farmers by commodity or product marketed, and region, in 1981. Cash receipts to farmers by region are not exact, but representative of product marketing as well as farm production. There is less crossover of commodities produced in one region and marketed in another than there is in State production and marketing.

Table 18—Percentage distribution of farm products marketed by cooperatives, by region, 1951 and 1981

Farm products and year	Regions						Product total
	NE	SE	SC	ENC	WNC	W	
<i>Percent</i>							
1951:							
Grain and soybeans	1	1	6	26	53	13	21
Milk and products	24	5	5	33	21	12	30
Livestock and products	2	1	8	38	36	15	22
Fruits and vegetables	10	21	2	2	1	64	9
Cotton products	0	7	74	0	1	18	5
Sugar crops	0	0	6	6	9	79	2
Poultry and eggs	27	11	3	10	21	28	4
Special crops	2	24	46	2	3	23	7
Total	10	6	11	25	27	21	100
1981:							
Grain and soybeans	1	2	9	24	57	7	38
Milk and products	15	9	10	30	22	14	29
Livestock products	2	1	6	28	55	8	10
Fruits and vegetables	13	16	1	11	1	58	8
Cotton products	0	1	54	0	0	45	3
Sugar crops	0	14	11	1	34	40	3
Poultry and eggs	6	50	23	5	10	6	2
Special crops	1	12	31	2	1	53	7
Total	6	7	11	22	35	19	100

Part B of table 19 shows percentage distribution of net sales from cooperative marketing by region in 1981. Total cooperative net marketing sales are reflected in the percentage of total products marketed by region. For example, 15 percent of the milk marketed by cooperatives was in the Northeast, while the same region has 20 percent of the total milk market.

Part A of table 19 represents total farm products marketed in 1981 or \$143.4 billion. Part B represents total cooperative marketing in 1981 or \$52.4 billion—slightly more than a third of total farm product marketings in 1981. Thus, cooperative percentages, while representing total cooperative marketings, represent only a third of the value of the percentages for total farm marketings in Part A.

The purpose of table 19 is to show the pattern of total marketing and the pattern and relationship of cooperative marketing to total product marketing. It

shows where cooperative marketing is weak, where it is holding even, and where it is strong. For example, the Northeast marketed 6 percent of total farm products in 1981 while 6 percent of total cooperative marketings were from the area (holding even). The Southeast had 11 percent of total farm marketings in 1981 while only 7 percent of cooperative marketings were in that region (weak cooperative marketing). The same was true for the South Central region. Cooperative marketing is strong in both the East and West North Central regions, which include the Farm Belt States.

Cooperative marketing is generally discussed in terms of net sales (total cooperative sales minus intercooperative sales) except when referring to cooperative or market share. Because marketing and operating costs are incurred in marketing farmers' products, these costs must be deducted from net sales to determine cooperative payments to farmers. The amounts cooperatives

paid farmers were compared with USDA cash receipts received by farmers to develop the cooperative share of farm products marketed (table 17).

Cooperative or market share is less than precise for each State. Some products are produced in one State and marketed by cooperatives in another. Market share comparisons for a particular State between 1951 and 1981 may be misleading as to cooperative performance in the State. The general decline in farm product marketing in the Northeast between 1951 and 1981 affected cooperative marketing. The shift of poultry production from some States in the Northeast to some in the Southeast and South Central during this period affected cooperative share of marketing in those States. Likewise, the shift of cotton production from some Southeast and South Central States to some Western States affected cooperative market share between 1951 and 1981. Some States market farm products not heavily marketed by cooperatives. Conversely, cooperatives are strong in marketing milk, grains and soybeans. So cooperative market share is affected in States marketing these products. And the number of marketing cooperatives differs widely in some States and regions.

Table 19—Percentage distribution of cash receipts from marketing and cooperative marketing by region, 1981

Farm products	Regions						Total U.S.
	NE	SE	SC	ENC	WNC	W	
<i>Percentage distribution - cash receipts</i>							
Grain and soybeans	1	5	17	26	41	10	100
Milk and products	20	8	10	27	16	19	100
Livestock and products	2	5	22	12	42	17	100
Fruits and vegetables	8	19	6	8	4	55	100
Cotton products	0	3	62	0	2	33	100
Sugar crops	1	15	8	5	17	54	100
Poultry and eggs	8	30	34	7	8	13	100
Special crops	7	33	21	7	7	25	100
Total	6	11	19	26	27	21	100
<i>Percentage Distribution - cooperatives</i>							
Grain and soybeans	1	2	9	24	57	7	100
Milk and products	15	9	10	30	22	14	100
Livestock products	2	1	6	28	55	8	100
Fruits and vegetables	13	16	1	11	1	58	100
Cotton products	0	1	44	0	0	55	100
Sugar crops	0	14	11	1	34	40	100
Poultry and eggs	6	50	23	5	10	6	100
Special crops	1	12	30	3	1	53	100
Total	6	7	11	22	35	19	100

Cooperative marketing and cooperative share of market is highest in Farm Belt States (table 17). Wisconsin with a 48-percent cooperative market share and Ohio with 45 percent led the East North Central region to a 40-percent cooperative share of market in 1981. Minnesota, with a 50-percent cooperative share and Iowa with 43 percent led the West North Central region to a 38-percent cooperative share in 1981. Cooperative marketing of milk in the dairy States of the Northeast helped the region to the third highest market share of 32 percent in 1981. The East North Central region had the highest market share, 27 percent in 1951, followed by the Western region with 22 percent.

Vermont and Massachusetts marketed more than half their products cooperatively in 1981 for a 52-percent market share in each State. Minnesota farmers marketed 50 percent of their products cooperatively, followed by 48 percent for farmers in Wisconsin.

Vermont led in cooperative market share in 1951 with 45 percent, followed by North Dakota with 40 percent, Minnesota 36 percent, and Wisconsin 34 percent. Farmers marketed through cooperatives 20 percent of all farm products in 1951 and raised the cooperative share of market to 30 percent in 1981.

COOPERATIVE SALES OF FARM SUPPLIES

Cooperative sales of farm production supplies and equipment are categorized as feed, fertilizer, petroleum, chemicals, equipment, seed, and supplies. Containers, building materials, and some miscellaneous sales are included in supplies. Farmstead equipment, heavy hardware, tools, and parts from



Table 20—Cash expenditures by farmers for production supplies, by region, 1951

Production supplies	Regions						Total U.S.
	NE	SE	ENC	WNC	SC	W	
<i>Million dollars</i>							
Feed	678.7	410.5	707.4	983.7	606.2	757.8	4,144.3
Fertilizer	114.3	305.1	226.8	103.1	219.3	96.8	1,065.4
Petroleum	87.3	109.5	248.3	381.0	227.7	196.4	1,250.2
Chemicals	23.3	41.6	17.0	13.1	41.1	59.2	195.3
Equipment	149.3	204.9	615.6	796.3	457.6	411.8	2,635.5
Field seeds	50.5	59.9	114.0	139.6	117.8	69.7	551.5
Supplies	194.7	167.0	468.6	853.9	567.5	901.6	3,153.3
Total	1,298.1	1,298.5	2,397.7	3,270.7	2,237.2	2,493.3	12,995.5
<i>Cooperative sales of production supplies</i>							
Feed	268.3	77.7	137.3	128.5	49.8	127.3	788.9
Fertilizer	29.4	29.9	50.9	24.8	35.2	11.1	181.3
Petroleum	20.6	12.2	111.8	170.9	13.9	37.5	366.9
Chemicals	3.3	2.5	5.1	3.5	3.9	4.7	23.0
Equipment	14.6	11.4	35.3	38.5	7.0	20.6	127.4
Field seeds	15.6	10.5	21.3	18.9	17.1	6.3	89.7
Supplies	20.9	20.8	62.7	77.8	13.7	33.0	228.9
Total	372.7	165.0	424.4	462.9	140.6	240.5	1,806.1
<i>Cooperative sales as a percentage of production expenditures</i>							
Percent	29	13	18	14	6	10	14

miscellaneous sales are included in equipment.

Cooperative supply sales were compared with total cash expenditures for farm production supplies in States and regions of the United States in 1951 and 1981 to measure cooperative performance. Nonsupply expenditures, such as hired labor, livestock purchase, taxes, insurance, interest, and depreciation, were excluded from total farm expenditures to make cooperative supply sales comparable with cash expenditures for farm production supplies and equipment. Cooperative sales to nonfarmers were deducted to determine cooperative share of the supply market in the States and regions in 1951 and 1981.

Detailed data for cooperative sales in States and regions, as well as cash expenditures by farmers for production supplies, included some estimates from limited data. However, estimates were based on the best information currently

available from Economic Research Service (ERS) and Agricultural Cooperative Service (ACS).

Supply Sales and Production Expenditures, 1951 and 1981

Expenditures by farmers for production supplies in 1951 was \$12.9 billion. Feed accounted for 32 percent, supplies 24 percent, equipment 20 percent, petroleum 10 percent, and fertilizer 8 percent.

Cooperative sales of production supplies in 1951 amounted to \$1.8 billion or 14 percent of the total (table 20). Feed made up 44 percent of total sales, petroleum 20 percent, supplies 13 percent, fertilizer 10 percent, equipment 7 percent, seed 5 percent, and farm chemicals 1 percent.

By 1981, expenditures by farmers for production supplies had increased to \$71.7 billion or 15 percent annually from 1951 (table 21). Feed fell from 32

percent to 26 percent in 1981, while percentage expenditures increased for fertilizer, petroleum, and farm chemicals.

Cooperative sales of production supplies increased to \$16.9 billion in 1981 or 28 percent annually from 1951 (table 21). Feed sales fell from 44 percent of total supply sales in 1951 to 21 percent in 1981, while percentage sales of fertilizer, petroleum, and farm chemicals doubled from 1951. Field seeds and supplies declined in percentage of sales from 1951 to 1981.

Regional Sales and Cash Expenditures, 1951 and 1981

Table 22 shows cash expenditures by farmers in 1951 and the percentage distribution of production expenditures by region and by supply items.

Expenditures were highest in the West North Central region in 1951 at \$3.3 billion, or 25 percent of the total, followed by the Western region with 19

Table 21—Cash expenditures by farmers for production supplies, 1981

Production supplies	Regions						Total U.S.
	NE	SE	ENC	WNC	SC	W	
<i>Million dollars</i>							
Feed	1,544.6	2,374.9	2,289.3	4,665.8	4,289.0	3,741.0	18,904.6
Fertilizer	385.2	1,305.1	2,344.3	2,945.8	1,752.0	1,331.1	10,063.5
Petroleum	528.4	966.8	1,602.2	2,539.7	1,911.9	1,749.1	9,198.1
Chemicals	140.5	510.9	718.7	883.8	782.0	690.8	3,726.7
Equipment	636.4	1,365.9	2,470.2	3,609.6	2,448.6	2,076.3	12,607.0
Field seeds	235.9	404.6	943.8	1,115.6	709.4	546.7	3,956.0
Supplies	973.9	1,409.1	2,779.8	3,309.5	2,513.6	2,134.6	13,120.5
Total	4,444.9	8,337.3	13,148.3	19,069.8	14,406.5	12,269.6	71,676.4
<i>Cooperative sales of production supplies</i>							
Feed	634.0	435.9	623.9	1,055.5	433.0	349.0	3,531.3
Fertilizer	151.6	296.9	888.9	1,435.9	638.7	237.8	3,649.8
Petroleum	937.4	300.9	1,232.3	2,164.3	406.3	491.4	5,532.6
Chemicals	64.6	108.3	302.5	452.0	262.7	84.9	1,275.0
Equipment	121.5	52.0	143.0	316.3	27.8	101.3	811.9
Field seeds	40.0	64.8	90.3	152.8	141.2	65.6	554.7
Supplies	194.9	144.8	257.1	496.0	188.8	280.0	1,561.6
Total	2,144.0	1,403.6	3,538.0	6,072.8	2,148.5	1,610.0 ¹	16,916.9
<i>Cooperative sales as a percentage of production expenditures</i>							
Percent	48	17	27	32	15	13	24

¹Total supply sales after adjustments for Alaska, Hawaii, and foreign sales.



Table 22—Cash expenditures by farmers for production supplies, and percentage distribution of expenditures by region, 1951

Production supplies	Regions						Total U.S.
	NE	SE	ENC	WNC	SC	W	
<i>Million dollars</i>							
Feed	678.7	410.5	707.4	983.7	606.2	757.8	4,144.3
Fertilizer	114.3	305.1	226.8	103.1	219.3	96.8	1,065.4
Petroleum	87.3	109.5	248.3	381.0	227.7	196.4	1,250.2
Chemicals	23.3	41.6	17.0	13.1	41.1	59.2	195.3
Equipment	149.3	204.9	615.6	796.3	457.6	411.8	2,635.5
Field seeds	50.5	59.9	114.0	139.6	117.8	69.7	551.5
Supplies	194.7	167.0	468.6	853.9	567.5	901.6	3,153.3
Total	1,298.1	1,298.5	2,397.7	3,270.7	2,237.2	2,493.3	12,995.5
Percent	10	10	19	25	17	19	100
<i>Percent</i>							
Feed	52	32	30	30	27	30	32
Fertilizer	9	24	9	3	10	4	8
Petroleum	7	8	10	12	10	8	10
Chemicals	2	3	1	1	2	2	2
Equipment	12	16	26	24	21	17	20
Field seeds	3	4	5	4	5	3	4
Supplies	15	13	19	26	25	36	24
Total	100	100	100	100	100	100	100

percent. Farm supplies were second to feed in percentage of total expenditures within each region, while farm equipment was third.

Table 23 shows cooperative sales of production supplies by region and percentage of sales distribution of supplies within the regions. Cooperative supply sales in 1951 were greatest in the West North Central region, as were cash expenditures. Combined cooperative sales in the East and West North Central region accounted for 49 percent of total cooperatives supply sales, followed by the Northeast with 21 percent. Feed made up 72 percent of sales volume in the Northeast, 47 percent in the Southeast, and 53 percent in the West. Feed was the leading supply item sold by cooperatives in 1951.

Table 24 shows that cash expenditures of \$19.1 billion were highest in the West North Central regions. They amounted to 27 percent of total expenditures in 1981, up from 25 percent in 1951. Feed accounted for the greatest expenditure in

the region, and in four of the six regions had highest percentage expenditures. Cash expenditures in the Western region, second highest in 1951, fell to fourth in 1981, when both the South Central and East North Central regions had higher totals. Feed accounted for 35 percent of expenditures in the Northeast and 28 percent in the Southeast. Farmers spent slightly more for supplies, equipment, and fertilizer than feed in the East North Central region, but feed accounted for 30 percent of total expenditures in both the South Central and Western regions in 1981.

Table 25 shows cooperative sales of production supplies by region and percentage distribution of sales within regions. Cooperative sales in 1981 were greatest in the West North Central region, nearly double cooperative sales in the East North Central region. In both regions, cooperative sales of petroleum and fertilizer exceeded feed sales, which led cooperative sales in 1951. Petroleum sales of 44 percent in the Northeast and 31 percent in the Western region helped

make it the leading production item sold by cooperatives in 1981. The percentage of feed sales declined in all regions from 1951, enabling fertilizer sales to top feed sales for second place.

Shift in Regional Sales, 1951-81

Twenty-six percent of total cooperative supplies were sold in the West North Central region in 1951, 23 percent in the East North Central region, and 21 percent in the Northeast. The West had 13 percent, the Southeast 9 percent, and the South Central region 8 percent.

Thirty-four percent of all cooperative feed sales were made in the Northeast. Forty-seven percent of cooperative petroleum sales came from the West North Central region, while 30 percent of petroleum, 28 percent of fertilizer, 28 percent of equipment, and 27 percent of farm supplies sold by cooperatives in 1951 were in the East North Central region (table 26).

By 1981, cooperatives sold 36 percent of

Table 23—Cooperative sales of production supplies, and percentage distribution of sales, by region and supply item, 1951

Production supplies	Regions						Total U.S.
	NE	SE	ENC	WNC	SC	W	
<i>Million dollars</i>							
Feed	268.3	77.7	137.3	128.5	49.8	127.3	788.9
Fertilizer	29.4	29.9	50.9	24.8	35.2	11.1	181.3
Petroleum	20.6	17.2	111.8	170.9	13.9	37.5	366.9
Chemicals	3.3	2.5	5.1	3.5	3.9	4.7	23.0
Equipment	14.6	11.4	35.3	38.5	7.0	20.6	127.4
Field seeds	15.6	10.5	21.3	18.9	17.1	6.3	89.7
Supplies	20.9	20.8	62.7	77.8	13.7	33.0	228.9
Total	372.7	165.0	424.4	462.9	140.6	240.5	1,806.1
Percent	21	9	23	26	8	13	100
<i>Percent</i>							
Feed	72	47	32	28	35	53	44
Fertilizer	8	18	12	5	25	5	10
Petroleum	6	7	26	37	10	15	20
Chemicals	1	2	2	1	3	2	1
Equipment	4	7	8	8	5	9	7
Field seeds	4	6	5	4	12	3	5
Supplies	5	13	15	17	10	13	13
Total	100	100	100	100	100	100	100

Table 24—Cash expenditures by farmers for production supplies and percentage distribution of expenditures, by region and supply item, 1981

Production supplies	Regions						Total U.S.
	NE	SE	ENC	WNC	SC	W	
<i>Million dollars</i>							
Feed	2,544.6	2,374.9	2,289.3	4,664.8	4,289.0	3,741.0	18,904.6
Fertilizer	385.2	1,305.1	2,344.3	2,945.8	1,752.0	1,331.1	10,063.5
Petroleum	528.4	966.8	1,602.2	2,539.7	1,911.9	1,749.1	9,298.1
Chemicals	140.5	510.9	718.7	883.8	782.0	690.8	3,726.7
Equipment	636.4	1,365.9	2,470.2	3,609.6	2,448.6	2,076.3	12,607.0
Field seeds	235.9	404.6	943.8	1,115.6	709.4	546.7	3,956.0
Supplies	973.9	1,409.1	2,779.8	3,309.5	2,513.6	2,134.6	13,120.5
Total	4,444.9	8,337.3	13,148.3	19,069.8	14,406.5	12,269.6	71,676.4
Percent	6	12	18	27	20	17	100
<i>Percent</i>							
Feed	35	28	17	25	30	30	26
Fertilizer	9	16	18	15	12	11	14
Petroleum	12	12	12	13	13	14	13
Chemicals	3	6	6	5	5	6	5
Equipment	14	16	19	19	17	17	18
Field seeds	5	5	7	6	5	5	6
Supplies	22	17	21	17	18	17	18
Total	100	100	100	100	100	100	100

Table 25—Cooperative sales of production supplies and percentage distribution of sales, by region and supply item, 1981

Production supplies	Regions						Total U.S.
	NE	SE	ENC	WNC	SC	W	
<i>Million dollars</i>							
Feed	634.0	435.9	623.9	1,055.5	433.0	349.0	3,531.3
Fertilizer	151.6	296.9	888.9	1,435.9	638.7	237.8	3,649.8
Petroleum	937.4	300.9	1,232.3	2,164.3	406.3	491.4	5,532.6
Chemicals	64.6	108.3	302.5	452.0	262.7	84.9	1,275.0
Equipment	121.5	52.0	143.0	316.3	77.8	101.3	811.9
Field seeds	40.0	64.8	90.3	152.8	141.2	65.6	554.7
Supplies	194.9	144.8	257.1	496.0	188.8	280.0	1,561.6
Total	2,144.0	1,403.6	3,538.0	6,072.8	2,148.5	1,610.0	16,916.9 ¹
Percent	13	8	21	36	13	9	100
<i>Percent</i>							
Feed	30	31	18	17	20	22	21
Fertilizer	7	21	25	24	30	15	22
Petroleum	44	21	35	36	19	31	33
Chemicals	3	8	9	7	12	5	7
Equipment	5	4	4	5	4	6	5
Field seeds	2	5	2	3	6	4	3
Supplies	9	10	7	8	9	17	9
Total	100	100	100	100	100	100	100

¹Total supply sales after adjustments for Alaska, Hawaii, and foreign sales.

their production supplies in the West North central region, up from 26 percent in 1951. The South Central region increased its share of total cooperative sales to 13 percent in 1981, up from 8 percent in 1951, while other regions lost percentage share in 1981 (table 26). The Western region declined from 13 percent to 9 percent, the Northeast from 21 percent to 13 percent, the Southeast from 9 percent to 8 percent, and the East North Central from 23 percent in 1951 to 21 percent in 1981.

The West had smaller percentage sales in feed, petroleum, chemicals, and equipment in 1981 than 1951; the Northeast in feed, fertilizer, chemicals, and field seeds; the Southeast in fertilizer, chemicals, and equipment, and the East North Central in fertilizer, petroleum, equipment, field seeds, and farm supplies from proportional cooperative sales in 1951 (table 26). The big winners in the West North Central region were feed, fertilizer, and chemical sales, which doubled in sales percentages from 1951 to 1981.

Cooperative sales generally followed trends in agricultural production and shifts in production from one region to another. For example, Northeast farmers had 16 percent of total feed expenditures in 1951 but only 8 percent in 1981 primarily because poultry production moved to the South. Thus, feed sales, which made up 34 percent of total cooperative feed sales in 1951, declined proportionally to 18 percent in 1981. The decline in fertilizer expenditures and corresponding decline in cooperative fertilizer sales in the Southeast were caused by the movement of cotton production to the South Central and Western regions.

Fertilizer and chemical expenditures in the West North Central region tripled on a percentage basis from 1951 to 1981 while cooperative sales of these items nearly doubled. Production expenditures by farmers increased in proportion in the South Central region and the West North Central region from 1951 to 1981 and declined in the Northeast, East

Table 26—Percentage distribution of cooperative sales of production supplies, by region, 1951 and 1981

Production supplies and year	Regions						Total U.S.
	NE	SE	ENC	WNC	SC	W	
<i>Percent</i>							
1951:							
Feed	34	10	18	16	6	16	100
Fertilizer	16	16	28	14	20	6	100
Petroleum	6	3	30	47	4	10	100
Chemicals	14	11	22	15	17	21	100
Equipment	11	9	28	30	6	16	100
Field seeds	17	12	24	21	19	7	100
Supplies	9	9	27	34	6	15	100
Total	21	9	23	26	8	13	100
1981:							
Feed	18	12	18	30	12	10	100
Fertilizer	4	8	24	39	18	7	100
Petroleum	17	5	22	40	7	9	100
Chemicals	5	8	24	35	21	7	100
Equipment	15	6	18	39	10	12	100
Field seeds	7	12	16	28	25	12	100
Supplies	13	9	16	32	12	18	100
Total	13	8	21	36	13	9	100

Table 27—Cash expenditures by farmers for production supplies, 1951 and 1981

Production supplies and year	Regions						Total U.S.
	NE	SE	ENC	WNC	SC	W	
<i>Percent</i>							
1951:							
Feed	16	10	17	24	15	8	100
Fertilizer	11	29	21	10	20	9	100
Petroleum	7	9	20	30	18	16	100
Chemicals	12	21	9	7	21	30	100
Equipment	6	8	23	30	17	16	100
Field seeds	9	11	21	25	21	13	100
Supplies	6	5	15	27	18	29	100
Total	10	10	19	25	17	19	100
<i>Percent</i>							
1981:							
Feed	8	12	12	25	23	20	100
Fertilizer	4	13	23	29	18	13	100
Petroleum	6	10	17	27	21	19	100
Chemicals	4	14	19	24	21	18	100
Equipment	5	11	20	29	19	16	100
Field seeds	6	10	24	28	18	14	100
Supplies	7	11	22	25	19	16	100
Total	6	12	18	27	20	17	100

North Central, and Western regions (table 27).

Cooperative Performance in Regions

Performance can be measured also by cooperative sales volume in a region relative to cash expenditures by farmers for production supplies. For example, in the Northeast, cash expenditures for supplies amounted to just 10 percent of production supplies in 1951 and declined proportionally to 6 percent in 1981 (table 27). But cooperatives sold 29 percent of total production supplies in the region in 1951 and 48 percent in 1981. Total cash expenditures increased nearly four times from 1951 to 1981 in the region while total cooperative sales increased nearly six times. Thus, cooperative sales relative to potential sales were higher in the Northeast than in any other region in both 1951 and 1981 (tables 22 and 23).

Cash expenditures for production supplies in the Southeast were 10 percent of total U.S. expenditures in 1951 and rose to 12 percent in 1981. Cooperatives sold 13 percent of production supplies in the region in 1951 and increased sales to 17 percent in 1981. Cash expenditures in the South Central region increased from 17 percent in 1951 to 20 percent of total expenditures in 1981, while cooperatives increased from a low of 6 percent in 1951 to 15 percent in 1981. Cooperative sales of production supplies in the South Central region showed the greatest increase between 1951 and 1981.

Cooperatives in the West North Central region were first in total sales of supplies in 1951 and 1981. However, in rate of increased sales over the period, the region ranked second to cooperative growth in the South Central region, and second to the Northeast in percent of sales to cash expenditures, with 32 percent to cooperatives 48 percent in the Northeast. While cash expenditures declined in percent of total U.S. expenditures, in both the East North Central and Western regions, cooperative sales of production supplies

increased in both regions. They went from 18 percent in 1951 to 27 percent in 1981 in the East North Central and from 10 percent to 13 percent in the Western region.

Cooperative Share of Supply Market

Cooperative supply sales to nonfarmers were deducted from net cooperative sales to determine cooperative sales of production supplies to farmers. These sales were compared with farm production expenditures for each State to determine cooperative share of production supplies in 1951 and 1981 (table 28). These data are limited to interpretation and accuracy of cooperative's reporting sales to farmers within and outside the State. In reporting cash expenditures for production supplies in each State, ERS makes some estimates from limited data. However, estimates are based on the best information currently available.

Cooperative sales of production supplies to farmers amounted to \$1.6 billion in 1951 or 12 percent of total farm production expenditures of \$12.9 billion. All Northeast States had above average cooperative shares of the farm supply market in 1951. The leading States were New Hampshire with 40 percent, New Jersey with 33 percent, and New York with 29 percent.

Maryland, Virginia, and Delaware had more than 20 percent cooperative share in the Southeast, but the other States fell below the national cooperative average of 12 percent. The five States of the East North Central region surpassed the average and raised cooperative share for the region to 16 percent. Minnesota, Missouri, and North Dakota held the region slightly above the cooperative average. All States in the South Central and all but Washington, Oregon, and Utah in the Western region had cooperative shares below the average in 1951.

By 1981, cooperative share increased to 20 percent. Nine States with above

average cooperative shares led the Northeast region to 41 percent share, double the national average. All States but Rhode Island in the Northeast had cooperative shares higher than any of the other States in the United States, (table 28). In New York, New Hampshire, and Massachusetts, farmers purchased more than half their production supplies from cooperatives in 1981. While the Northeast was low in volume of farm supplies purchased, it was highest in cooperative patronage in both 1951 and 1981.

Southeast States with a 14-percent average cooperative share fell further below the cooperative average in 1981. Farm supply cooperatives in this area need some attention, especially in North Carolina and Florida. States of the East North Central region averaged a 23-percent cooperative share, but growth was below the average for cooperatives in the United States.

West North Central States, with cooperative shares of 24 percent to 30 percent, were second to the Northeast in highest cooperative share and second to the South Central region in rate of growth from 1951 to 1981. Cooperative supply growth was greatest in the South Central region where a number of States more than doubled cooperative share by 1981. Although below average cooperative share, South Central region supply cooperative operations are leading the way to greater growth.

Although the Western region States of Washington, Oregon, Utah, and Montana had above average cooperative shares in 1981, heavy farm production expenditures in California and low cooperative sales of 5 percent effectively lowered the average for the region. The region had the lowest cooperative share in 1981 and also the slowest growth rate, so there is ample opportunity for cooperative supply growth in the West, particularly California.

Table 28—Cooperative share of farm production supplies sold to farmers, by State and region, 1951 and 1981

State and region	1951			1981		
	Cooperatives sales to farmers	Farm production expenditures	Cooperatives share of market	Cooperatives sales to farmers	Farm production expenditures	Cooperatives share of market
— — — Million dollars — — —						
Maine	15.4	82.2	18.7	74.5	303.2	24.6
New Hampshire	14.5	36.5	39.7	37.9	73.5	51.6
Vermont	9.1	58.5	15.6	90.7	235.9	38.5
Massachusetts	21.1	93.8	22.5	81.6	161.5	50.5
Rhode Island	1.6	11.2	14.3	7.6	19.8	38.4
Connecticut	15.8	77.5	20.4	78.7	164.4	47.9
New York	118.5	404.8	29.3	791.2	1,533.0	51.6
New Jersey	49.9	149.6	33.4	113.8	369.6	42.2
Pennsylvania	88.2	384.0	22.9	531.3	1,684.0	31.6
NE region	334.1	1,298.1	25.7	1,807.3	4,444.9	40.7
Delaware	10.9	53.4	20.4	47.3	209.3	22.6
Maryland	30.4	125.9	24.2	182.1	648.3	28.1
Virginia	45.8	202.2	22.7	334.9	1,018.5	32.9
West Virginia	7.4	63.6	11.6	70.3	203.2	34.6
North Carolina	27.7	286.5	9.7	167.6	2,123.5	7.9
South Carolina	3.9	137.9	2.8	59.2	709.4	8.4
Georgia	10.4	249.4	4.2	224.7	1,892.9	11.9
Florida	11.3	179.6	6.3	98.6	1,532.2	6.4
SE region	147.8	1,298.5	11.4	1,184.7	8,337.3	14.2
Ohio	81.2	430.7	18.9	493.9	2,292.7	21.5
Indiana	75.5	432.1	17.5	612.9	2,575.3	23.8
Illinois	96.5	810.6	11.9	893.7	4,251.4	21.0
Michigan	45.1	294.4	15.3	242.5	1,563.6	15.5
Wisconsin	82.3	429.9	19.1	746.1	2,465.3	30.3
ENC region	380.6	2,397.7	15.9	2,989.1	13,148.3	22.7
Minnesota	104.8	517.4	20.3	975.6	3,367.1	28.9
Iowa	91.7	935.7	9.8	1,423.7	5,224.7	27.3
Missouri	71.1	419.7	16.9	747.8	2,528.0	29.6
North Dakota	34.9	225.7	15.5	397.9	1,333.7	29.8
South Dakota	28.3	236.3	11.9	331.3	1,251.4	26.5
Nebraska	39.7	480.0	8.3	653.90	2,915.9	25.0
Kansas	44.5	455.9	9.8	595.3	2,449.0	24.3
WNC region	415.0	3,270.7	12.7	5,125.5	19,069.8	26.9
Kentucky	14.5	205.7	7.1	214.0	1,366.7	15.7
Tennessee	13.1	181.9	7.2	269.9	1,196.6	22.6
Alabama	12.9	164.5	7.8	230.2	1,259.5	18.3
Mississippi	17.5	193.3	9.1	251.1	1,229.3	20.4
Arkansas	15.6	216.5	7.2	236.2	1,812.1	13.0
Louisiana	3.1	137.7	2.3	122.9	932.6	13.2
Oklahoma	14.3	261.2	5.5	176.1	1,473.4	11.9
Texas	34.9	876.4	4.0	314.4	5,136.3	6.1
SC region	125.9	2,237.2	5.6	1,814.8	14,406.5	12.6
Montana	13.9	159.2	8.7	168.2	771.6	21.8
Idaho	11.6	151.8	7.6	91.7	962.0	9.5
Wyoming	2.0	77.6	2.6	26.9	274.0	9.8
Colorado	14.2	270.7	5.3	178.8	1,123.6	15.9
New Mexico	3.0	96.4	3.1	10.1	425.7	2.4
Arizona	3.4	135.6	2.5	28.6	719.4	3.9
Utah	11.2	75.1	14.9	70.9	320.0	22.2
Nevada	.2	20.7	1.0	.4	104.2	.4
Washington	48.6	218.0	22.3	321.1	1,290.8	24.9
Oregon	31.7	186.9	16.9	208.8	848.0	24.6
California	75.8	1,101.3	6.9	245.7	5,262.7	4.7
Alaska and Hawaii	—	—	—	5.4	167.6	3.2
W region	215.6	2,493.3	8.7	1,356.6	12,269.6	11.1
U.S. total	1,619.0	12,995.5	12.4	14,278.0	71,676.4	19.9

Appendix table 1—Net value of cooperative marketing, by region

Region	1951		1981	
	Mil. dol.	Percent	Mil. dol.	Percent
Northeast	697.5	10.0	3,062.5	5.8
Southeast	433.5	6.2	3,681.6	7.0
South Central	801.3	11.5	6,194.5	11.8
East North Central	1,708.0	24.5	11,451.3	21.9
West North Central	1,865.6	26.8	18,113.2	34.6
Western	1,455.2	21.0	9,913.8	18.9
Total	6,961.1	100.0	52,416.9	100.0

Appendix table 2—Net value of all farm products marketed, by region

Region	1951		1981	
	Mil. dol.	Percent	Mil. dol.	Percent
Northeast	2,806.6	8.8	7,713.1	5.4
Southeast	3,480.3	10.7	15,984.1	11.1
South Central	5,947.7	18.3	27,158.4	18.9
East North Central	6,077.8	18.7	23,441.6	16.3
West North Central	8,027.3	14.7	39,311.8	27.4
Western	6,052.9	18.8	29,813.8	20.9
Total	32,446.6	100.0	143,422.8	100.0

Appendix table 3—Cooperative marketing of farm products, by region, 1951

Commodity	Region						Total U.S.
	NE	SE	ENC	WNC	SC	W	
<i>Million dollars</i>							
Grain and soybeans	11.2	11.4	82.1	386.2	794.5	202.5	1,487.9
Milk and products	493.6	105.2	106.5	675.6	437.3	249.6	2,067.8
Livestock products	36.8	17.3	122.9	579.6	536.9	226.3	1,519.8
Fruits and vegetables	67.6	134.3	9.8	16.6	8.1	412.4	648.8
Cotton products	0	25.1	258.8	0	2.9	63.4	350.2
Sugar crops	.5	0	8.9	9.0	12.7	116.2	147.3
Poultry and eggs	78.5	33.7	7.8	30.6	60.3	81.1	292.0
Special crops	9.3	106.5	204.5	10.4	12.9	103.7	447.3
Total	697.5	433.5	801.3	1,708.0	1,865.6	1,455.2	6,961.1
<i>Percent</i>							
Grain and soybeans	1	1	6	26	53	13	100
Milk and products	24	5	5	33	21	12	100
Livestock products	3	1	8	38	35	15	100
Fruits and vegetables	10	20	2	3	1	64	100
Cotton products	0	7	74	0	1	18	100
Sugar crops	(1)	0	6	6	9	79	100
Poultry and eggs	27	12	3	10	20	28	100
Special crops	2	24	46	2	3	23	100
Average	10	6	12	25	27	20	100

¹Less than 1 percent.

Appendix table 4—Cooperative marketing of farm products, by region, 1981

Commodity	Region						Total U.S.
	NE	SE	ENC	WNC	SC	W	
<i>Million dollars</i>							
Grain and soybeans	73.6	393.7	1,874.9	4,778.1	11,212.7	1,438.9	19,772.9
Milk and products	2,219.7	1,274.6	1,475.8	4,569.5	3,323.5	2,152.3	15,015.4
Livestock products ¹	95.8	74.7	331.5	1,437.2	2,836.9	419.8	5,195.9
Fruits and vegetables	592.0	712.1	42.8	504.4	41.9	2,577.7	4,470.9
Cotton products	—	8.3	909.5	—	2.4	753.9	1,674.1
Sugar crops	—	227.3	166.6	16.5	531.7	624.0	1,566.1
Poultry and eggs	65.8	577.0	272.7	62.7	110.3	65.4	1,153.9
Special crops ²	15.6	413.9	1,120.7	82.9	52.8	1,881.8	3,567.7
Total	3,062.5	3,681.6	6,194.5	11,451.3	18,113.2	9,913.8	52,416.9
<i>Percentage distribution</i>							
Grain and soybeans	1	2	9	24	57	7	100
Milk and products	15	9	10	30	22	14	100
Livestock products ¹	2	1	6	28	55	8	100
Fruits and vegetables	13	16	1	11	1	58	100
Cotton products	0	1	54	0	(³)	45	100
Sugar crops	0	14	11	1	34	40	100
Poultry and eggs	6	50	23	5	10	6	100
Special crops ²	1	12	31	2	1	53	100
Average	6	7	11	22	35	19	100

¹Includes wool. ²Includes rice, dry beans and peas, peanuts, tree nuts, tobacco, and other. ³Less than 1 percent.



Appendix table 5—Net business volume of marketing, farm supply, and related service cooperatives, 1951-81

Period ¹	Net volume (excludes intercooperative business)			
	Farm products marketed	Farm supplies	Related services ²	Total
<i>1,000 dollars</i>				
1950-51	6,361,766	1,685,413	99,958	8,147,137
1955-56	7,495,159	2,046,086	214,880	9,756,125
1960-61	9,631,247	2,472,286	305,600	12,409,133
1961-62	10,160,364	2,561,338	302,102	13,023,804
1962-63	10,834,165	2,704,400	303,281	13,841,846
1963-64	11,209,069	2,831,586	313,103	14,353,758
1964-65	11,516,217	2,910,188	315,527	14,741,932
1965-66	12,197,744	3,085,382	325,071	15,608,197
1966-67	12,899,762	3,339,207	317,570	16,556,539
1967-68	13,189,137	3,544,854	316,014	17,040,005
1968-69	13,420,765	3,615,271	350,761	17,386,797
1969-70	14,816,000	3,873,211	391,176	19,080,387
1970-71	15,801,872	4,339,529	414,299	20,555,700
1971-72	16,463,065	4,739,603	462,240	21,664,908
1972-73	19,573,016	5,914,962	502,800	25,990,778
1973-74	26,943,792	7,764,027	657,730	35,365,549
1974-75	31,937,363	8,660,605	744,477	41,342,445
1975-76	29,783,115	9,411,685	855,277	40,050,077
1976-77	32,133,711	10,557,465	892,977	43,584,153
1978 ³	35,305,600	11,051,865	947,655	47,305,120
1979	41,693,349	13,521,489	1,053,559	56,268,397
1980	48,911,018	16,134,111	1,209,225	66,254,354
1981 ⁴	53,284,950	17,058,630	1,190,385	71,533,967
1982	51,393,826	16,362,124	1,394,36	69,150,336

¹For years prior to 1950-51, see appendix table 7, FCS General Report 128, in libraries. Data for prior years are not entirely comparable due to revisions in statistical procedures in 1950-51.

²Services related to marketing or supply purchasing but not included in the volumes reported for these activities.

³Previously, data for farmer cooperatives were reported on a fiscal year basis. Beginning in 1978, data are included for the calendar year. Data for 1978 are estimated.

⁴Preliminary.

Appendix table 6—Cooperative gross business volume by commodity, 1981¹

Commodity	Cooperatives handling ²	Gross volume (including inter-cooperative business)
	Number	1,000 dollars
Products marketed:		
Beans and peas (dry edible)	59	247,246
Cotton and cotton products	480	2,469,549
Dairy products	470	16,572,275
Fruits and vegetables	388	5,985,812
Grain, soybeans and soybean meal and oil	2,410	32,599,061
Livestock and livestock products	435	5,592,183
Nuts	49	692,510
Poultry products	74	1,299,874
Rice	57	1,279,314
Sugar products	41	1,935,670
Tobacco	36	471,817
Wool and mohair	140	60,110
Miscellaneous ³	114	956,131
Total farm products	⁴ 4,308	70,161,551
Supplies purchased:		
Building materials	2,097	583,900
Containers and packaging supplies	658	298,970
Farm chemicals	3,684	2,225,248
Farm machinery and equipment	1,822	564,370
Feed	3,603	5,590,005
Fertilizer	3,789	6,910,499
Meats and groceries	482	219,350
Petroleum products	2,911	11,067,399
Seed	3,607	775,403
Miscellaneous supplies ⁵	4,326	1,892,180
Total farm supplies	⁴ 5,009	30,127,323
Services provided:		
Trucking, cotton ginning, storage, grinding, locker plants, misc.	⁴ 4,608	⁶ 1,190,385
Total business	⁴ 6,211	101,479,260

¹Preliminary. Totals may not add due to rounding.

²Numbers are based on 1980 survey results due to sampling procedures use in 1981.

³Includes coffee, forest products, hay, hops, seed marketed for growers, nursery stock, other farm products not separately classified, and sales of farm products not received directly from member-patrons.

⁴Because many cooperatives do more than one type of business, these totals are fewer than the number obtained by adding the number of cooperatives handling individual items or performing individual services.

⁵Includes plant equipment, automotive supplies, hardware, chicks, and other supplies not separately classified.

⁶Charges for services related to marketing or purchasing but not included in the volume reported for these activities.

**U.S. Department of Agriculture
Agricultural Cooperative Service**

Agricultural Cooperative Service (ACS) 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 agency (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.

ACS publishes research and educational materials and issues *Farmer Cooperatives* magazine. All programs and activities are conducted on a nondiscriminatory basis, without regard to race, creed, color, sex, or national origin.