

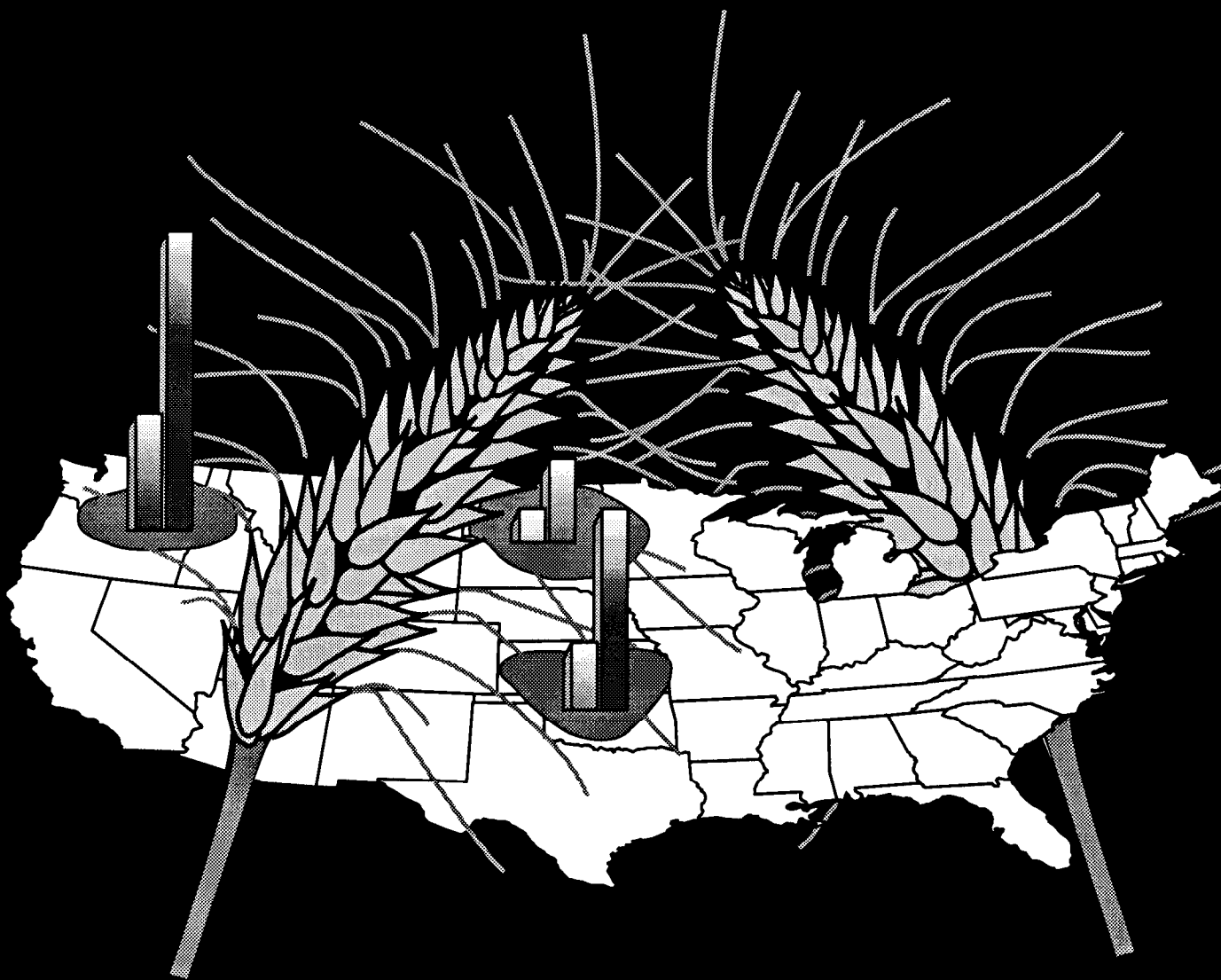


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CS Research  
Report 132

# Wheat Grain Cooperatives Adjust to Challenges of 1980s, Poised for 1990s



## Abstract

### **Wheat Grain Cooperatives Adjust to Challenges of 1980s, Poised for 1990s**

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This report presents information for 1983 through 1991 on the physical and financial structure adjustments made by local first-handlers-of-grain cooperatives in three major wheat areas-Northern Plains, Southern Plains, and Pacific Northwest. They had annual total sales of at least \$5 million, more than half in grain. Most associations also handled farm supplies and all provided related services.

Local cooperative grain handlers faced abrupt changes in export markets for grains and oilseeds, shifts in Government policy, and occasional drought, accompanied by wide swings in grain prices. Most associations represented in this report adjusted successfully to changing economic conditions through sound financial management of particularly long-term debt and operating capital. The economic position of most locals improved in the latter half of the period due in part to increased patronage from their regional cooperatives.

**Keywords:** cooperative, grain, adjustment, expenses, debt, patronage

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## Preface

This report is based on balance sheet and operating statement data from cooperatives' annual reports requested for an annual survey of grain marketing cooperatives by **USDA/RDA— Cooperative Services**. Grain cooperatives are defined as those whose sales of grains and **oilseeds** account for more than half of total sales. Other types of information, such as volume of grain handled and storage capacity, were obtained directly from first-handler cooperatives.

Report information is for two sizes of local first-handler associations in the Southern Plains (SP), Northern Plains (NP), and Pacific Northwest (PNW). Large cooperatives had \$15 million or more in total sales. Medium-sized ones ranged from \$5 million to \$14.9 million. In fiscal 1991, both groups combined accounted for an estimated 85, 72, and 92 percent of total grains and **oilseeds** sales by local grain cooperatives in their respective areas.

These cooperatives specialized in handling wheat and sorghum (Southern Plains); wheat, barley, and oats (Northern Plains); and wheat and barley (Pacific Northwest). Most cooperatives were diversified, also handling farm supplies. All provided related services.

Information for this report is based on condensed balance sheets and operating statements. Financial report adjustments were made to ensure data comparability because of variations in accounting, auditing practices, and terminology. Some detail was lost in the process. Data reported are averages per, not totals for, first-handler grain associations.

This report may help cooperative managers and boards make sound business decisions as they adjust to variations of old problems and consider the need for increased capital for improved or new facilities and/or services. Information can be used to compare your cooperative with others of similar size.

## Glossary of Terms

**Current assets-** Value of assets readily converted into cash without interfering with normal business operations.

**Investments—** Dollar value of investments in other businesses, mainly cooperative associations, and deferred patronage.

**Fixed assets-** Dollar value of property, structures and equipment (less depreciation), land, construction in progress, and capital leases.

**Other assets-** All other assets such as bond cost amortization and deferred and prepaid expenses.

**Current liabilities-** Dollar value of liabilities, including that portion of long-term debt due in a year or less and patronage refunds payable.

**Long-term liabilities-** Value of all debts with a maturity of more than 1 year, such as debentures, notes, industrial revenue bonds, and mortgage notes.

**Total debt-** Dollar value of all long-term liabilities plus the current portion of those liabilities, seasonal loans, and debenture notes.

**Net worth or equity capital—** Dollar value of owners' equity listed in the equity sections. Includes common/capital/preferred stock, allocated/unallocated earnings, per-unit retains, and certificates of indebtedness and membership.

**Unallocated reserves—** Equity capital generally, but not exclusively, viewed as available for investment in facility expansion or growth. Comparable terminology includes capital and general reserve; unallocated patronage; retained savings, earnings, margins, and income; and surplus.

**Gross margins—** Dollar value of sales of grains and oilseeds and farm supplies less cost of goods sold.

**Other operating income-** Dollar value of storage and handling fees, service revenue, load-out fees, cleaning, drying, mixing, commissions, finance charges, etc.

**Nonoperating income-** Dollar value of net interest income/expenses, gain or loss from sale of assets, dividends on stock, and patronage refunds from other cooperatives.

**Gross income-** Dollar value of gross margins plus other operating and non-operating income.

## Glossary of Terms

**Total expenses**— Dollar value of labor, administrative, and other general expenses such as depreciation, repairs, utilities, and property taxes.

**Labor expense** Dollar value of salaries and wages and fringe benefits, including Social Security, workers' compensation, unemployment, retirement, hospitalization, bonuses, and other expenses directly related to labor.

**Net savings (losses)**— Dollar value of gross income minus total expenses before income taxes.

**Allocation of net savings**— Dollar value (1) paid in cash as patronage refunds, (2) paid in cash as dividends or interest on stock, (3) allocated to patrons on the book, (4) retained as equity or unallocated retained earnings, (5) allocated to an educational fund, and (6) set aside for Federal and State income taxes.

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## Highlights

This report presents information for 1983 through 1991, except for 1984, on the physical and financial structure of local first-handlers-of-grain cooperatives in three major wheat areas with total sales of at least \$5 million. Annual survey and cooperatives' annual records for their operations revealed:

- Average net savings per association were lowest for wheat-barley-oats (Northern Plains) cooperatives and highest for wheat-barley (Pacific Northwest) firms. The net savings spread among the three types was relatively uniform during the period for medium-sized firms and narrowed significantly the latter half of the period for large ones.
- Net savings per association for both large and mid-sized cooperatives generally edged downward in the early 1980s, rose and averaged highest during 1986-87, then sharply dropped during 1989-91.
- Early declines in net savings were largely related to the sharp dropoff in grain exports and falling prices after expansion in the late 1970s; mid-period rises to the Government storage program and rising prices; and latter declines due largely to falling prices, drought, and producer participation in the Conservation Reserve Program.
- Although almost nonexistent in the early 1980s, except in the Southern Plains (wheat-sorghum), patronage refunds received from largely regional cooperatives rose sharply in the late 1980s and early 1990s. This income source was significantly more important for medium-sized firms than for large ones, contributing up to 55 percent to total net savings during 1989-91.
- Grain sales were a stabilizing factor throughout the period and contributed significantly more to total sales on wheat-barley-oats and wheat-barley cooperatives than on wheat-sorghum ones.
- Grain averaged at least 82 percent of total sales for wheat-barley-oats and wheat-barley cooperatives, considerably higher than the 68 percent for the medium-sized and 63 percent for the large wheat-sorghum firms.
- Total margins on total sales were consistently higher for wheat-sorghum than for wheat-barley-oats and wheat-barley cooperatives, due mainly to their higher proportion of farm supply sales. Grain margins were low throughout the period and, except for the wheat-barley cooperatives in the Pacific Northwest, varied considerably more than farm supply margins.
- In general, cooperatives in both size groups had sharply reduced long-term debt to manageable levels by the late 1980s. Exceptions were medium-sized wheat-barley-oats and large wheat-barley firms.

## Highlights

- Medium-sized wheat grain associations owned more of their assets than their counterparts. Beginning in the mid-1980s, member ownership improved for medium-sized firms while leveling off for large ones.
- For most size-location situations, local grain-handling wheat cooperatives not only paid out more earnings as patronage during the latter years, but also retained more as unallocated reserves for investment in the business.
- Despite closer management of operations in the 1980s, labor costs generally increased in dollar terms for firms in all three areas. Except for medium-sized wheat-barley-oats cooperatives, labor as a proportion of total expenses generally declined until the latter 1980s and then rose entering the 1990s.
- Internal and external expansion of grain storage capacity occurred during the latter part of the study period. Except for the large wheat-sorghum cooperatives, grain storage capacity per association averaged larger during 1989-91 than during 1983-85—12 percent for medium-sized firms and 5 and 8 percent for large firms.

Substantial change occurred during the 1980s. First-handlers in the three major wheat areas adjusted to abrupt changes in export markets for grains and oilseeds, Government policy shifts, and drought conditions, all accompanied by wide swings in grain prices. The key to cooperatives adjusting to such conditions is sound financial management, particularly of debt and operating capital.

Considerable effort is still needed to manage debt and operating capital and grain merchandising. Financial management is probably the most important, complex, and yet rewarding managerial activity in operating grain-handling cooperatives. Grain merchandising probably is a close second. Financial planning should include (1) generation of more permanent capital to replace or supplement revolving types, (2) equitable membership participation in financing, and (3) making maximum use of financial leverage.

Traditionally, much operating capital of cooperatives was provided by members, even though this is a more restrictive way to finance operations. During the 1970s, many grain-handling cooperatives discovered they could not expand operations solely on internal (or equity) financing. They found it increasingly necessary to borrow capital to meet growing financial needs and realize economies of scale.

Creative approaches to financing investment and grain merchandising are needed if cooperatives are to grow and be economically sound. Cooperatives experience of the 1980s should contribute significantly to meeting the challenges of the 1990s and beyond.



# Wheat Grain Cooperatives Adjust to Challenges of 1980s, Poised for 1990s

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## FIRST-HANDLER CHARACTERISTICS

This study analyzes changes in the financial structure and related operating characteristics of Southern Plains (SP), Northern Plains (NP), and Pacific Northwest (PNW) local cooperatives that are first-handlers of grain (also referred to as first-handlers, grain cooperatives, or associations). Annual sales were at least \$5 million, more than

half from grain. Most cooperatives were diversified, handling both farm supplies and grain.

These cooperatives are concentrated in Kansas and Oklahoma (SP), North and South Dakota (NP), and Washington and Oregon (PNW) and specialize in handling wheat and sorghum (SP); wheat, barley, and oats (NP); and wheat and barley (PNW) (fig. 1).

Figure 1— Location of Selected Types of First-Handler Grain Cooperatives

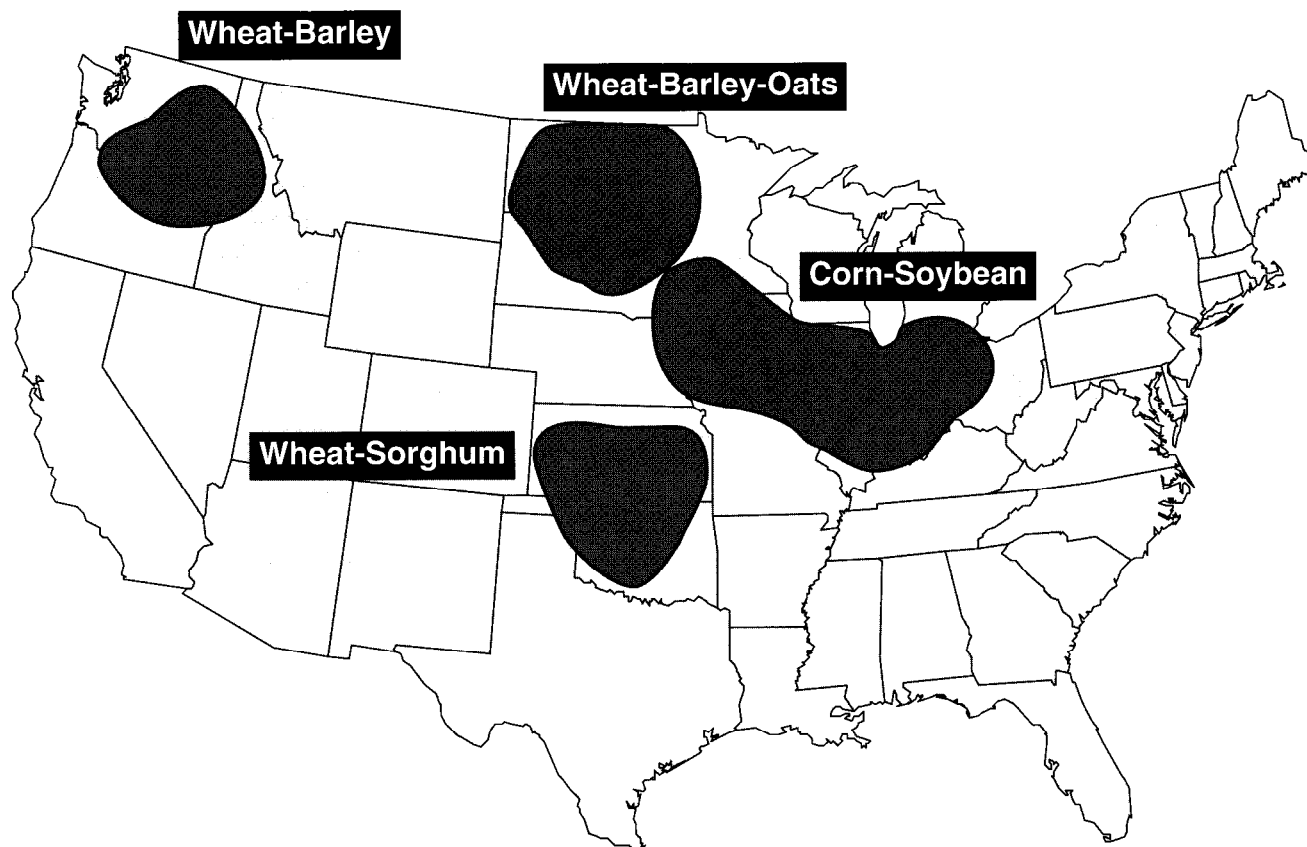


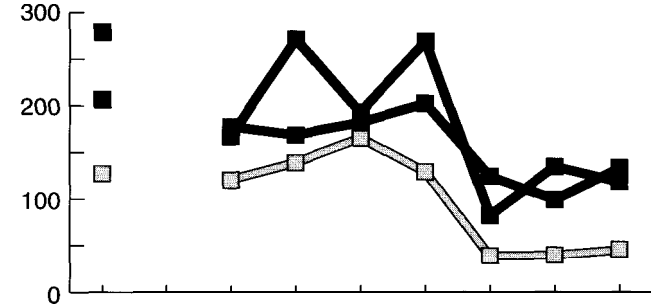
Figure 2

**Net Savings Realized**

Wheat First-Handler Co-ops

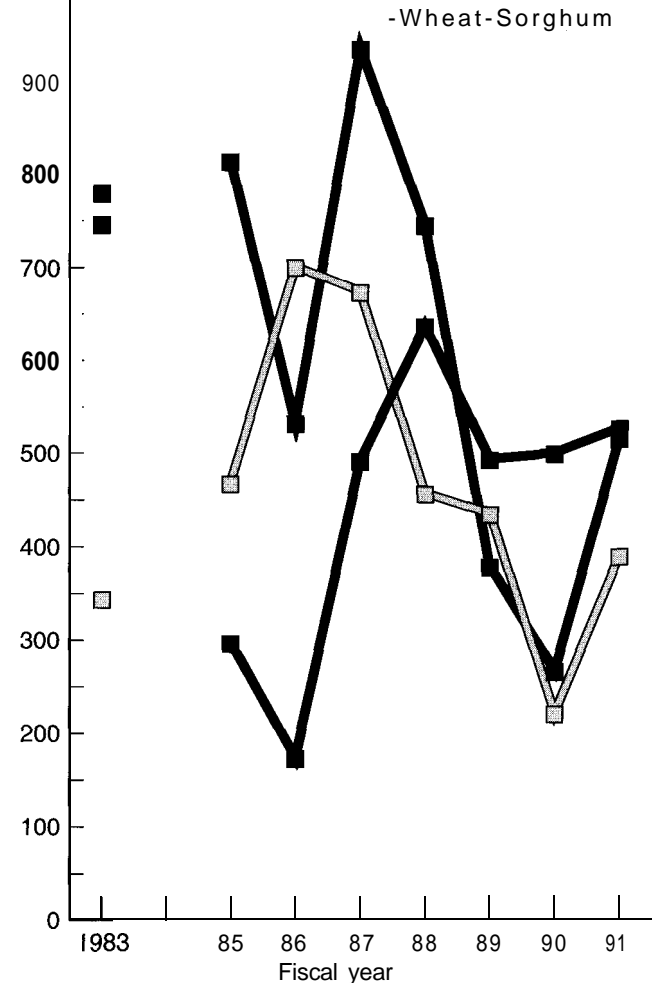
**Medium**

\$ Thous.



**Large**

1000



Fiscal year 1984 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales.

**NET SAVINGS**

Net savings per association for both medium-sized and large grain cooperatives generally edged downward in the early 1980s, rose slightly and averaged highest in the mid-1980s, then dropped sharply and averaged lowest during 1989-91 (fig. 2). Early period declines were largely related to the sharp dropoff in grain exports and falling prices. This was followed by a recovery period featuring a Government storage program and generally rising prices. The subsequent sharp drop in savings was partially due to generally lower prices, drought, and participation in particularly the Conservation Reserve Program (CRP). Wheat-sorghum (SP) cooperatives were least impacted while large wheat-barley-oats (NP) and wheat-barley (PNW) cooperatives were affected most by the CRP.

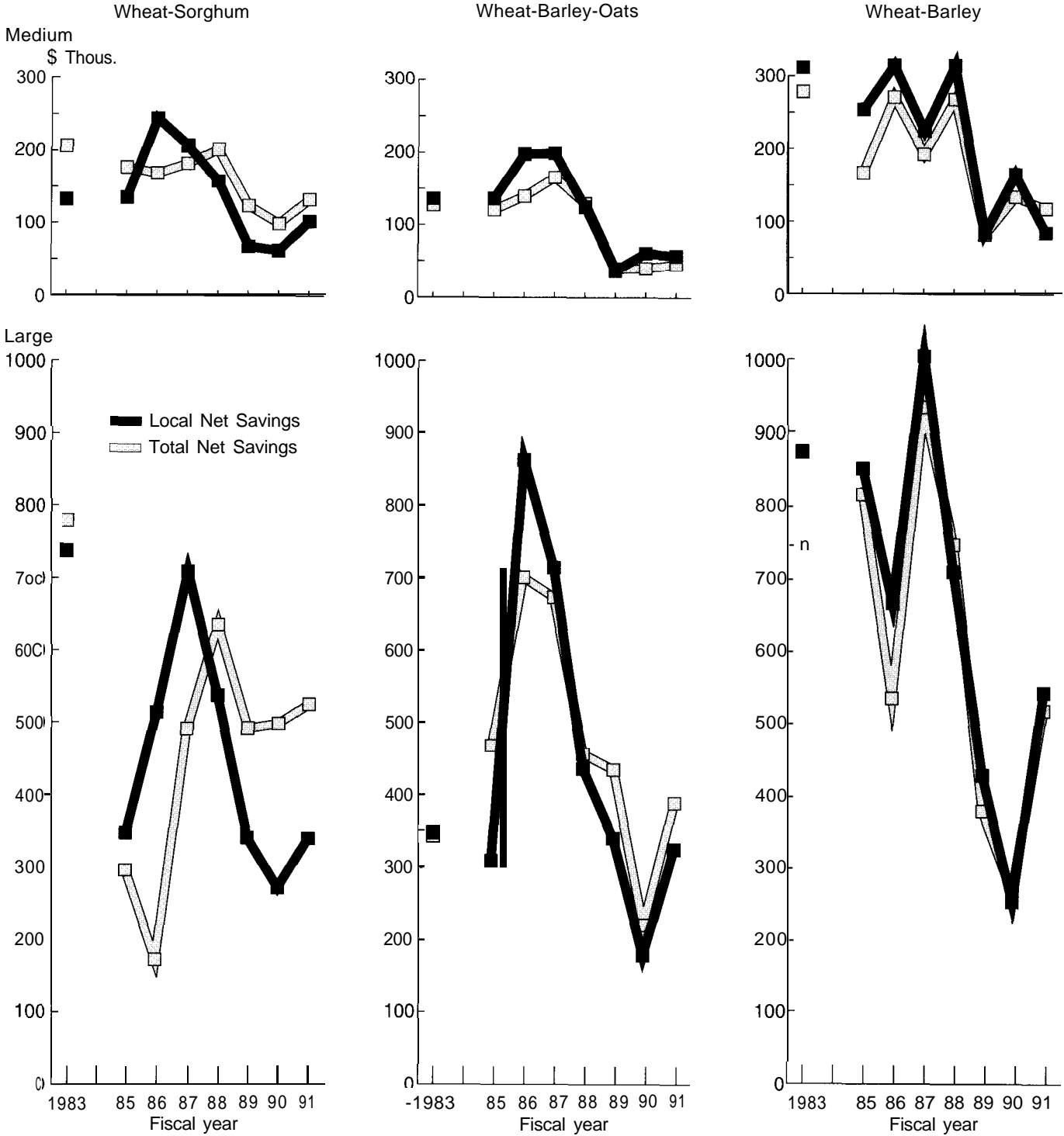
Local net savings reveals interesting patterns for the period. The influence on total net savings of other sources of income had a substantial "worse off" effect on local wheat-sorghum (SP) grain handlers in the mid-1980s (fig. 3). For wheat-barley-oats (NP) and wheat-barley (PNW) cooperatives, nonoperating income sources hurt total net savings throughout the period, particularly on the wheat-barley cooperatives. The relative contribution of the various sources of nonoperating income (adjustments to local net savings) varied considerably during the period (fig. 4) and is discussed later.

Allocations of total net savings revealed a mixed pattern. The proportion of net savings allocated as patronage increased during the period while unallocated reserves declined for wheat-barley-oats and medium-sized wheat-barley cooperatives (fig. 5 and table 1).

This proportion for wheat-sorghum associations, particularly large locals, decreased after the mid-1980s. The proportion of patronage retained during the later years of the period was about the same as during the earlier years for most size-location situations (fig. 6). This proportion rose in the early 1990s for wheat-barley-oats and wheat-barley cooperatives. Retained patronage is an important source of capital for investment in cooperatives.

Figure 3

**Local and Total Net Savings, First-Handler Co-ops**

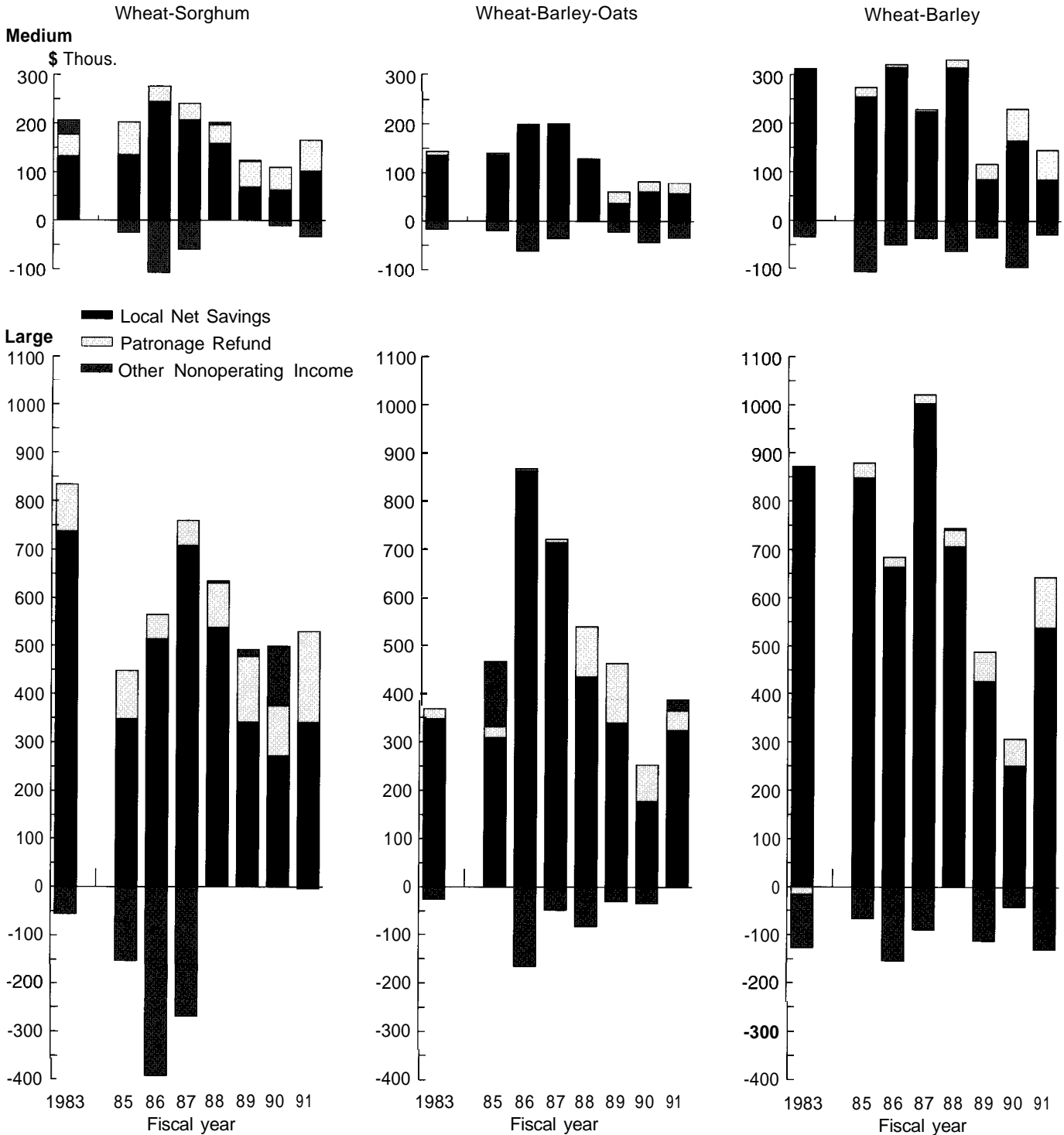


Fiscal year 1984 not available

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales

Figure 4

**Local Net Savings and Adjustments, First-Handler Co-ops**

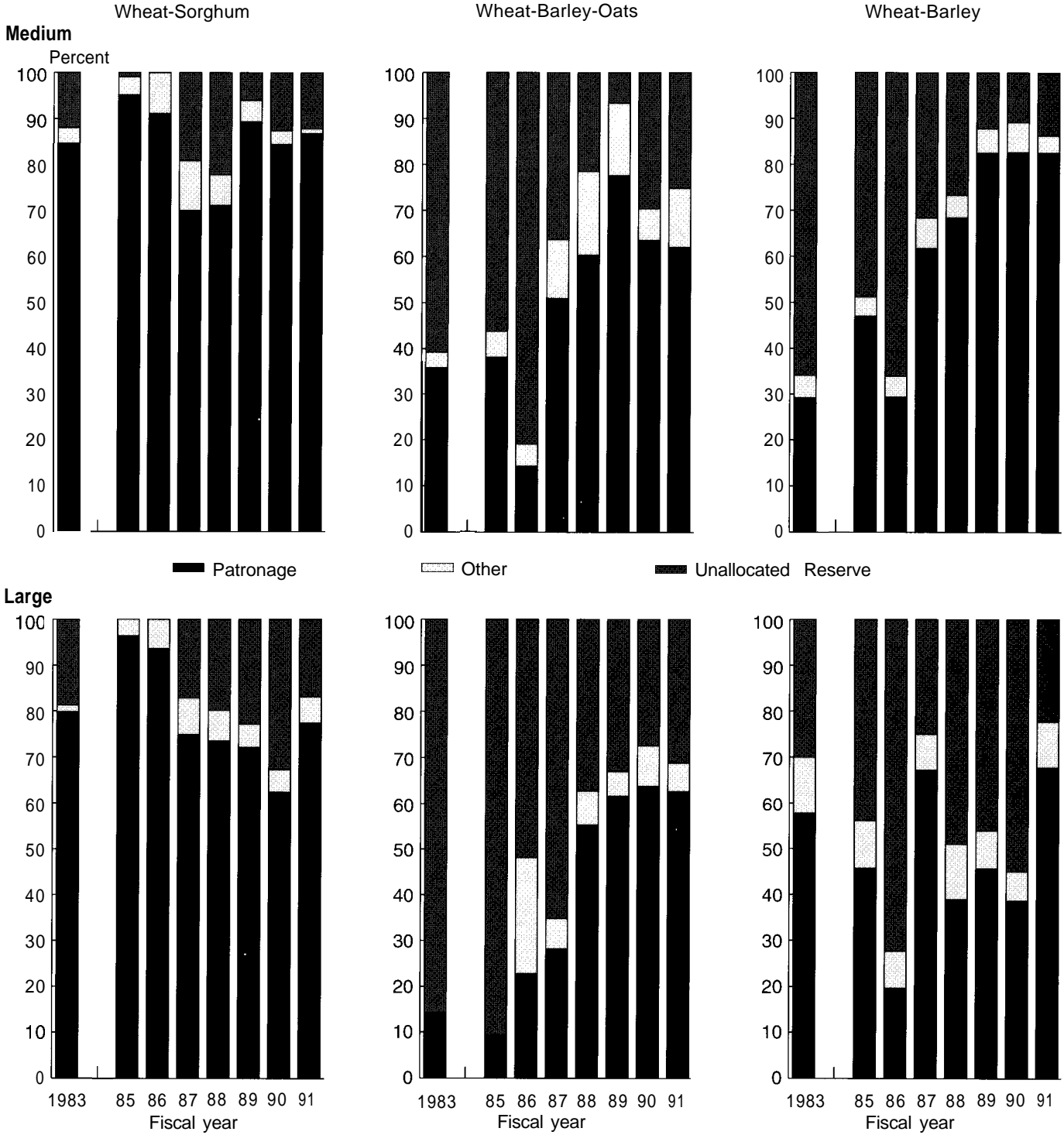


Fiscal year 1984 not available

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales

Figure 5

**Allocation of Net Savings, First-Handler Co-ops**



Fiscal year 1984 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales

**Table I-Allocation of net savings(loss) of wheat-sorghum first-handlers-of-grain cooperatives, by total sales group, 1983-91\***

Item	Unit	1983	1985	1986	1987	1988	1989	1990	1991
<i>\$5- 14.9 million</i>									
NET SAVINGS <sup>1</sup>	Dollars	206,237	177,406	168,862	182,355	202,296	124,105	99,194	132,889
Patronage, total	Percent	84.5	95.2	91.1	70.0	71.1	89.3	84.4	86.7
Paid in cash	Percent	35	37	39	43	39	41	42	47
Retained	Percent	65	63	61	57	61	59	58	53
Other <sup>2</sup>	Percent	3.6	3.9	8.9	10.9	6.7	4.7	3.0	1.1
Unallocated reserves	Percent	11.9	.9	—	19.1	22.2	6.0	12.6	12.2
<i>\$15 million or more</i>									
NET SAVINGS <sup>1</sup>	Dollars	777,792	295,551	172,611	490,790	634,949	491,903	498,384	525,632
Patronage, total	Percent	79.8	96.4	93.6	74.9	73.5	72.1	62.4	77.4
Paid in cash	Percent	29	32	38	45	31	49	29	31
Retained	Percent	71	68	62	55	69	51	71	69
Other <sup>2</sup>	Percent	1.5	3.6	6.4	8.0	6.7	5.1	4.9	5.8
Unallocated reserves	Percent	18.7	—	—	17.1	19.8	22.8	32.7	16.8

\*1984 data not available.

<sup>1</sup> Savings before income taxes and allocations.

<sup>2</sup> Includes dividends/interest on equity capital, an educational provision, and Federal and State income taxes.

**Table I-Allocation of net savings(loss) of wheat-barley-oats first-handlers-of-grain cooperatives, by total sales group, 1983-91\***

Item	Unit	1983	1985	1986	1987	1988	1989	1990	1991
<i>\$5-14.9 million</i>									
NET SAVINGS <sup>1</sup>	Dollars	126,840	120,604	139,297	165,567	129,205	38,763	39,447	45,449
Patronage, total	Percent	35.7	38.0	14.3	50.9	60.3	77.6	63.5	62.0
Paid in cash	Percent	33	27	36	26	24	34	33	30
Retained	Percent	67	73	64	74	76	66	67	70
Other <sup>2</sup>	Percent	3.6	5.8	4.8	12.8	18.2	15.8	6.9	12.9
Unallocated reserves	Percent	60.7	56.2	80.9	36.3	21.5	6.6	29.6	25.1
<i>\$15 million or more</i>									
NET SAVINGS <sup>1</sup>	Dollars	342,725	467,102	699,848	672,362	455,735	433,697	219,432	388,047
Patronage, total	Percent	14.4	8.9	22.8	28.2	55.3	61.7	63.8	62.7
Paid in cash	Percent	20	25	35	24	27	34	27	24
Retained	Percent	80	75	65	76	73	66	73	76
Other <sup>2</sup>	Percent	.0	.4	25.3	6.6	7.5	5.3	8.8	6.2
Unallocated reserves	Percent	85.6	90.7	51.9	65.2	37.2	33.0	27.4	31.1

● 1 984 data not available.

<sup>1</sup> Savings before income taxes and allocations.

<sup>2</sup> Includes dividends/interest on equity capital, an educational provision, and Federal and State income taxes.

**Table I-Allocation of net savings(loss) of wheat-barley first-handlers-of-grain cooperatives, by total sales group, 1983-91<sup>1</sup>**

Item	Unit	1983	1985	1986	1987	1988	1989	1990	1991
<i>\$5-14.9 million</i>									
NET SAVINGS <sup>1</sup>	Dollars	278,468	167,060	271,473	192,881	268,850	82,421	134,419	118,485
Patronage, total	Percent	29.2	47.0	29.2	61.7	68.4	82.5	82.6	82.5
Paid in cash	Percent	33	20	20	30	33	44	37	32
Retained	Percent	67	80	80	70	67	56	63	68
Other <sup>2</sup>	Percent	4.9	4.2	4.6	6.7	4.9	5.3	6.6	3.8
Unallocated reserves	Percent	65.9	48.8	66.2	31.6	26.7	12.2	10.8	13.7
<i>\$15 million or more</i>									
NET SAVINGS <sup>1</sup>	Dollars	744,873	812,595	531,412	932,482	744,262	376,574	264,662	514,395
Patronage, total	Percent	57.7	45.7	19.7	67.2	38.9	45.6	38.6	67.7
Paid in cash	Percent	20	23	38	34	24	23	38	28
Retained	Percent	80	77	62	66	76	77	62	72
Other <sup>2</sup>	Percent	12.3	10.4	8.0	7.8	12.1	8.3	6.4	10.0
Unallocated reserves	Percent	30.0	43.9	72.3	25.0	49.0	46.1	55.0	22.3

\*1984 data not available.

<sup>1</sup> Savings before income taxes and allocations.

<sup>2</sup> Includes dividends/interest on equity capital, an educational provision, and Federal and State income taxes.

The highest incidence of losses reported by wheat-sorghum (SP) grain cooperatives coincided with low grain prices and wheat harvested acreage in 1985-87. Loss rates for wheat-barley-oats (NP) cooperatives were highest in 1988-91 for medium-sized ones and 1988-89 for large ones, attributed to period-low yields and production (drought) and low wheat and barley prices.

Highest incidence of losses for wheat-barley (PNW) cooperatives was in 1987-89, associated with low harvested acres and production of wheat and barley. Low grain prices in 1987 were a contributing factor. Net savings for wheat-barley-oats and wheat-barley grain cooperatives that reported a savings tended to average lowest during their periods of high losses (figs. 7 and 8). Participation in the Government grain storage program in the mid-1980s boosted net savings for wheat cooperatives, particularly for wheat-sorghum cooperatives that reported a savings, despite the high incidence of losses.

## INCOME AND EXPENSES

Key factors underlying the 1983-91 changes in net savings were grain prices and sales volumes,

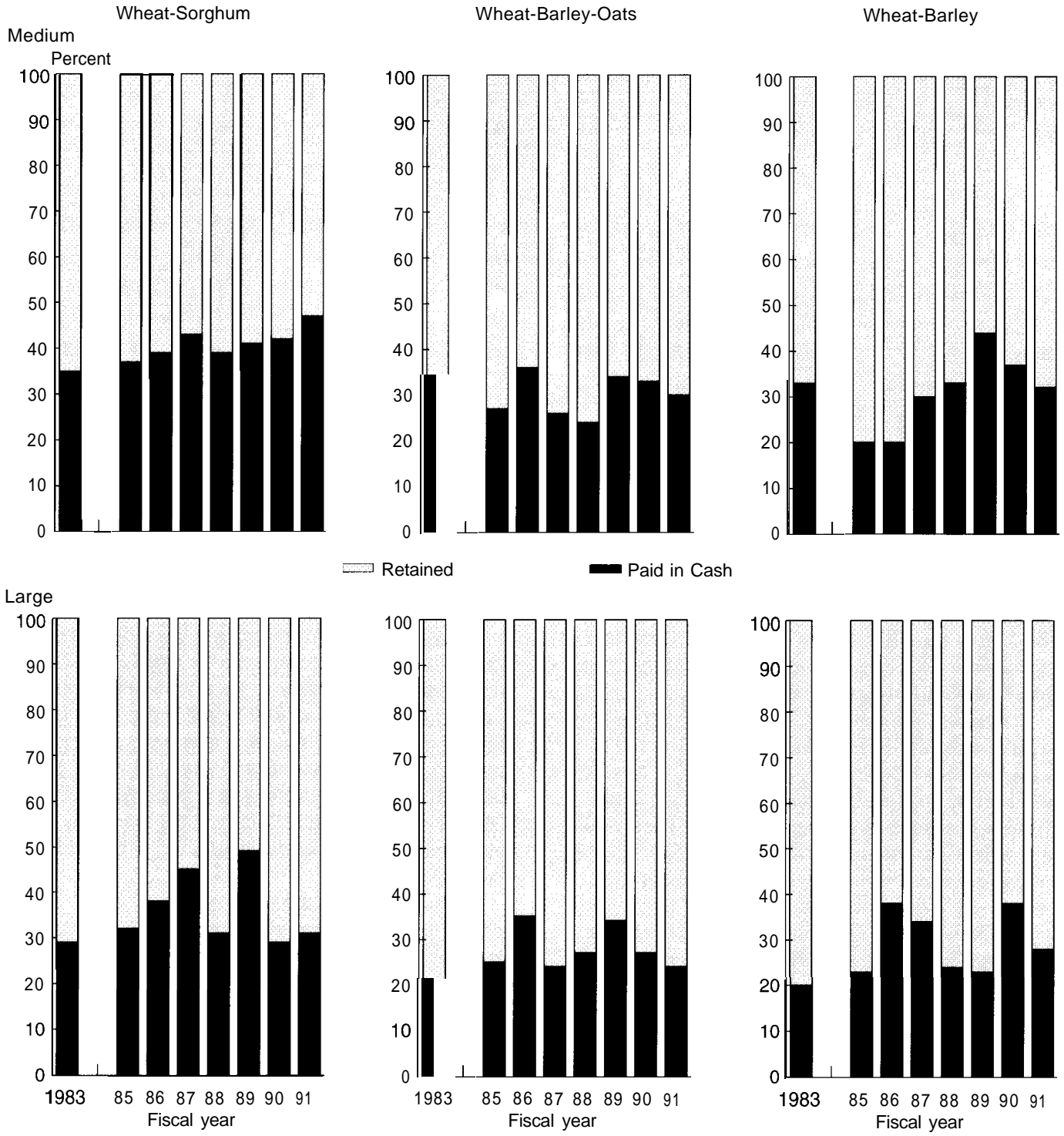
drought, regional cooperative relationships, and Government program impacts on the income side and labor expenses on the cost side. Income-related factors varied considerably more than cost-related factors.

Gross income for most wheat cooperative situations rose steadily to its peak during 1986-87, with increases from the early 1980s noticeably steeper for the large ones than for the medium-sized ones (table 2 and fig. 9). Gross incomes and total operating costs generally averaged lower following their respective peaks, and were rising entering the 1990s. This was particularly true for the large wheat cooperatives in the Southern Plains and Pacific Northwest.

When viewing the relationship of gross income to total expenses as an efficiency measure, large wheat cooperatives tended to be more efficient than the medium-sized ones (fig. 10). This tendency doesn't appear to be strong enough to suggest that there is pressure on wheat cooperatives to increase scale of operations. Operating efficiency improved through 1988 driven largely by Government grain storage income. Operating efficiency dropped during 1989-91 with the sale of large volumes of Commodity Credit Corporation

Figure 6

**Allocation of Patronage Earned, First-Handler Co-ops**



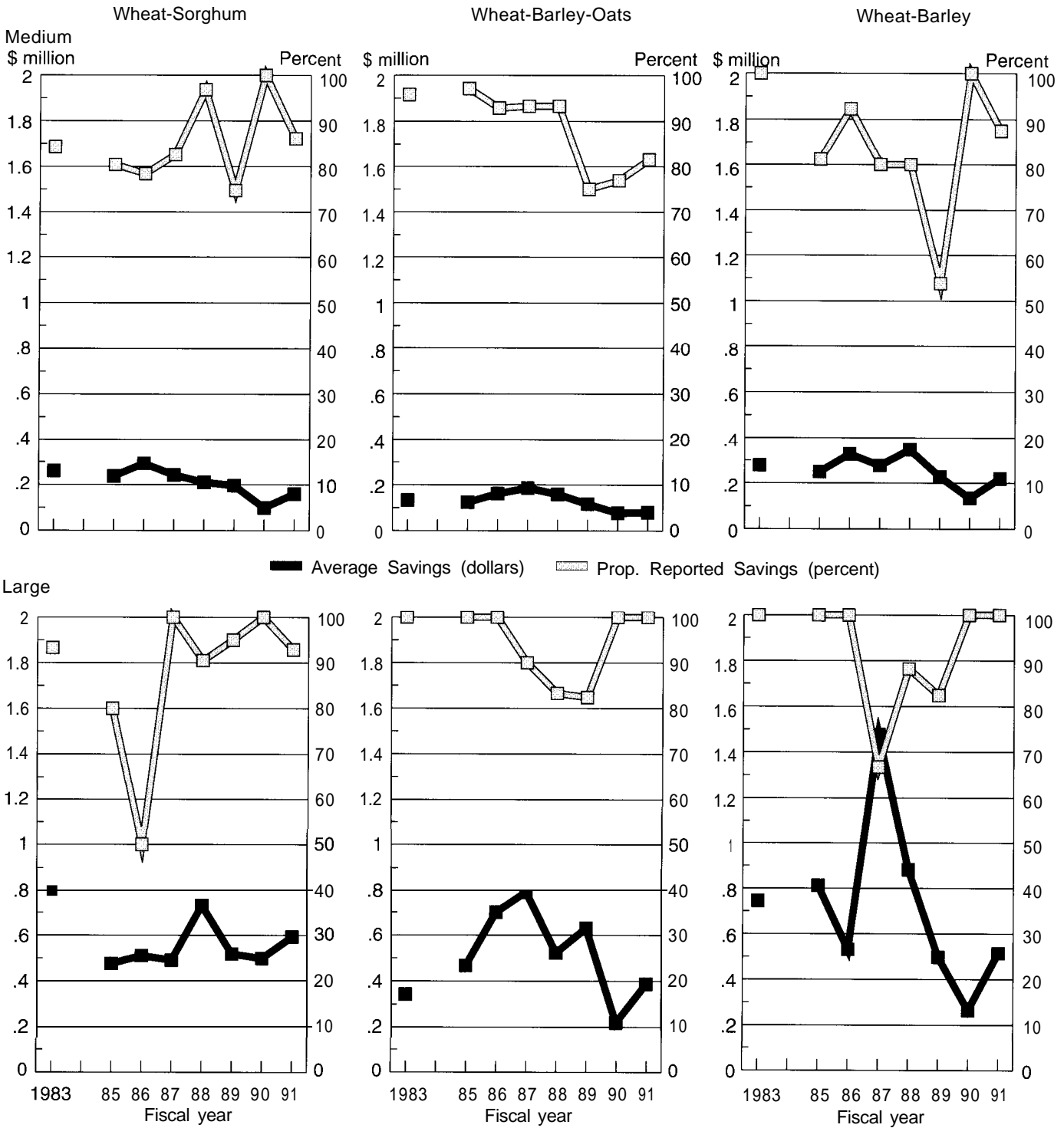
Fiscal year 1984 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales



Figure 7

**Co-ops Reported Savings and Average Savings, First-Handler Co-ops**



Fiscal year 1984 not available.

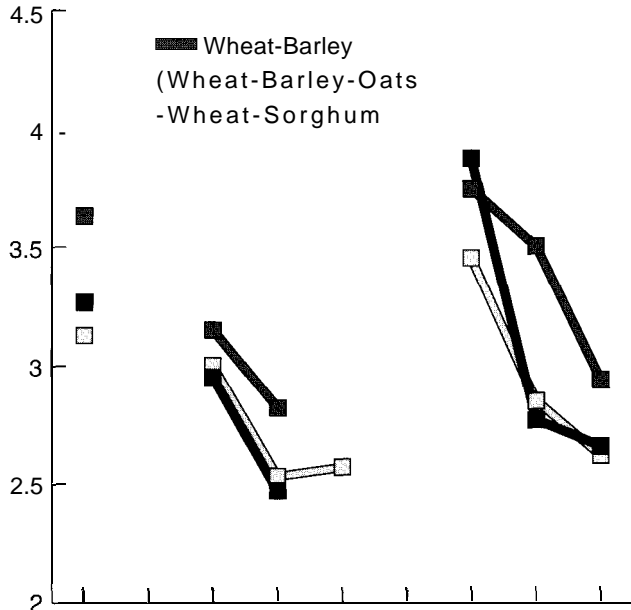
Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales.

Figure 8

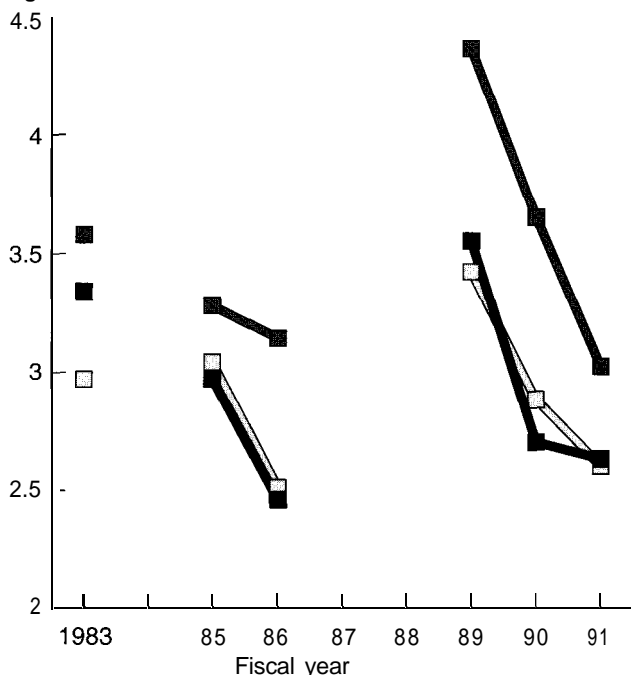
**Prices Received Per Bushel Grains Sold**  
Wheat First-Handler Co-ops

**Medium**

Dollars



**Large**



Fiscal year 1984, 1988, and part of 1987 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales

(CCC) grain as the Government withdrew from the grain storage business.

**Sales and Margins**

Total sales per association largely mirrored farm supply sales for all wheat cooperatives. Grain sales provided stability and contributed significantly more to total sales for wheat-barley-oats and wheat-barley cooperatives than for wheat-sorghum ones (fig. 11 and table 2). The coefficients of variation (CV)<sup>1</sup> for grain sales ranged from 3.9 percent to 8.7 percent for the medium-sized wheat cooperatives and from 8.6 percent to 11.1 percent for large wheat cooperatives. The variation in farm supply sales was much greater during the period, with comparable CV ranges of 7.8 percent to 33.6 percent and 10.5 to 30.9 percent, respectively.

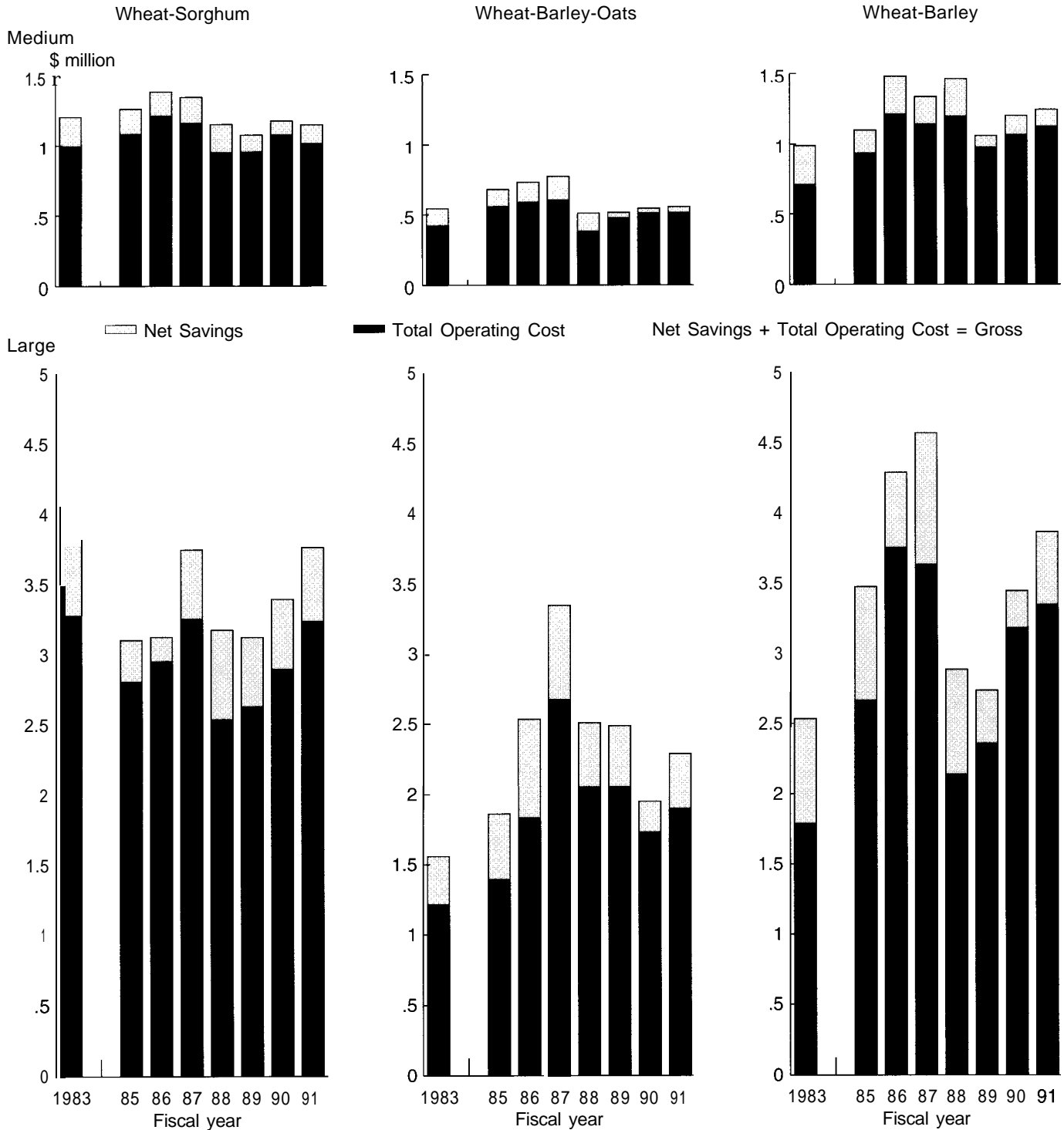
Yearly variation in total gross margins was relatively large, similar to farm supply sales, particularly for large wheat cooperatives and all wheat-barley cooperatives (fig. 12). Annual average grain and farm supply gross margins CVs were similar for medium-sized and large wheat-sorghum cooperatives (11.2 percent to 14.2 percent). For both the medium-sized and large associations, farm supply margins CVs were larger than grain margins CVs in the other two areas, particularly for wheat-barley cooperatives.

Grain cooperatives routinely deal with unpredictable annual variations in market prices and volumes. Thin grain merchandising margins (margin rates) typified 1983-91. This placed considerable pressure on the grain marketing activity for volumes sufficient to offset the low per-unit margins. This was particularly true for wheat-barley cooperatives in the Pacific Northwest. Grain margin rates of 1.5 percent to 3.5 percent were common. Partially offsetting the low grain margins were favorable farm supply margin rates (17-20 percent). Sufficient grain volume origination during this period was difficult due to declining exports, selected

<sup>1</sup> The coefficient of variation expresses the standard deviation of a set of data as a percentage of its mean or average. This statistic is used in determining the relative variation of two or more sets of data.

Figure 9

**Operating Cost of Gross Income, First-Handler Co-ops**



Fiscal year 1984 not available

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales.

**Table P-Selected physical facility and income statement data for wheat-sorghum first-handlers-of-grain cooperatives, by size, 1983-91\***

Item	Unit	Total sales group (million dollars)							
		1983	1985	1986	1987	1988	1989	1990	1991
\$5-14.9									
Size characteristics:									
Locations	Number	2.17	2.34	( <sup>1</sup> )—	—	—	2.20	2.13	2.25
Storage capacity	Bushels	1,769,969	1,949,167	—	—	—	1,979,055	2,193,607	2,072,150
Grain sold	Bushels	1,762,481	2,038,244	2,155,415	—	—	1,493,713	1,976,034	2,113,740
Turnover rate	Times	1.00	1.05	—	—	—	0.75	0.9	1.02
Unit-trains	Percent	—	—	—	—	—	12.00	15.15	16.67
Employees <sup>2</sup>	Number	—	18.75	—	—	—	17.04	18.38	16.36
Income statement items:									
Grain sales	Dollars	5,762,502	6,004,800	5,327,616	5,898,098	5,970,912	5,778,934	5,474,206	5,619,766
Farm supply sales	Dollars	2,589,697	2,742,264	2,608,938	2,384,048	2,380,526	2,651,408	3,020,462	2,880,456
<b>Total</b>	<b>Dollars</b>	<b>8,352,199</b>	<b>8,747,064</b>	<b>7,936,554</b>	<b>8,282,146</b>	<b>8,351,438</b>	<b>8,430,342</b>	<b>8,494,668</b>	<b>8,500,222</b>
Cost of sales	Dollars	7,715,632	8,072,353	7,265,516	7,595,904	7,691,276	7,788,776	7,780,280	7,781,767
Margins on sales	Dollars	636,567	674,711	671,038	686,242	660,162	641,566	714,388	718,455
Other oper. income	Dollars	490,575	540,261	782,166	677,667	445,022	376,542	421,461	396,956
Nonoperating income	Dollars	73,549	42,078	(75,550)	(24,276)	43,842	56,279	37,038	30,296
<b>Gross income</b>	<b>Dollars</b>	<b>1,200,691</b>	<b>1,257,050</b>	<b>1,377,654</b>	<b>1,339,633</b>	<b>1,149,026</b>	<b>1,074,387</b>	<b>1,172,887</b>	<b>1,145,707</b>
Labor expenses	Dollars	440,313	478,652	510,672	512,313	442,607	453,623	531,311	493,717
Other expenses	Dollars	554,141	600,992	698,120	644,965	504,123	496,659	542,382	519,101
<b>Total</b>	<b>Dollars</b>	<b>994,454</b>	<b>1,079,644</b>	<b>1,208,792</b>	<b>1,157,278</b>	<b>946,730</b>	<b>950,282</b>	<b>1,073,693</b>	<b>1,012,818</b>
<b>NET SAVINGS<sup>1</sup></b>	<b>Dollars</b>	<b>206,237</b>	<b>177,406</b>	<b>168,862</b>	<b>182,355</b>	<b>202, 296</b>	<b>124,105</b>	<b>99,194</b>	<b>132,889</b>
Relationships:									
Gross income/\$ expense	Dollars	1.21	1.16	1.14	1.16	1.21	1.13	1.09	1.13
Total sales/\$ assets	Dollars	2.29	2.28	1.80	2.05	2.43	2.44	2.41	2.34
Total sales/\$ labor exp.	Dollars	18.97	18.27	15.54	16.17	18.87	18.58	15.99	17.22
Total sales/employee	Dollars	—	466,510	—	—	—	494,738	462,158	519,538
Margins of total sales	Percent	7.62	7.71	8.46	8.29	7.90	7.61	8.41	8.45
Net savings of equity	Percent	9.00	7.12	6.22	7.12	8.95	5.13	3.93	5.13
Grain of total sales	Percent	69.0	68.6	67.1	71.2	71.5	68.5	64.4	66.1
Labor of total expenses	Percent	44.3	44.3	42.2	44.3	46.8	47.7	49.5	48.71

Continued

**Table 2-Selected physical facility and income statement data for wheat-sorghum first-handlers-of-grain cooperatives, by size, 1983-91\* (continued)**

Item	Unit	Total sales group (million dollars)							
		1983	1985	1986	\$15 or more		1988	1989	1990
Size characteristics:									
Locations	Number	6.47	5.13	( <sup>1</sup> )—	—	—	5.55	5.92	5.86
Storage capacity	Bushels	5816,614	4,090,401	—	—	—	3,697,959	4,328,244	4,477,995
Grain sold	Bushels	4,817,412	4,498,007	4,411,964	—	—	4,283,738	5,419,783	5,623,305
Turnover rate	Times	0.83	1.10	—	—	—	1.16	1.25	1.26
Unit-trains	Percent	—	—	—	—	—	10.00	16.67	14.29
Employees <sup>2</sup>	Number	—	47.48	—	—	—	50.16	54.23	52.45
Income statement items:									
Grain sales	Dollars	16,075,385	13,378,618	10,836,858	15,925,751	15,510,342	15,200,839	14,616,883	14,765,814
Farm supply sales	Dollars	8,370,039	8,648,843	7,839,811	9,349,403	7,143,723	7,990,733	9,376,186	10,086,541
Total	Dollars	24,445,424	22,027,461	18,676,669	25,275,154	22,654,065	23,191,572	23,993,069	24,852,355
Cost of sales	Dollars	22,224,826	20,169,492	16,945,456	23,081,032	20,744,945	21,262,512	21,897,925	22,469,919
Margins on sales	Dollars	2,220,598	1,857,969	1,731,213	2,194,122	1,909,120	1,929,060	2,095,144	2,382,436
Other oper. income	Dollars	1,793,658	1,297,474	1,735,737	1,769,184	1,168,139	1,043,539	1,072,791	1,194,548
Nonoperating income	Dollars	40,604	(52,045)	(341,064)	(217,426)	97,529	150,511	226,735	184,723
Gross income	Dollars	4,054,860	3,103,398	3,125,886	3,745,880	3,174,788	3,123,110	3,394,670	3,761,707
Labor expenses	Dollars	1,439,665	1,245,275	1,311,916	1,473,994	1,192,765	1,236,348	1,413,552	1,563,500
Other expenses	Dollars	1,837,403	1,562,572	1,641,359	1,781,096	1,347,074	1,394,859	1,482,734	1,672,575
Total	Dollars	3,277,068	2,807,847	2,953,275	3,255,090	2,539,839	2,631,207	2,896,286	3,236,075
NET SAVINGS <sup>3</sup>	Dollars	777,792	295,551	172,611	490,790	634,949	491,903	498,384	525,632
Relationships:									
Gross income/\$ expense	Dollars	1.24	1.11	1.06	1.15	1.25	1.19	1.17	1.16
Total sales/\$ assets	Dollars	2.07	2.37	1.99	2.41	2.84	2.77	2.52	2.46
Total sales/\$ labor exp.	Dollars	16.98	17.69	14.24	17.15	18.99	18.76	16.97	15.9
Total sales/employee	Dollars		463,931	—		—	462,352	442,438	473.862
Margins of total sales	Percent	9.08	8.43	9.27	8.68	8.43	8.32	8.73	9.59
Net savings of equity	Percent	11.68	5.03	3.26	6.92	11.68	8.86	7.83	8.11
Grain of total sales	Percent	65.8	60.7	58	63	68.5	65.5	60.9	59.4
Labor of total expenses	Percent	43.9	44.3	44.4	45.3	47	47	48.8	48.3

● 1 984 data not available.

<sup>1</sup> Cells with -- means data not available.

<sup>2</sup> Full-time equivalent.

<sup>3</sup> Savings before income taxes and allocations.

**Table P-Selected physical facility and income statement data for wheat-barley-oats first-handlers-of-grain cooperatives, by size, 1983-91\***

Item	Unit	Total sales group (million dollars)							
		1983	1985	1986	1987	1988	1989	1990	1991
\$5-14.9									
Size characteristics:									
Locations	Number	1.54	1.50	( <sup>1</sup> )—	—	—	1.40	1.77	1.81
Storage capacity	Bushels	610,479	822,176	—	—	—	691,395	802,000	844,741
Grain sold	Bushels	2,065,546	2,207,417	2,475,804	2,693,163	—	2,267,369	2,295,540	2,678,840
Turnover rate	Times	3.38	2.68	—	—	—	3.28	2.86	3.17
Unit-trains	Percent	—	—	—	—	—	73.33	69.23	70.83
Employees <sup>2</sup>	Number	—	9.50	—	—	—	6.64	7.81	7.13
Income statement items:									
Grain sales	Dollars	6,474,710	6,626,757	6,253,998	6,934,405	7,197,861	7,828,989	6,542,288	7,027,784
Farm supply sales	Dollars	1,083,829	1,447,965	885,999	1,283,839	1,324,740	897,926	1,376,453	910,127
Total	Dollars	7,558,539	8,074,722	7,139,997	8,218,244	8,522,601	8,726,915	7,918,741	7,937,911
Cost of sales	Dollars	7,163,200	7,662,571	6,726,576	7,769,502	8,171,760	8,369,202	7,537,359	7,501,792
Margins on sales	Dollars	395,339	412,151	413,421	448,742	350,841	357,713	381,382	436,119
Other oper. income	Dollars	162,578	285,512	376,885	357,797	154,708	154,268	188,811	135,148
Nonoperating income	Dollars	(8,872)	(15,646)	(58,610)	(33,337)	4,633	2,413	(20,928)	(11,425)
Gross income	Dollars	549,045	682,017	731,696	773,202	510,182	514,394	549,265	559,842
Labor expenses	Dollars	178,068	251,904	247,814	243,646	165,176	193,153	220,570	205,376
Other expenses	Dollars	244,137	309,509	344,585	363,989	215,801	282,478	289,248	309,017
Total	Dollars	422,205	561,413	592,399	607,635	380,977	475,631	509,818	514,393
NET SAVINGS <sup>4</sup>	Dollars	126,840	120,604	139,297	165,567	129,205	38,763	39,447	45,449
Relationships:									
Gross income/\$ expense	Dollars	1.3	1.21	1.24	1.27	1.34	1.08	1.08	1.09
Total sales/\$ assets	Dollars	2.87	2.53	2.32	2.61	3.12	3.05	3.30	2.73
Total sales/\$ labor exp.	Dollars	42.45	32.05	28.81	33.73	51.60	45.18	35.90	38.65
Total sales/employee	Dollars	—	849,971	—	—	—	1,314,294	1,014,223	1,113,369
Margins of total sales	Percent	5.23	5.10	5.79	5.46	4.12	4.10	4.82	5.49
Net savings of equity	Percent	9.56	7.47	9.13	11.63	9.42	2.81	3.45	3.63
Grain of total sales	Percent	85.7	82.1	87.6	84.4	84.5	89.7	82.6	88.5
Labor of total expenses	Percent	42.2	44.9	41.8	40.1	43.4	40.6	43.3	39.9

Continued

**Table 2—Selected physical facility and income statement data for wheat-barley-oats first-handlers-of-grain cooperatives, by size, 1983-91\* (continued)**

Item	Unit	Total sales group (million dollars)							
		1983	1985	1986	1987	1988	1989	1990	1991
Size characteristics:									
Locations	Number	3.71	5.00	( <sup>1</sup> )—	—	—	5.47	6.40	6.38
Storage capacity	Bushels	2,295,857	1,919,550	—	—	—	2,410,217	1,901,600	2,318,015
Grain sold	Bushels	8,372,166	7,040,326	11,394,159	—	—	8,974,695	8,883,049	10,909,623
Turnover rate	Times	3.65	3.67	—	—	—	3.72	4.67	4.71
Unit-trains	Percent	—	—	—	—	—	100.00	100.00	100.00
Employees <sup>2</sup>	Number	—	26.38	—	—	—	30.91	27.40	27.50
Income statement items:									
Grain sales	Dollars	24,903,062	21,428,038	28,621,520	33,723,271	30,314,671	30,677,483	25,583,182	28,415,246
Farm supply sales	Dollars	2,386,901	3,278,163	3,346,134	5,515,493	5,943,984	6,438,257	4,774,459	3,635,234
Total	Dollars	27,289,963	24,706,201	31,967,654	39,238,764	36,258,655	37,115,740	30,357,641	32,050,480
Cost of sales	Dollars	26,084,769	23,648,107	30,469,509	37,048,512	34,410,104	35,372,396	28,850,451	30,266,808
Margins on sales	Dollars	1,205,194	1,058,094	1,498,145	2,190,252	1,848,551	1,743,344	1,507,190	1,783,672
Other oper. income	Dollars	357,714	643,801	1,195,623	1,192,636	637,198	646,893	400,510	438,511
Nonoperating income	Dollars	(4,388)	( <sup>3</sup> ) 158,858	(161,315)	(40,864)	20,715	94,537	41,435	64,301
Gross income	Dollars	1,558,520	1,860,753	2,532,453	3,342,024	2,506,464	2,484,774	1,949,135	2,286,484
Labor expenses	Dollars	506,392	613,273	842,710	1,187,833	838,466	844,802	754,980	849,409
Other expenses	Dollars	709,403	780,378	989,895	1,481,829	1,212,263	1,206,275	974,723	1,049,028
Total	Dollars	1,215,795	1,393,651	1,832,605	2,669,662	2,050,729	2,051,077	1,729,703	1,898,437
NET SAVINGS <sup>4</sup>	Dollars	342,725	467,102	699,848	672,362	455,735	433,697	219,432	388,047
Relationships:									
Gross income/\$ expense	Dollars	1.28	1.34	1.38	1.25	1.22	1.21	1.13	1.2
Total sales/\$ assets	Dollars	2.20	2.48	2.30	2.67	3.16	3.06	3.06	2.4
Total sales/\$ labor exp.	Dollars	53.89	40.29	37.93	33.03	43.24	43.93	40.21	37.73
Total sales/employee	Dollars	—	936,550	—	—	—	1,200,768	1,107,943	1,165,472
Margins of total sales	Percent	4.42	4.28	4.69	5.58	5.10	4.70	4.96	5.57
Net savings of equity	Percent	8.50	11.79	14.96	9.68	8.47	7.99	4.65	7.19
Grain of total sales	Percent	91.3	86.7	89.5	84.4	83.6	82.7	84.3	88.7
Labor of total expenses	Percent	41.7	44.0	46.0	44.5	40.9	41.2	43.6	44.7

<sup>1</sup>1984 data not available.

<sup>2</sup> Cells with — means data not available.

<sup>3</sup> Full-time equivalent.

<sup>4</sup> Reflects gains in assets value related to unexpected natural occurrences; figure would have been -\$29,787 otherwise

<sup>5</sup> Savings before income taxes and allocations.

**Table 2-Selected physical facility and income statement data for wheat-barley first-handlers-of-grain cooperatives, by size, 1983-91\***

Item	Unit	Total sales group (million dollars)							
		1983	1985	1986	1987	1988	1989	1990	1991
\$5-14.9									
Size characteristics:									
Locations	Number	3.22	3.31	( <sup>1</sup> )—	—	—	3.46	5.75	6.46
Storage capacity	Bushels	3,555,000	3,789,028	—	—	—	3,381,840	4,288,119	4,643,920
Grain sold	Bushels	2,313,292	2,373,766	3,081,940	—	—	2,476,636	2,720,389	3,044,905
Turnover rate	Times	0.65	0.63	—	—	—	0.73	0.71	0.66
Unit-trains	Percent	—	—	—	—	—	53.85	55.56	53.85
Employees <sup>2</sup>	Number	—	14.25	—	—	—	17.27	14.14	13.88
Income statement items:									
Grain sales	Dollars	8,386,118	7,488,821	8,694,854	7,409,005	9,214,166	9,253,856	9,523,880	8,964,095
Farm supply sales	Dollars	1,034,275	1,103,491	753,729	1,225,571	1,154,919	1,363,657	2,107,006	2,057,451
Total	Dollars	9,420,393	8,592,312	9,448,583	8,634,576	10,369,085	10,617,513	11,630,886	11,021,546
Cost of sales	Dollars	9,052,855	8,198,619	9,050,761	8,277,461	9,833,520	10,007,660	10,970,699	10,429,583
Margins on sales	Dollars	367,538	393,693	397,822	357,115	535,565	609,853	660,187	591,963
Other oper. income	Dollars	654,016	791,176	1,126,860	1,006,900	972,920	451,893	570,287	616,733
Nonoperating income	Dollars	(33,169)	(87,510)	(43,812)	(31,892)	(46,229)	(2,517)	(31,034)	33,550
Gross income	Dollars	988,385	1,097,359	1,480,870	1,332,123	1,462,256	1,059,229	1,199,440	1,242,246
Labor expenses	Dollars	260,666	412,914	510,048	462,814	447,338	455,034	504,068	509,972
Other expenses	Dollars	449,251	517,385	699,349	676,428	746,068	521,774	560,953	613,789
Total	Dollars	709,917	930,299	1,209,397	1,139,242	1,193,406	976,808	1,065,021	1,123,761
NET SAVINGS <sup>3</sup>	Dollars	278,468	167,060	271,473	192,881	268,850	82,421	134,419	118,485
Relationships:									
Gross income/\$ expense	Dollars	1.39	1.18	1.22	1.17	1.23	1.08	1.13	1.11
Total sales/\$ assets	Dollars	2.87	2.53	2.32	2.61	3.12	3.05	3.27	2.66
Total sales/\$ labor exp.	Dollars	36.14	20.81	18.52	18.66	23.18	23.33	23.07	21.61
Total sales/employee	Dollars	—	602,969	—	—	—	600,410	822,617	793,796
Margins of total sales	Percent	3.9	4.58	4.21	4.14	5.04	5.88	5.68	5.37
Net savings of equity	Percent	13.54	7.59	8.87	6.84	8.96	3.67	5.35	3.83
Grain of total sales	Percent	89	87.2	92	85.8	86.8	89.2	81.9	81.3
Labor of total expense	Percent	36.7	44.4	42.2	40.6	37.5	46.6	47.3	45.4

Continued



**Table P-Selected physical facility and income statement data for wheat-barley first-handlers-of-grain cooperatives, by size, 1983-91\* (continued)**

Item	Unit	Total sales group (million dollars)							
		1983	1985	\$15 or more		1988	1989	1990	1991
				1986	1987				
Size characteristics:									
Locations	Number	12.00	10.27	( <sup>1</sup> )—	—		8.71	10.30	10.88
Storage capacity	Bushels	7,265,857	6,777,545		—	—	7,370,854	7,505,000	7,779,600
Grain sold	Bushels	7,552,196	8,430,961	7,593,262	—	—	6,342,402	7,896,109	8,733,234
Turnover rate	Times	1.04	1.24		—	—	0.86	1.05	1.12
Unit-trains	Percent	—	—	—	—	—	47.06	40.00	50.00
Employees <sup>2</sup>	Number	—	47.75	—	—	—	40.05	47.25	46.45
Income statement items:									
Grain sales	Dollars	27,034,843	27,687,403	23,820,572	27,776,075	21,568,644	27,660,042	28,820,798	26,350,555
Farm supply sales	Dollars	2,914,445	5,083,479	7,835,420	5,689,646	4,442,621	5,522,904	6,854,015	7,497,133
Total	Dollars	29,949,288	32,770,882	31,655,992	33,465,721	26,011,265	33,182,946	35,674,813	33,847,688
Cost of sales	Dollars	28,812,678	31,415,908	29,670,596	31,570,036	24,522,115	31,699,914	33,976,727	31,830,879
Margins on sales	Dollars	1,136,610	1,354,974	1,985,396	1,895,685	1,489,150	1,483,032	1,698,086	2,016,809
Other oper. income	Dollars	1,523,259	2,156,558	2,431,258	2,740,439	1,359,103	1,303,111	1,734,299	1,870,463
Nonoperating income	Dollars	(126,450)	(35,742)	(132,174)	(70,775)	37,440	(48,973)	13,359	(24,363)
Gross income	Dollars	2,533,419	3,475,790	4,284,480	4,565,349	2,885,693	2,737,170	3,445,744	3,862,909
Labor expenses	Dollars	700,822	1,253,799	1,660,253	1,634,790	927,036	1,002,776	1,431,487	1,533,675
Other expenses	Dollars	1,087,724	1,409,396	2,092,815	1,998,077	1,214,395	1,357,820	1,749,595	1,814,839
Total	Dollars	1,788,546	2,663,195	3,753,068	3,632,867	2,141,431	2,360,596	3,181,082	3,348,514
NET SAVINGS <sup>3</sup>	Dollars	744,873	812,595	531,412	932,482	744,262	376,574	264,662	514,395
Relationships:									
Gross income/\$ expense	Dollars	1.42	1.31	1.14	1.26	1.35	1.16	1.08	1.15
Total sales/\$ assets	Dollars	3.56	3.25	2.17	2.54	2.59	3.73	3.00	2.77
Total sales/\$ labor exp.	Dollars	42.73	26.14	19.07	20.47	28.06	33.09	24.92	22.07
Total sales/employee	Dollars	—	686,301	—	—	—	828,538	755,022	728,691
Margins of total sales	Percent	3.80	4.13	6.27	5.66	5.73	4.47	4.76	5.96
Net savings of equity	Percent	16.42	15.12	6.77	11.58	13.51	6.70	3.81	7.37
Grain of total sales	Percent	90.3	84.5	75.2	83.0	82.9	83.4	80.8	77.9
Labor of total expenses	Percent	39.2	47.1	44.2	45.0	43.3	42.5	45.0	45.8

\*1984 data not available.

<sup>1</sup> Cells with — means data not available.

<sup>2</sup> Full-time equivalent.

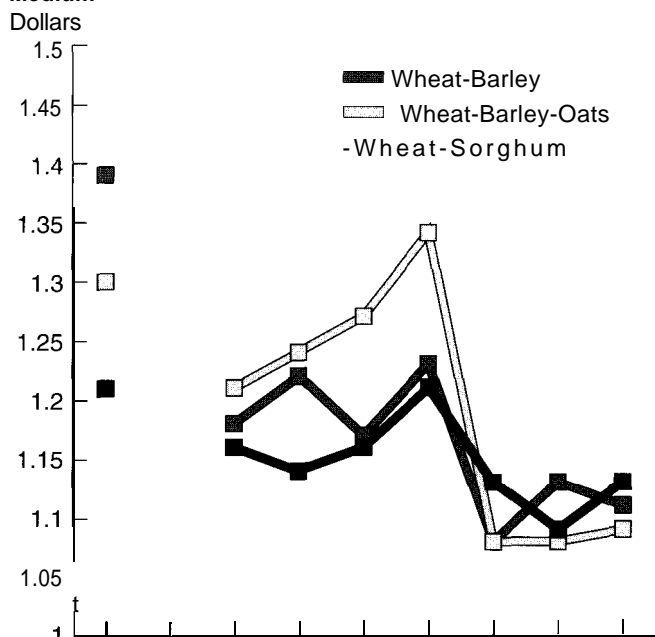
<sup>3</sup> Savings before income taxes and allocations.

Figure 10

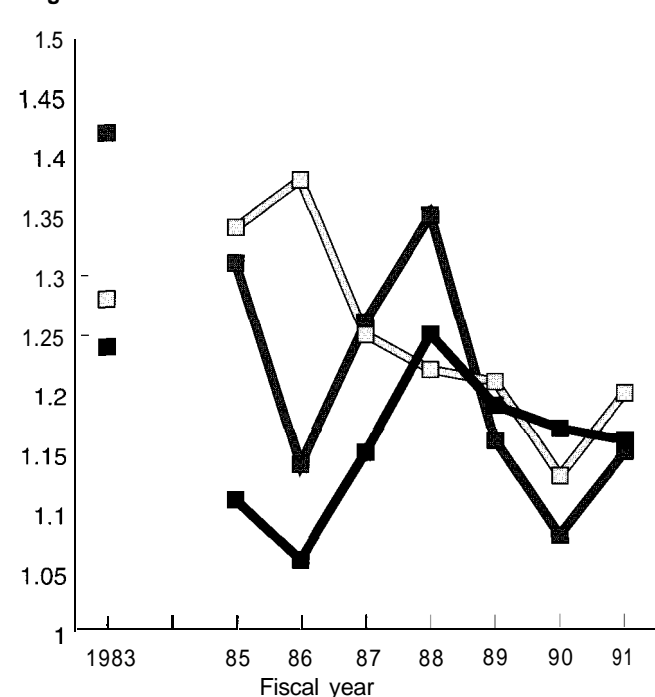
**Gross Income Per Dollar of Operating Cost**

Wheat First-Handler Co-ops

**Medium**



**Large**



Fiscal year 1984 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales

Government programs, and increasing worldwide competition. Both farm supply (9-12 percent) and grain margins (3-5 percent) were thin for Northern Plains wheat-barley-oats cooperatives.

Total margins as a percentage of total sales was generally higher for large than for medium-sized associations for the wheat-sorghum and wheat-barley cooperatives. This reflects their generally higher proportion of farm supply sales (table 2). This relationship was mixed during the period for the wheat-barley-oats associations, largely because farm supply margins rates were not only low but also were low relative to grain margins rates.

**Grain Marketings and Prices Received**

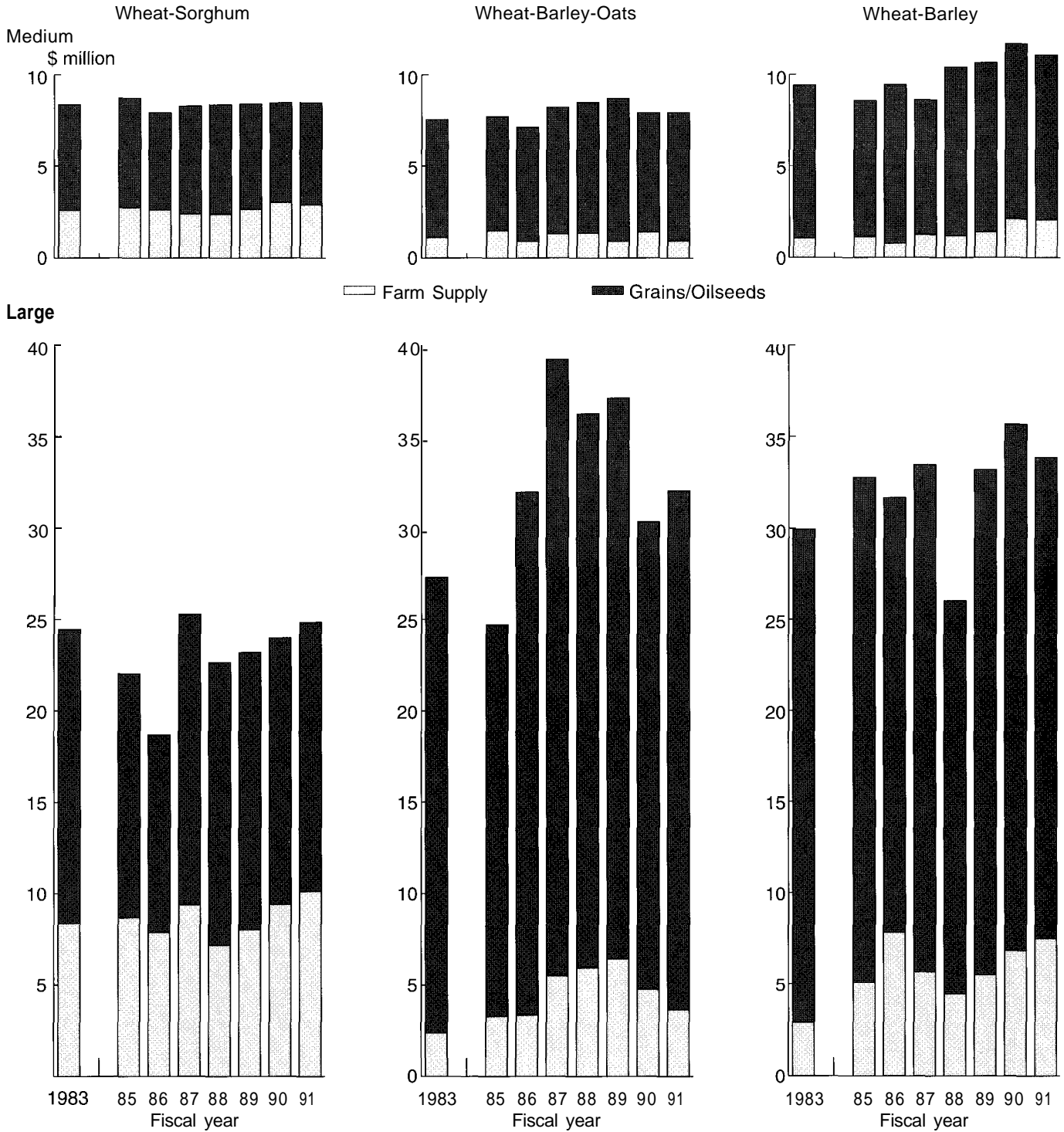
Grain marketings by medium-sized and large cooperatives were generally higher per cooperative during 1983-86 than during 1989-91, and were on the rise in all three areas entering the 1990s (table 3). It is speculated that declines from 1986 levels typified marketings during the years of missing data (1987-88), related to low prices, the high level of Government storage program activity, and drought for wheat-barley-oats cooperatives. Wheat accounted for a rising proportion of total marketings, at the expense of barley, during the study period for all wheat-barley cooperatives (fig. 13).

In the other two areas, wheat's proportion rose for medium-sized cooperatives and declined for the large associations. In the Northern Plains, the barley proportion was generally up, but the "other small grains" proportion, principally oats, was down. In the Southern Plains, the grain sorghum proportion was down for the medium-sized cooperatives, but up for larger ones.

Seasonal average prices received for wheat marketings fell steadily during 1983-86 and peaked in 1988-89 (fig. 14 and appendix A). Price swings for grain sorghum were even more dramatic. Barley price swings, while similar, were less dramatic. Most grain price variation was related to Government program effects on production-and on ending stocks and CCC grain storage operations-and on exports, principally drawdowns of CCC-stored grain to satisfy other Government pro-

Figure 11

**Grains and Farm Supply Sales, First-Handler Co-ops**

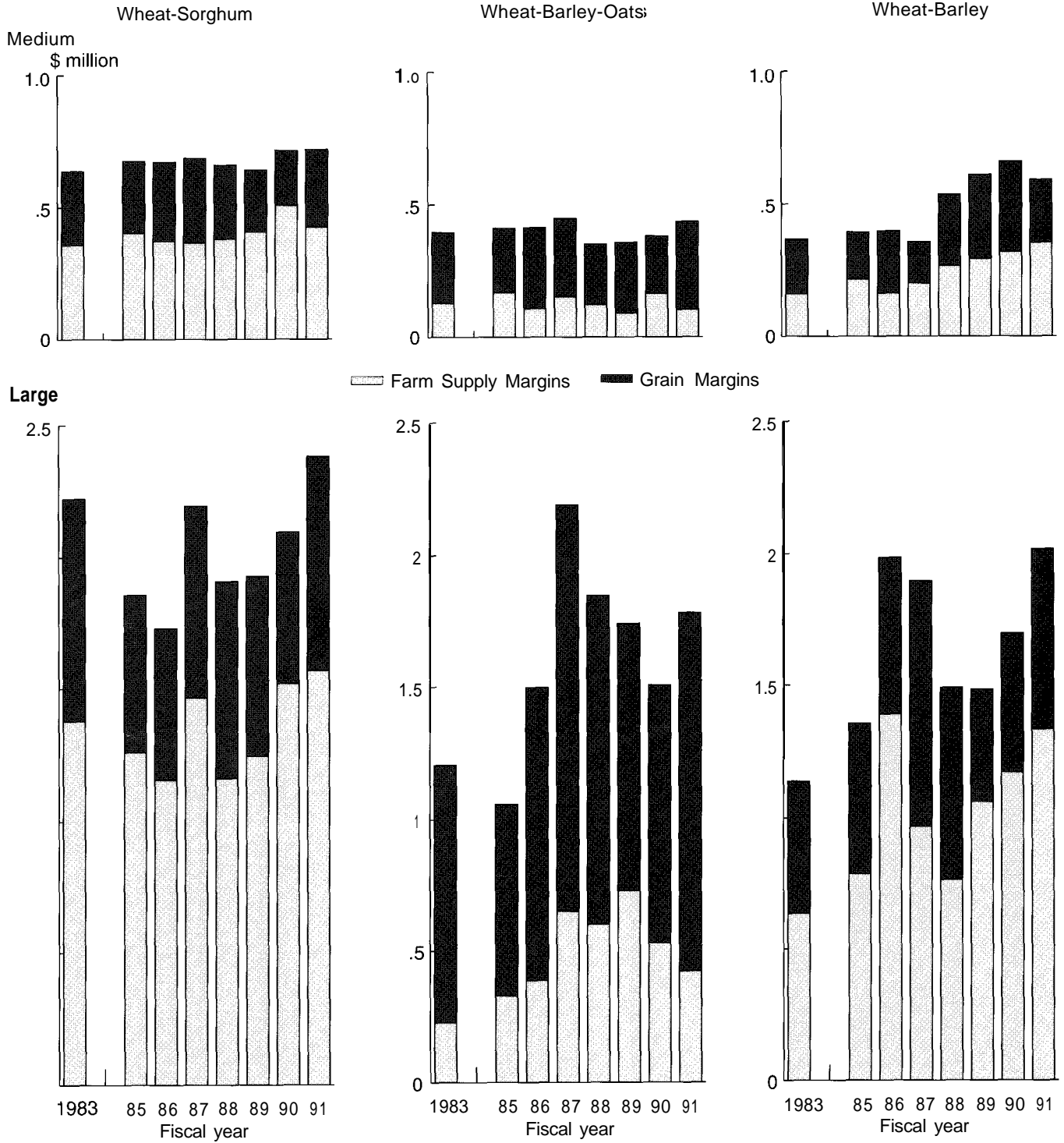


Fiscal year 1984 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales.

Figure 12

**Grain and Farm Supply Margins, First-Handler Co-ops**



Fiscal year 1984 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales.

**Table 3-Types of grains marketed by wheat-sorghum first-handlers-of-grain cooperatives, by total sales group, 1983-91 .**

Item	Unit	1983	1985	1986	1987	1988	1989	1990	1991
<i>\$5- 14.9 million</i>									
Grain marketed, total	Bushels	1,762,481	2,038,244	2,155,415	( <sup>1</sup> )—	—	1,493,713	1,976,034	2,113,740
Wheat	Bushels	1,307,239	1,278,797	1,354,907	—	—	1,078,408	1,488,111	1,513,154
Corn	Bushels	85,275	112,925	133,689	—	—	65,356	102,676	161,165
Soybeans	Bushels	40,397	39,771	52,118	—	—	47,512	38,528	34,468
Sorghum	Bushels	310,951	564,711	576,004	—	—	291,642	334,595	392,163
Barley	Bushels	5,198	20,784	10,546	—	—	1,906	2,053	2,042
Other <sup>2</sup>	Bushels	13,421	21,256	28,151	—	—	8,889	10,071	10,748
<i>\$15 million or more</i>									
Grain marketed, total	Bushels	4,817,412	4,498,007	4,411,964	—	—	4,283,738	5,419,783	5,623,305
Wheat	Bushels	3,462,621	2,634,926	2,431,162	—	—	2,337,621	3,146,491	2,982,700
Corn	Bushels	220,347	360,780	487,735	—	—	376,635	513,836	708,230
Soybeans	Bushels	88,184	76,251	123,369	—	—	163,396	179,568	202,517
Sorghum	Bushels	1,005,506	1,351,636	1,274,533	—	—	1,341,753	1,551,724	1,701,114
Barley	Bushels	10,450	29,119	73,876	—	—	7,080	2,815	2,510
Other <sup>2</sup>	Bushels	30,304	45,295	21,289	—	—	57,253	25,349	26,234

<sup>1</sup>1984 data not available.

<sup>1</sup> Cells with — means data not available.

<sup>2</sup> Includes oats, sunflowers, rye, and flaxseed.

**Table 3-Types of grains marketed by wheat-barley-oats first-handlers-of-grain cooperatives, by total sales group, 1983-91\***

Item	Unit	1983	1985	1986	1987	1988	1989	1990	1991
<i>\$5- 14.9 million</i>									
Grain marketed, total	Bushels	2,065,546	2,207,417	2,475,804	2,693,163	( <sup>1</sup> )—	2,267,369	2,295,540	2,678,840
Wheat	Bushels	1,049,034	1,159,518	1,366,754	1,496,151	—	1,327,411	1,356,894	1,747,530
Corn	Bushels	62,391	60,353	135,307	83,174	—	62,899	82,937	88,220
Soybeans	Bushels	66,945	93,427	80,761	160,745	—	75,296	122,971	54,643
Sorghum	Bushels	2,491	1,441	1,217	25,208	—	0	0	3,418
Barley	Bushels	461,060	540,742	567,330	585,644	—	588,672	561,987	571,011
Other <sup>2</sup>	Bushels	423,625	351,936	324,435	342,241	—	213,091	170,751	214,018
<i>\$15 million or more</i>									
Grain marketed, total	Bushels	8,372,166	7,040,326	11,394,159	—	—	8,974,695	8,883,049	10,909,623
Wheat	Bushels	4,016,538	4,855,312	6,950,752	—	—	5,355,381	4,522,090	6,303,084
Corn	Bushels	171,309	31,474	159,982	—	—	493,217	362,979	396,376
Soybeans	Bushels	120,589	5,000	17,246	—	—	335,110	162,718	195,106
Sorghum	Bushels	0	0	0	—	—	35,118	0	0
Barley	Bushels	2,111,833	1,308,060	2,485,589	—	—	2,010,114	2,592,694	2,651,577
Other <sup>2</sup>	Bushels	1,951,897	840,480	1,780,590	—	—	745,755	1,242,568	1,363,480

<sup>1</sup>1984 data not available.

<sup>1</sup> Cells with — means data not available

<sup>2</sup> Includes oats, sunflowers, rye, and flaxseed.

**Table 3-Types of grains marketed by wheat-barley first-handlers-of-grain cooperatives, by total sales group, 1983-91\***

Item	Unit	1983	1985	1986	1987	1988	1989	1990	1991
<i>\$5- 14.9 million</i>									
Grain marketed, total	Bushels	2,313,292	2,373,766	3,081,940	( <sup>1</sup> )—	—	2,476,636	2,720,389	3,044,905
Wheat	Bushels	1,690,923	1,573,924	2,177,390		—	1,784,435	2,067,496	2,477,695
Corn	Bushels	31,736	0	57,344	—		0	0	11,093
Soybeans	Bushels	0	0	0		—	0	0	0
Sorghum	Bushels	0	0	0	—	—	0	0	0
Barley	Bushels	523,637	745,909	826,702	—	—	581,618	489,670	466,222
Other <sup>2</sup>	Bushels	66,996	53,933	20,504		—	110,583	163,223	89,895
<i>\$15 million or more</i>									
Grain marketed, total	Bushels	7552,196	8,430,961	7,593,262	—	—	6,342,402	7,896,109	8,733,234
Wheat	Bushels	6,088,455	6,412,654	6,025,276	—	—	5,092,032	6,316,887	7,849,890
Corn	Bushels	78,101	115,267	21,667		—	25,440	0	0
Soybeans	Bushels	0	191,088	0	—	—	0	0	0
Sorghum	Bushels	0	0	0		—	117	0	0
Barley	Bushels	1,339,569	1,654,577	1,546,319		—	1,080,495	1,263,378	848,161
Other*	Bushels	46,071	57,375	0			144,318	315,844	35,183

\*1984 data not available.

<sup>1</sup> Cells with — means data not available.

<sup>2</sup> Includes oats, sunflowers, rye, and flaxseed.

gram needs. CRP enrollment in the Northern Plains and Pacific Northwest and drought in the Northern Plains in 1988-89 also were factors.

### Other Income Sources

Operating income from sources other than margins on sales was largely from the grain storage function and related services (e.g., drying, cleaning, and treating). This income source normally contributes no more than 30 to 40 percent to total operating income for wheat-sorghum and wheat-barley-oats cooperatives and 50 to 55 percent for wheat-barley cooperatives (fig. 15).

These percentages were noticeably higher when wheat grain cooperatives prospered under the Federal Government's grain storage program in 1986 and 1987 (fig. 16 and table 2). Medium-sized cooperatives benefitted proportionally more than

their large counterparts. The program's short-term effect was dramatic.

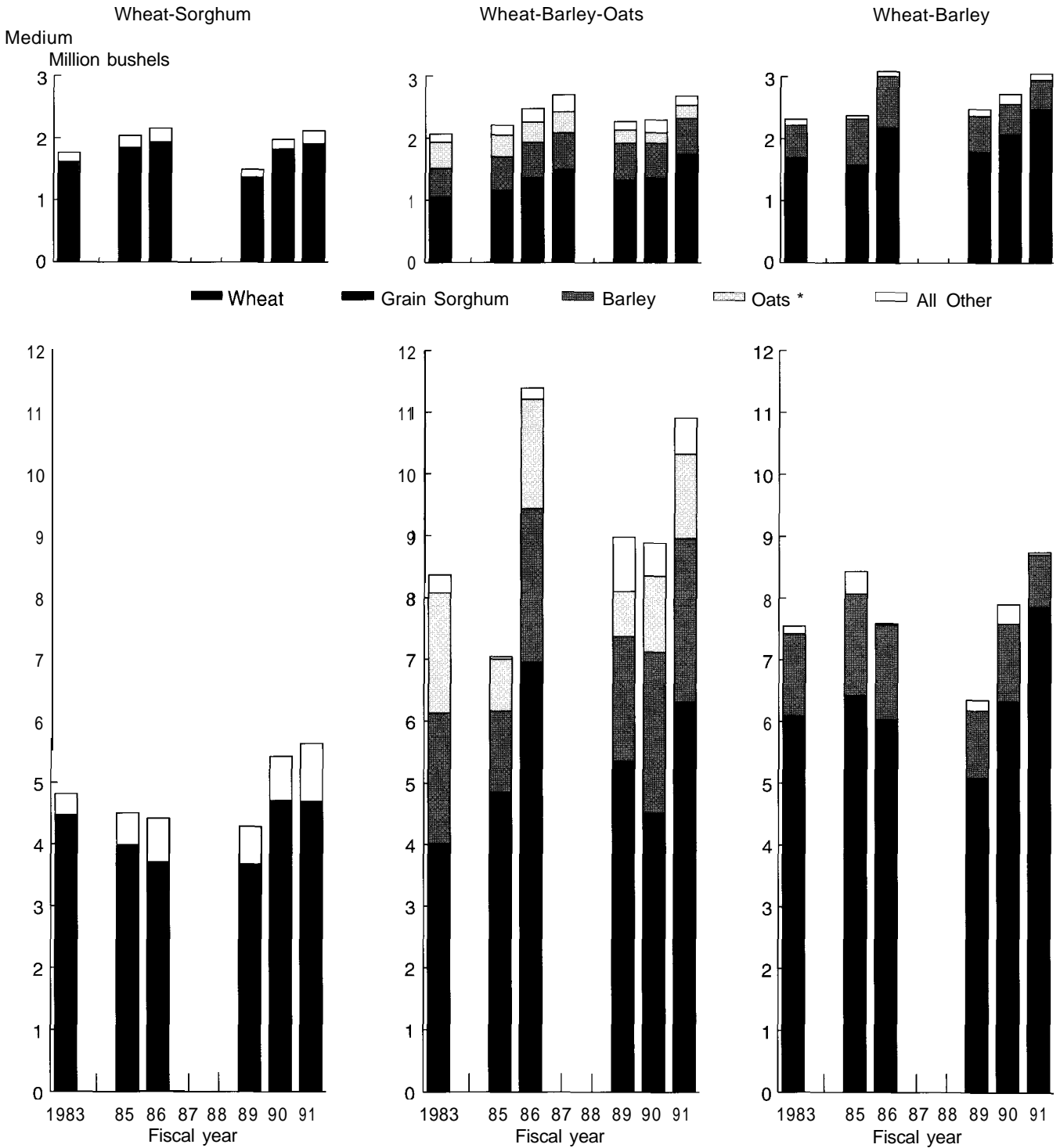
Nonoperating income—largely the combined effect of small patronage refunds received from other cooperatives and a net interest adjustment—generally was a relatively minor factor during the period (fig. 17 and table 2). In earlier years, cooperatives were burdened with paying off substantial debt with associated interest costs plus having to absorb writeoffs of investments in their respective regional cooperatives. This situation subsequently turned around. Considerable debt was repaid and regionals increased patronage refunds to locals.

### Patronage Refunds

Patronage refunds from regional cooperatives were an important and even "saving" source of

Figure 13

**Breakdown of Total Grains Sold, First-Handler Co-ops**



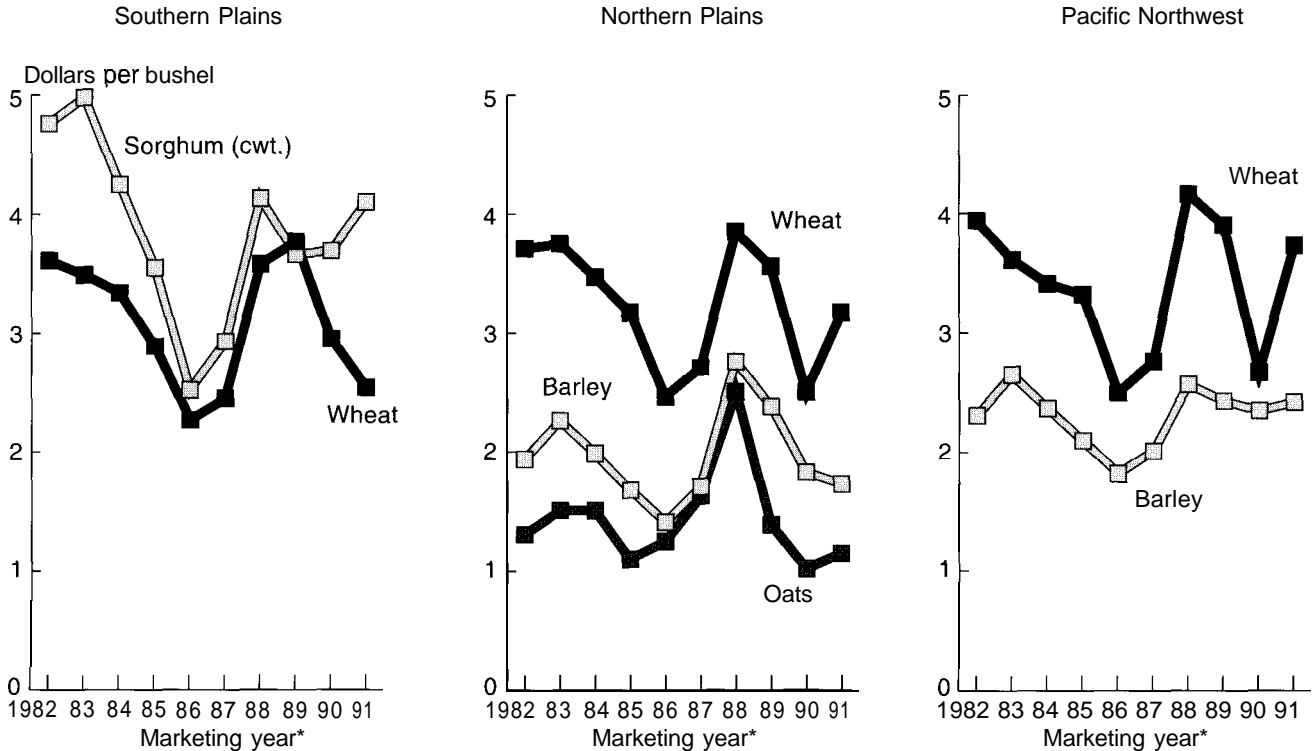
Fiscal year 1984 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales.

\* Oats, sunflowers, flaxseed, rye.

Figure 14

**Seasonal Average Prices Received, by Commodity**



\* Wheat, barley, oats —6/1–5/31 Grain sorghum —10/1–9/30  
 Source: USDA, N.A.S.S., Agricultural Prices, Washington, D.C., Annual summary issues.

income for local grain cooperatives, particularly in the latter 1980s (fig. 18).

For wheat-barley-oats and wheat-barley cooperatives, patronage from other cooperatives went from meager dividends in the early 1980s to almost nonexistent in the mid-1980s. Several regional cooperatives had substantial losses in the form of investment writedowns and writeoffs. In turn, many locals were forced to take similar measures. Wheat-sorghum cooperatives in the Southern Plains fared much better than their cooperative counterparts in other areas of the country through the mid-1980s.

The grain industry began an upswing in the latter 1980s. Patronage refunds became an increasing proportion of the locals' profits (figs. 19 and 20). Patronage refunds became relatively more important for medium-sized than for large cooper-

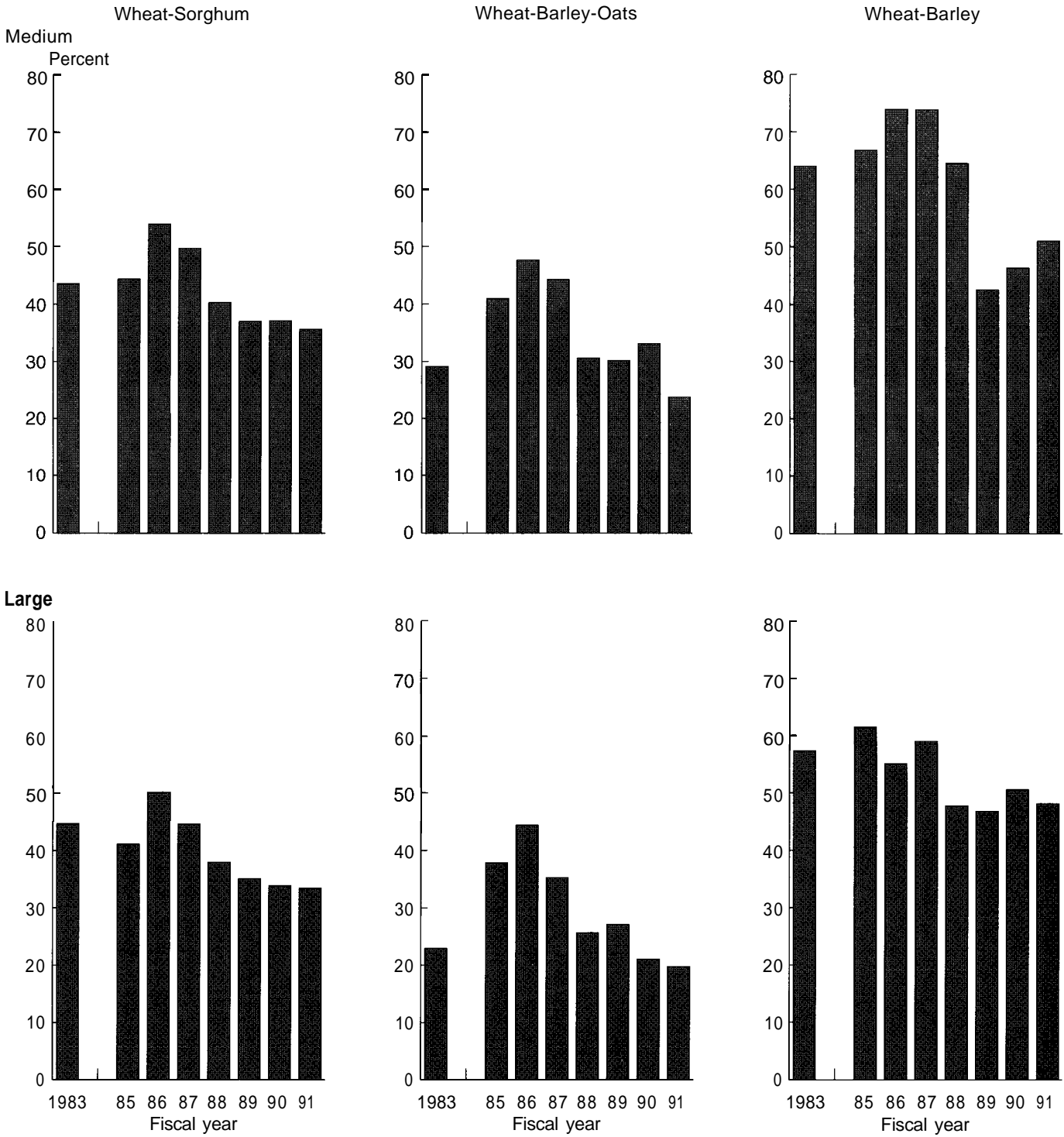
atives in all three areas, accounting for about 50 percent of net savings entering the 1990s. This income source continues to be sizeable, largely because of regional cooperative activity in value-added products. Regionals, largely through joint ventures, mergers, and acquisitions involving other cooperatives and investor-owned firms (IOFs), have been shifting resources to the production of larger-margin, value-added commodities.

This situation is likely to typify the 1990s. The regionals continue to position themselves to be competitive in the production of value-added products. While these margins may weaken somewhat as competition intensifies, they will continue to far exceed grain merchandising margins in the foreseeable future and generate significant patronage dividends for medium-sized member locals.



Figure 15

**Nonmargin of Total Operating Income, First-Handler Co-ops**

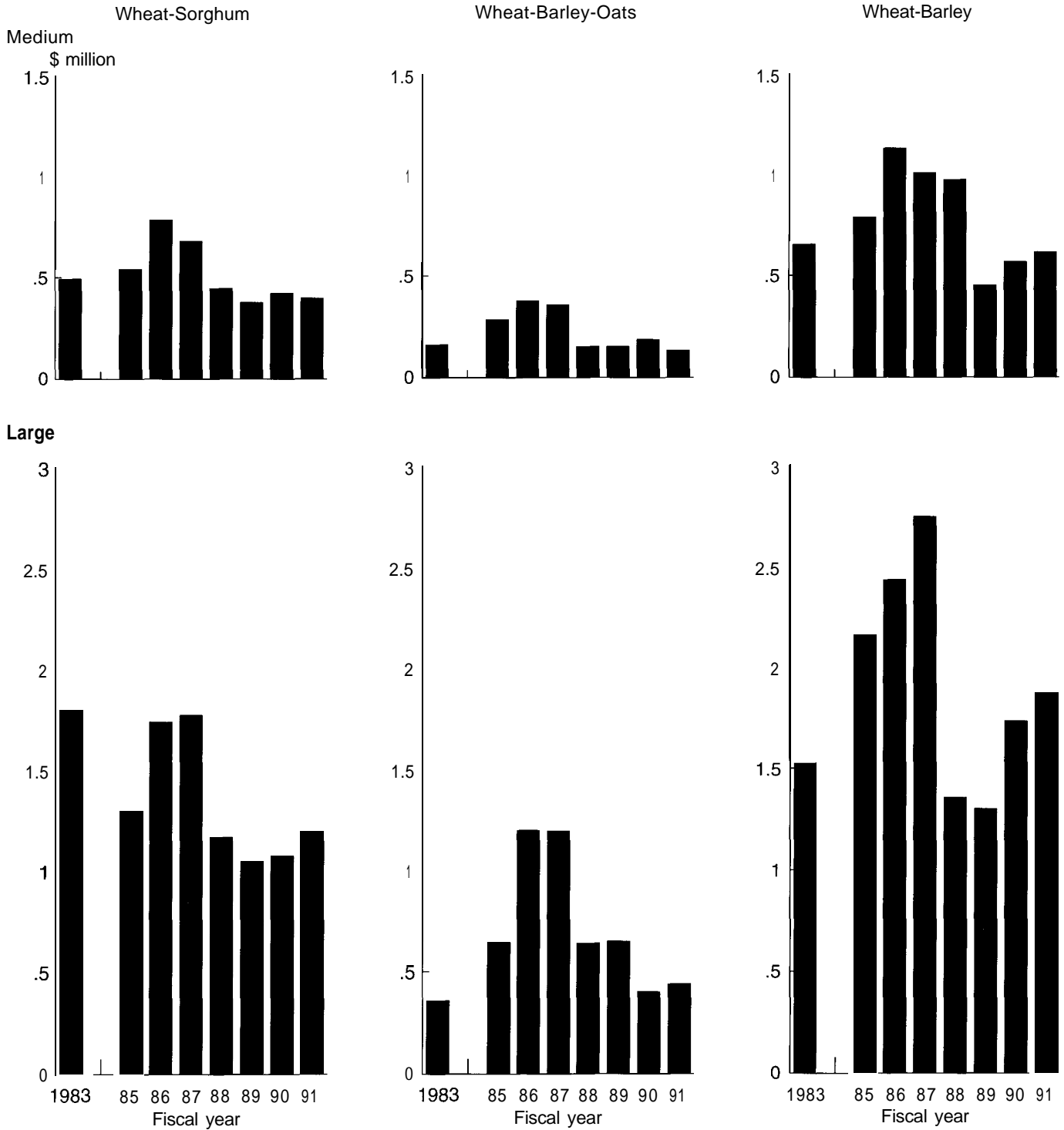


Fiscal year 1984 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales.

Figure 16

**Other Operating Income, First-Handler Co-ops**

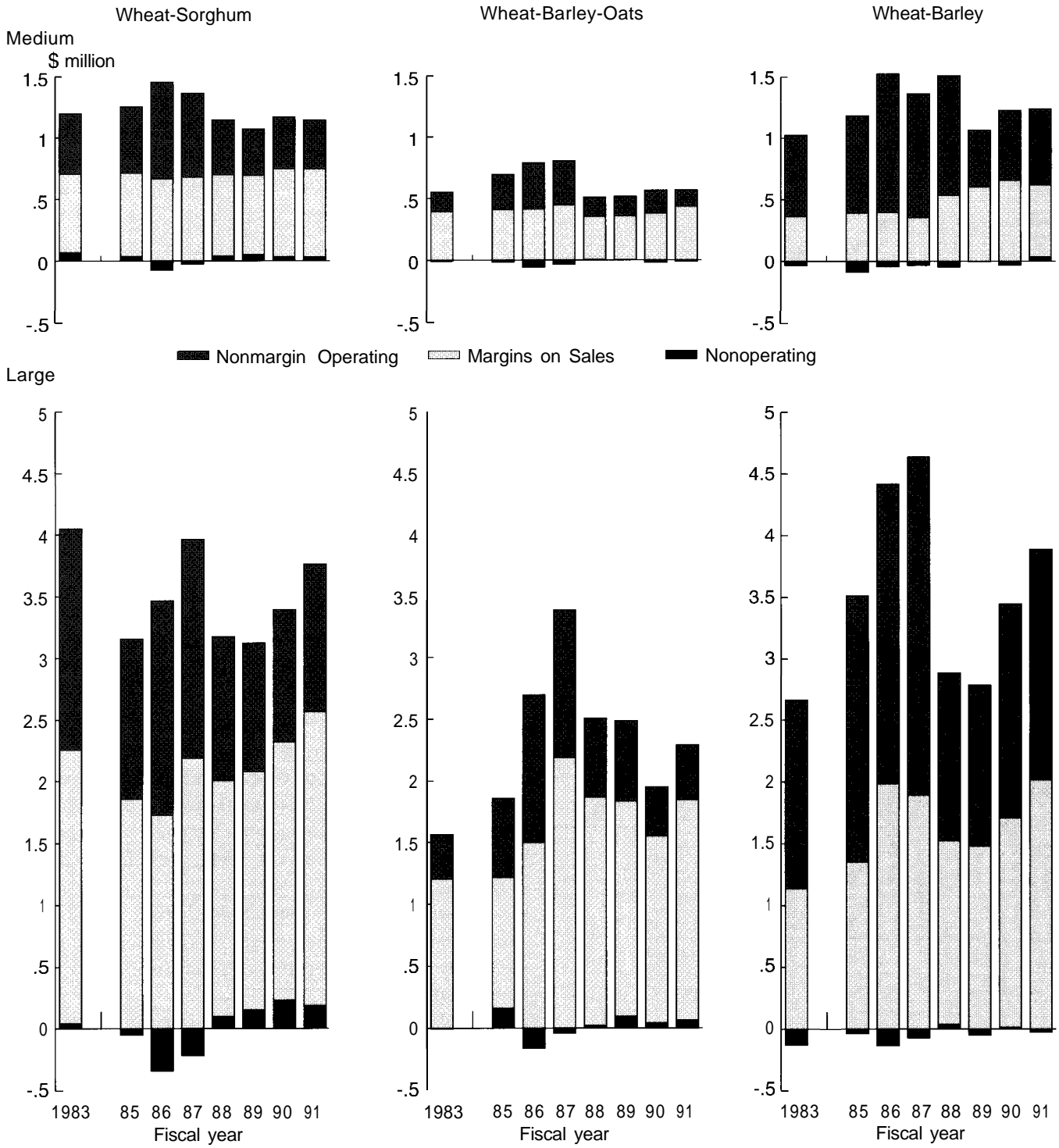


Fiscal year 1984 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales.

Figure 17

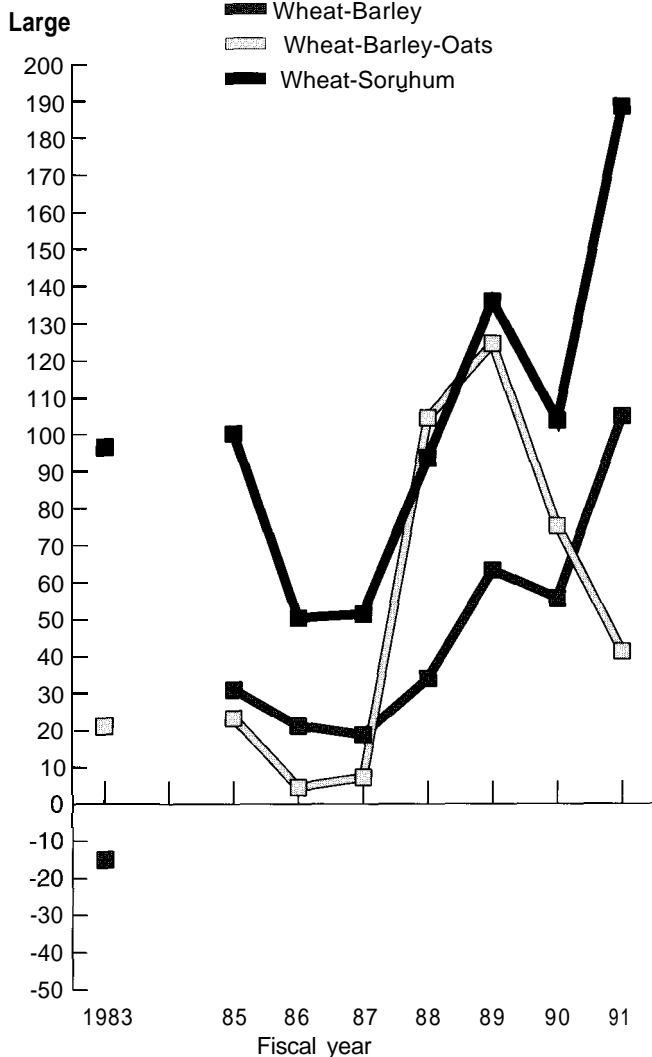
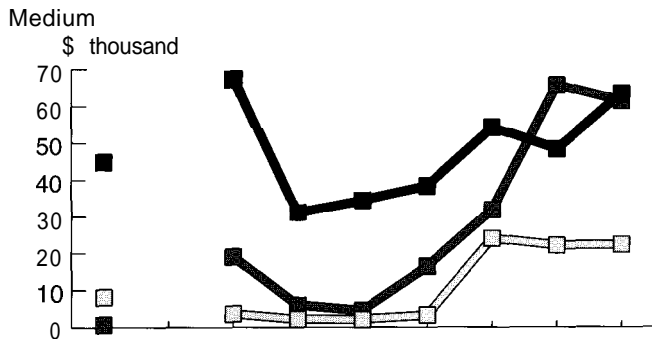
**Gross Income Sources, First-Handler Co-ops**



Fiscal year 1984 not available.  
 Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales

Figure 18

**Patronage Refunds Received**  
Wheat First-Handler Co-ops



Fiscal year 1984 not available.  
Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales.

**Operating Expenses**

Total operating expenses (TOE) for both sizes of grain-handling cooperatives peaked during 1986-87, subsequently sharply declined, and were on the rise again entering the 1990s. This held true for both sizes of grain-handling cooperatives (fig. 9 and table 2). TOEs averaged significantly higher in 1986-87 than for the pre- and post-periods, corresponding to that period's substantially greater grain storage activity.

**Role of Labor**

Labor cost (including benefits), except for 1986-87, gradually increased for both sized cooperatives. Efforts to curb rising labor costs, particularly the benefits portion, proved difficult. Labor cost as a proportion of total expenses generally rose steadily for wheat-sorghum cooperatives during the period (fig. 21). Except for medium-sized wheat-barley-oats cooperatives, the proportion for wheat-barley-oats and wheat-barley associations fell until the latter 1980s and then began to climb entering the 1990s.

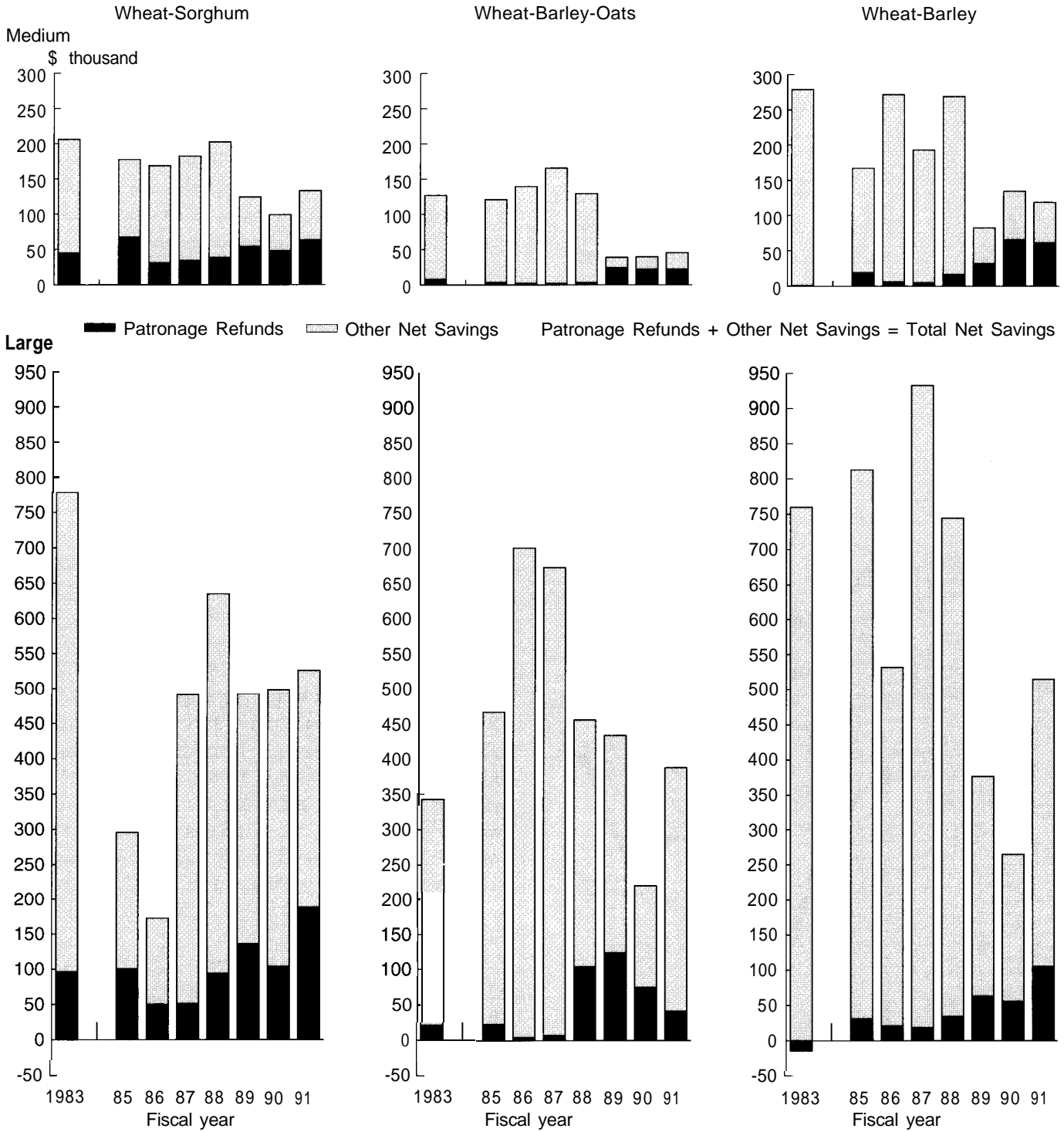
Total sales per dollar of labor expenses, a measure of labor efficiency, varied considerably from year to year. Variation was considerably greater among the three wheat areas for each size of cooperative than between the two sizes (fig. 22). Labor efficiency declined from 1983 to 1987 largely because of rising labor costs. For medium-sized wheat cooperatives, labor costs rose more than sales declined. For large wheat-barley-oats and wheat-barley cooperatives, costs grew faster than sales.

Labor efficiency improved during 1988-89 for all wheat grain cooperatives. Increased sales, particularly of farm supplies, were accompanied by lower labor costs.

Labor efficiency declined entering the 1990s. Except for wheat-barley cooperatives, sales were flat (medium-sized firms) or up slightly (large firms) and labor costs were rising. Grain sales were off and labor costs increasing for wheat-barley first-handlers.

Figure 19

**Patronage Refunds Received and Total Net Savings, First-Handler Co-ops**



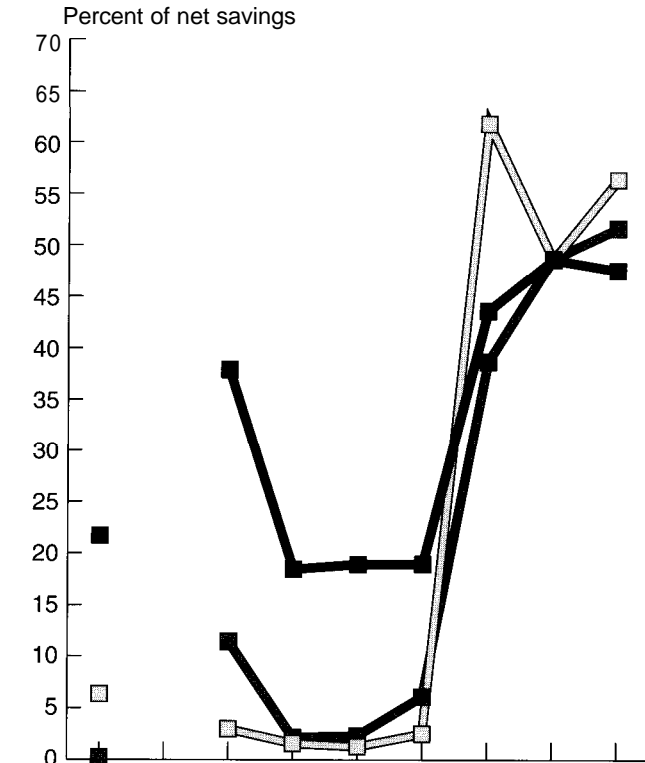
Fiscal year 1984 not available

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales.

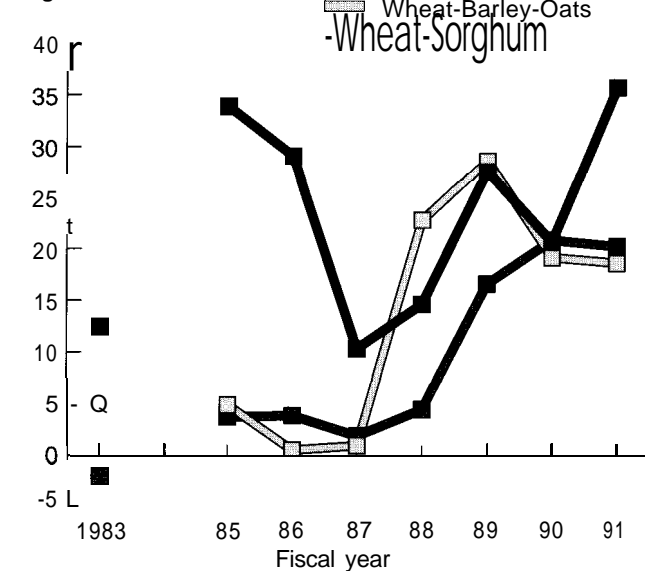
Figure 20

**Proportion Patronage Refunds Received**  
Wheat First-Handler Co-ops

**Medium**



**Large**



Fiscal year 1984 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales

**Other Expenses**

Other operating expenses generally followed the same pattern of ups and downs heading into the early 1990s. This pattern was considerably more pronounced for the large than the medium-sized cooperatives. Nonlabor operating cost increases prior to and during 1986-87 were largely associated with the storage buildup due to substantial participation in the Government grain storage program.

Nonlabor operating costs per association and as a proportion of total operating costs generally averaged lower during the latter half of the period, largely due to ongoing efforts to reduce overhead costs. Many wheat grain associations had to adjust to operating more efficiently and generating higher profits given the excess fast-loading, unit-train shipping capacity acquired and/or constructed in the latter 1970s and early 1980s. This was particularly true for wheat grain cooperatives in the Northern and Southern Plains. (See references (1) and (3) for detailed information on cooperatives operating with unit-train capability.)

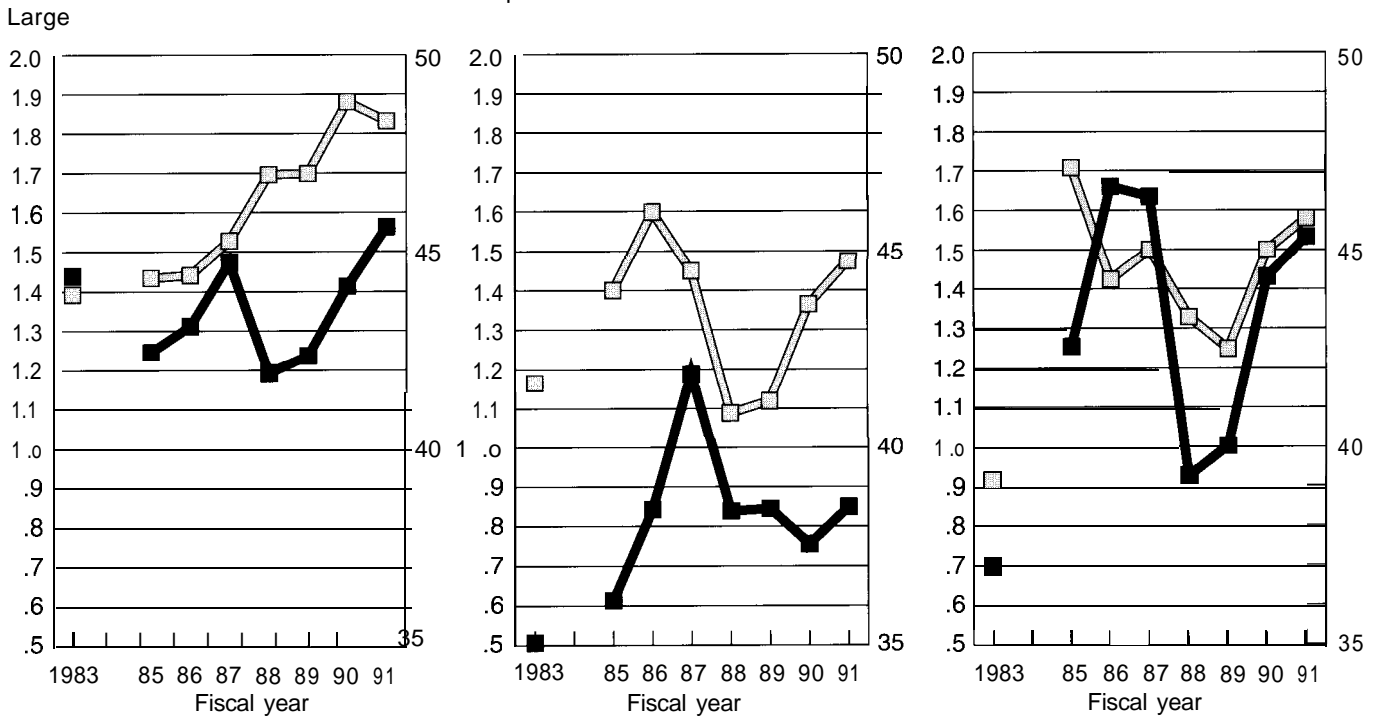
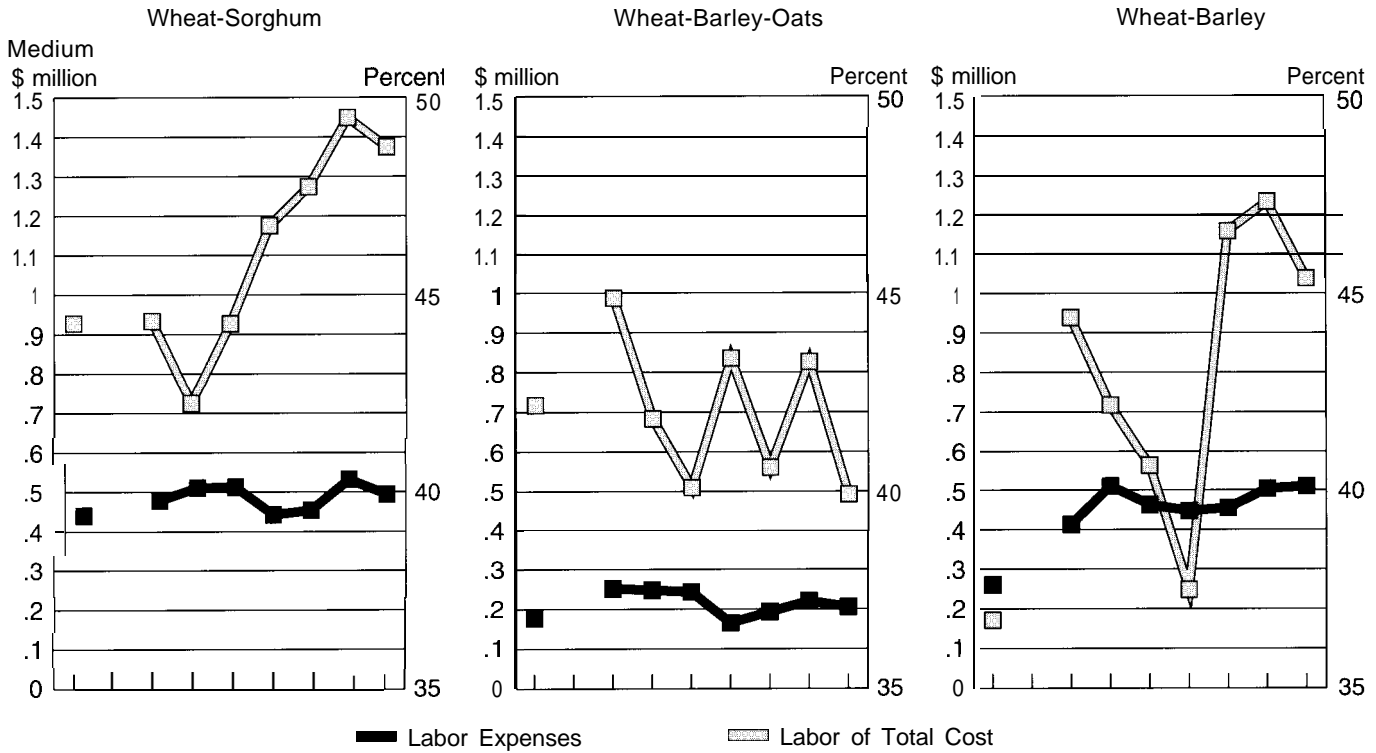
Expansion was in response to grain export growth in the late 1970s and expectations of its continuation into the 1980s. U.S. wheat exports peaked in 1981 at about 1.6 billion bushels and dropped to about 0.9 billion bushels in 1985 and 1986. Under the Export Enhancement Program (EEP) initiated in FY 1985, wheat exports climbed in FY 1987 and 1988. Sales, however, were largely CCC stocks being stored for the Government under contract, much of it by wheat grain cooperatives. Such sales sharply reduced the cooperatives' storage income base. This was followed by participation in the Conservation Reserve Program (CRP)<sup>2</sup> beginning in FY 1987 and drought in the Northern Plains in 1988-89.

Both CRP and drought reduced volumes of wheat and other grains available to cooperatives. This translated into a significant change in operating efficiency and profitability in grain merchandising.

<sup>2</sup> At the national level, CRP reduced the wheat base acreage available for production alone by more than 10 million acres during 1987-91.

Figure 21

**Labor Cost and Proportion of Total Cost, First-Handler Co-ops**

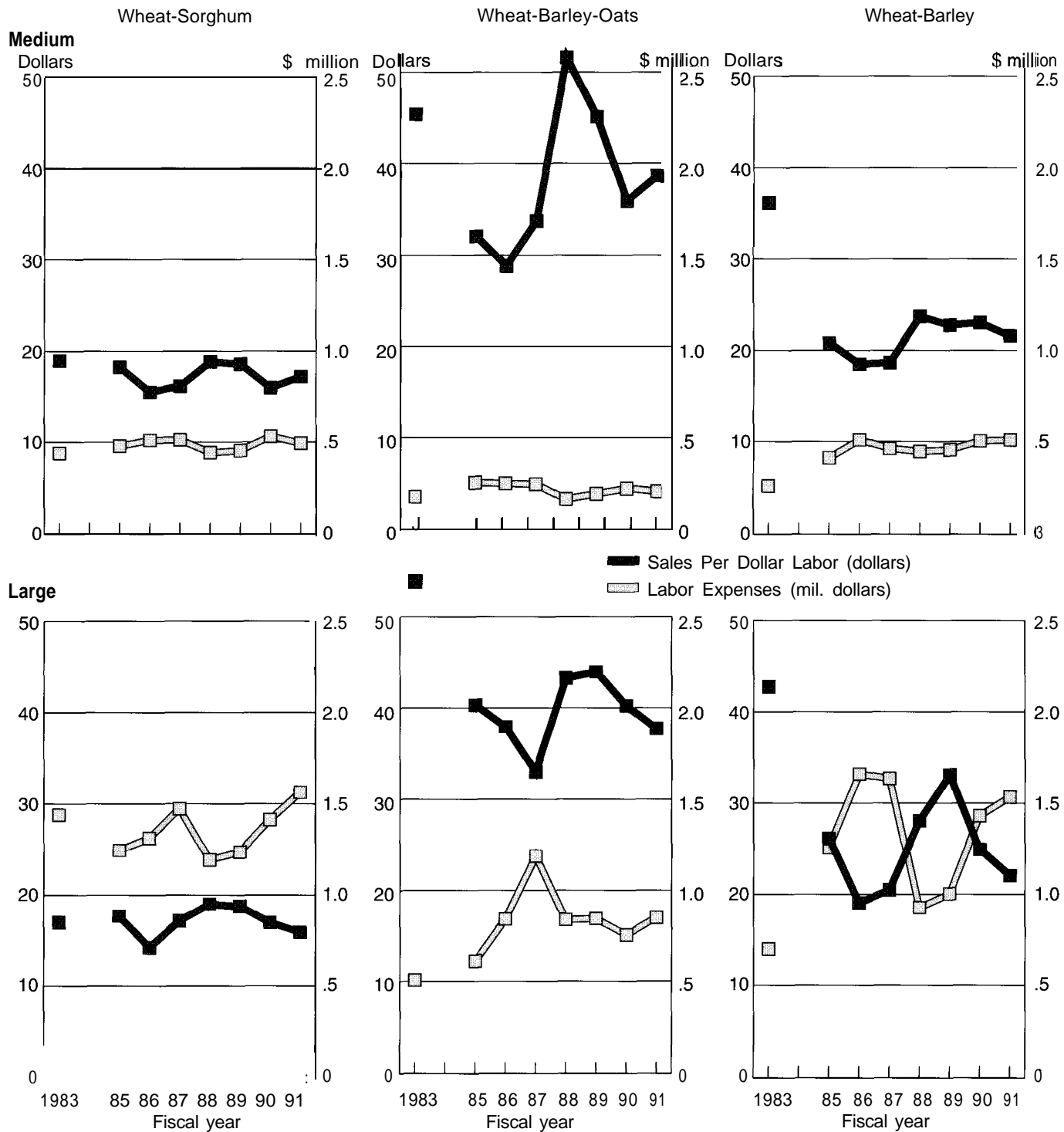


Fiscal year 1984 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales.

Figure 22

**Total Labor Cost and Sales Per Dollar Labor, First-Handler Co-ops**



Fiscal year 1984 not available

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales.



## **Snapshot of Cost Structure**

Time series operating cost data exist for only the labor and other operating expenses. See the detailed breakdown of costs for wheat-barley-oats cooperatives prepared for 1989 under three major categories-labor, facility, and general/administrative-in appendix B <sup>3</sup>. Cost distributions are similar, yet different, for both medium-sized and large cooperatives.

Labor and general/administrative expenses were about the same proportion of total operating cost for both medium-sized and large local wheat-barley-oats cooperatives. Facility costs and income taxes were higher for medium-sized cooperatives while interest cost was higher for large cooperatives. Labor cost percentages were similar for both size groups for wages/salaries (83 percent), fringe benefits (10 percent), and taxes (7 percent).

## **Grain Storage Capacity**

Grain storage capacity data were not available for local wheat grain cooperatives for 1986-88, but data available for the remaining years largely mirror the national pattern. The decline in U.S. grain exports in the early 1980s was accompanied by a buildup in U.S. grain stocks, which peaked in 1986-87 at 8.4 billion bushels. This buildup, accompanied by Government agricultural program incentives, in turn, led to increased U.S. grain storage capacity. It reached a record 22.9 billion bushels on Dec. 1, 1988. Since then, grain storage capacity has been declining and grain stocks have dropped sharply, resulting in considerable excess grain storage capacity and reduced storage income.

Cooperative grain storage capacity (and grain marketings) for medium-sized cooperatives increased early in the period, while the situation for large cooperatives was mixed (table 2). Grain storage capacity (and grain marketings) per association generally averaged lower for all three types

of wheat grain cooperatives the next 2 to 3 years, and then increased during 1989-91.

Storage capacity levels for 1989-91 averaged 9 to 12 percent higher than for 1983-85 for medium-sized wheat associations in all three areas. Storage capacity averaged 5 and 8 percent higher in 1989-91 for large wheat-barley-oats and wheat-barley associations, respectively. Storage levels for large wheat-sorghum cooperatives averaged lower. Rising turnover rates in the 1990s largely reflected the increased grain merchandising.

## **BALANCE SHEET**

### **Assets**

Total value of assets per association varied considerably among the three types of wheat grain cooperatives. Assets of medium-sized wheat-sorghum and wheat-barley firms were similar and significantly larger (30 to 34 percent) than the wheat-barley-oats firms. Large wheat-barley-oats cooperatives in the Northern Plains were largest among the three wheat areas studied, averaging 10 percent and 27 percent larger than in the Pacific Northwest and Southern Plains, respectively (table 4).

Total assets per association increased prior to the mid-1980s (1986-87), decreased for a year or two, and then rose steadily into the 1990s (fig. 23). Except for medium-sized wheat-barley cooperatives, total value of assets of wheat grain cooperatives averaged 7 to 12 percent lower during 1988-91 than during 1983-87.

Net book value of fixed assets-physical facility and related equipment-generally increased through 1987, declined until the early 1990s, and averaged 7 to more than 18 percent lower during 1988-91 than during 1983-87 (fig. 23). Net fixed assets averaged highest in value and was the highest proportion of total assets for wheat-barley cooperatives, reflecting their significantly larger physical plants.

Current assets per association increased through 1986-87, subsequently declined, and then climbed again into the 1990s. This pattern was pronounced for the large cooperatives in all areas and coincides with similar grain industry patterns.

<sup>3</sup> A comparable breakdown of wheat-sorghum and wheat-barley association costs was not possible because of insufficient data.

**Table 4-Selected balance sheet data for wheat-sorghum first-handlers-of-grain cooperatives, by total sales group, 1983-91\***

Item	Unit	1983	1985	1986	1987	1988	1989	1990	1991
<i>\$5- 14.9 million</i>									
Current assets	Dollars	1,507,334	1,564,815	1,928,939	1,869,235	1,649,678	1 579, 1 3 6	1,564,154	1,567,536
Investments	Dollars	868,707	975,069	971,694	871,278	721,698	802,937	888,585	917,134
Fixed assets	Dollars	1,252,291	1,274,716	1,477,750	1,274,757	1,043,979	1,058,678	1,059,541	1,138,064
Other assets	Dollars	19,762	23,775	19,451	17,544	16,752	14,976	13,910	11,128
<b>Total</b>	<b>Dollars</b>	<b>3,648,094</b>	<b>3,838,375</b>	<b>4,397,834</b>	<b>4,032,814</b>	<b>3,432,107</b>	<b>3,455,727</b>	<b>3,526,190</b>	<b>3,633,862</b>
Current liabilities	Dollars	949,337	904,885	1,170,918	1,144,134	959,799	859,538	823,860	875,427
Long-term liab.	Dollars	407,788	441,600	510,581	329,302	211,081	175,698	177,859	169,626
Equity	Dollars	2,290,969	2,491,890	2,716,335	2,559,378	2,261,227	2,420,491	2,524,471	2,588,809
<b>Total</b>	<b>Dollars</b>	<b>3,648,094</b>	<b>3,838,375</b>	<b>4,397,834</b>	<b>4,032,814</b>	<b>3,432,107</b>	<b>3,455,727</b>	<b>3,526,190</b>	<b>3,633,862</b>
Working capital <sup>1</sup>	Dollars	557,997	659,930	758,021	725,101	689,879	719,598	740,294	692,109
Total debt	Dollars	823,266	789,442	927,210	804,761	623,326	587,689	594,133	523,386
Ratios:									
Current	Number	1.59	1.73	1.65	1.63	1.72	1.84	1.90	1.79
Liab./equity	Number	0.59	0.54	0.62	0.58	0.52	0.43	0.40	0.40
Equity/total assets	Number	0.63	0.65	0.62	0.63	0.66	0.70	0.72	0.71
Debt/total assets	Number	0.23	0.21	0.21	0.20	0.18	0.17	0.17	0.14
Debt/equity	Number	0.36	0.32	0.34	0.31	0.28	0.24	0.24	0.20
<i>\$15 million or more</i>									
Current assets	Dollars	5,121,655	3,768,752	3,873,804	4,776,757	3,537,758	3,884,338	4,566,112	5,174,422
Investments	Dollars	2,601,056	2,214,588	2,148,449	2,244,206	1,684,978	1,606,470	1,819,637	1,854,193
Fixed assets	Dollars	4,019,131	3,265,061	3,305,656	3,442,707	2,737,753	2,867,200	3,102,062	3,045,774
Other assets	Dollars	51,458	39,903	43,579	45,549	27,423	28,573	17,408	47,262
<b>Total</b>	<b>Dollars</b>	<b>11,793,300</b>	<b>9,288,304</b>	<b>9,371,488</b>	<b>10,509,219</b>	<b>7,987,912</b>	<b>8,386,581</b>	<b>9,505,219</b>	<b>10,121,651</b>
Current liabilities	Dollars	3,787,044	2,320,349	2,816,344	2,862,934	2,029,101	2,287,168	2,649,118	3,083,793
Long-term liab.	Dollars	1,348,401	1,093,794	1,266,481	553,169	520,554	546,390	491,509	553,827
Equity	Dollars	6,657,855	5,874,161	5,288,663	7,093,116	5,438,257	5,553,023	6,364,592	6,484,031
<b>Total</b>	<b>Dollars</b>	<b>11,793,300</b>	<b>9,288,304</b>	<b>9,371,488</b>	<b>10,509,219</b>	<b>7,987,912</b>	<b>8,386,581</b>	<b>9,505,219</b>	<b>10,121,651</b>
Working capital <sup>1</sup>	Dollars	1,334,611	1,448,403	1,057,460	1,913,823	1,508,657	1,597,170	1,916,994	2,090,629
Total debt	Dollars	2,732,593	2,308,206	2,609,245	1,445,600	1,289,052	1,531,162	1,871,134	2,184,294
Ratios:									
Current	Number	1.35	1.62	1.38	1.67	1.74	1.70	1.72	1.68
Liab./equity	Number	0.77	0.58	0.77	0.48	0.47	0.51	0.49	0.56
Equity/total assets	Number	0.56	0.63	0.56	0.67	0.68	0.66	0.67	0.64
Debt/total assets	Number	0.23	0.25	0.28	0.14	0.16	0.18	0.20	0.22
Debt/equity	Number	0.41	0.39	0.49	0.20	0.24	0.28	0.29	0.34

\*1984 data not available.

<sup>1</sup> Current assets minus current liabilities.

**Table 4-Selected balance sheet data for wheat-barley-oats first-handlers-of-grain cooperatives, by total sales group, 1983-91\***

Item	Unit	1983	1985	1986	1987	1988	1989	1990	1991
<i>\$5-14.9 million</i>									
Current assets	Dollars	1,465,609	1,722,980	1,611,906	1,832,928	1,611,413	1,743,981	1,365,732	1,878,604
<b>Investments</b>	Dollars	<b>410,402</b>	<b>453,715</b>	<b>427,323</b>	<b>306,991</b>	<b>264,178</b>	<b>281,414</b>	<b>308,562</b>	<b>272,703</b>
<b>Fixed assets</b>	Dollars	<b>727,323</b>	<b>994,206</b>	1,021,061	<b>982,323</b>	<b>836,926</b>	<b>809,407</b>	<b>699,597</b>	<b>743,087</b>
Other assets	Dollars	<b>30,951</b>	<b>20,403</b>	<b>15,832</b>	<b>21,920</b>	<b>21,515</b>	<b>26,216</b>	<b>29,234</b>	<b>17,948</b>
<b>Total</b>	Dollars	2,634,285	3,191,304	3,076,122	3,144,162	2,734,032	2,861,018	2,403,125	2,912,342
Current liabilities	Dollars	1,149,676	1,360,392	1,319,670	1,516,604	1,255,294	1,368,195	1,060,488	1,459,578
<b>Long-term liab.</b>	Dollars	<b>158,303</b>	<b>216,389</b>	<b>230,155</b>	<b>203,952</b>	<b>106,443</b>	<b>111,253</b>	<b>199,208</b>	<b>200,998</b>
<b>Equity</b>	Dollars	1,326,306	1,614,523	1,526,297	1,423,606	1,372,295	1,381,570	1,143,429	1,251,766
<b>Total</b>	Dollars	2,634,285	3,191,304	3,076,122	3,144,162	2,734,032	2,861,018	2,403,125	2,912,342
<b>Working capital</b> <sup>1</sup>	Dollars	<b>315,933</b>	<b>362,588</b>	292,236	<b>316,324</b>	<b>356,119</b>	<b>375,786</b>	<b>305,244</b>	<b>419,026</b>
<b>Total debt</b>	Dollars	<b>328,909</b>	<b>335,616</b>	<b>356,240</b>	<b>358,270</b>	<b>334,185</b>	<b>319,888</b>	<b>356,405</b>	<b>286,802</b>
<b>Ratios:</b>									
<b>Current</b>	<b>Number</b>	<b>1.27</b>	<b>1.27</b>	<b>1.22</b>	<b>1.21</b>	<b>1.28</b>	<b>1.27</b>	<b>1.29</b>	<b>1.29</b>
Liab./equity	<b>Number</b>	<b>0.99</b>	<b>0.98</b>	<b>1.02</b>	<b>1.21</b>	<b>0.99</b>	<b>1.07</b>	<b>1.10</b>	<b>1.33</b>
Equity/total assets	<b>Number</b>	<b>0.50</b>	<b>0.51</b>	<b>0.50</b>	<b>0.45</b>	<b>0.50</b>	<b>0.48</b>	<b>0.48</b>	<b>0.43</b>
Debt/total assets	<b>Number</b>	<b>0.12</b>	<b>0.11</b>	<b>0.12</b>	<b>0.11</b>	<b>0.12</b>	<b>0.11</b>	<b>0.15</b>	<b>0.10</b>
Debt/equity	<b>Number</b>	<b>0.25</b>	<b>0.21</b>	<b>0.23</b>	<b>0.25</b>	<b>0.24</b>	<b>0.23</b>	<b>0.31</b>	<b>0.23</b>
<i>\$15 million or more</i>									
Current assets	Dollars	8,378,873	<b>5833,731</b>	8,472,424	8,016,028	6,150,794	6,730,076	5,441,771	8,370,936
<b>Investments</b>	Dollars	1,371,290	1,191,408	1,641,645	2,092,487	1,634,126	1,771,375	1,570,105	1,735,433
<b>Fixed assets</b>	Dollars	2,649,698	2,922,461	3,749,420	4,560,239	3,687,175	3,608,116	2,896,068	3,226,289
<b>Other assets</b>	Dollars	<b>21,782</b>	<b>6,131</b>	<b>24,663</b>	<b>34,961</b>	<b>12,519</b>	<b>18,425</b>	<b>8,055</b>	<b>20,018</b>
<b>Total</b>	Dollars	12,421,643	9,953,731	13,888,152	14,703,715	11,484,614	12,128,042	9,915,999	13,352,676
Current liabilities	Dollars	7,561,588	4,924,562	7,947,282	7,021,162	5,428,606	6,091,716	4,779,283	7,533,758
<b>Long-term liab.</b>	Dollars	<b>828,815</b>	1,067,089	1,262,055	<b>739,095</b>	<b>673,548</b>	<b>607,063</b>	<b>416,703</b>	<b>424,073</b>
<b>Equity</b>	Dollars	4,031,240	3,962,080	4,678,815	6,943,458	5,382,460	5,429,263	4,720,013	5,394,845
<b>Total</b>	Dollars	12,421,643	9,953,731	13,888,152	14,703,715	11,484,614	12,128,042	9,915,999	13,352,676
<b>Working capital</b> <sup>1</sup>	Dollars	<b>817,285</b>	<b>909,169</b>	<b>525,142</b>	<b>994,866</b>	<b>722,188</b>	<b>638,360</b>	<b>662,488</b>	<b>837,178</b>
<b>Total debt</b>	Dollars	<b>993,243</b>	1,450,350	1,509,579	1,074,443	1,328,938	1,077,349	<b>755,838</b>	<b>821,783</b>
<b>Ratios:</b>									
<b>Current</b>	<b>Number</b>	<b>1.11</b>	<b>1.18</b>	<b>1.07</b>	<b>1.14</b>	<b>1.13</b>	<b>1.10</b>	<b>1.14</b>	<b>1.11</b>
Liab./equity	<b>Number</b>	<b>2.08</b>	1.51	<b>1.97</b>	<b>1.12</b>	<b>1.13</b>	<b>1.23</b>	<b>1.10</b>	<b>1.48</b>
Equity/total assets	<b>Number</b>	<b>0.32</b>	<b>0.40</b>	<b>0.34</b>	<b>0.47</b>	<b>0.47</b>	<b>0.45</b>	<b>0.48</b>	<b>0.40</b>
Debt/total assets	<b>Number</b>	<b>0.08</b>	<b>0.15</b>	<b>0.11</b>	<b>0.07</b>	<b>0.12</b>	<b>0.09</b>	<b>0.08</b>	<b>0.06</b>
Debt/equity	<b>Number</b>	<b>0.25</b>	<b>0.37</b>	<b>0.32</b>	<b>0.15</b>	<b>0.25</b>	<b>0.20</b>	<b>0.16</b>	<b>0.15</b>

<sup>1</sup> 1984 data not available.

<sup>1</sup> Current assets minus current liabilities.

**Table 4-Selected balance sheet data for wheat-barley first-handlers-of-grain cooperatives, by total sales group, 1983-91\***

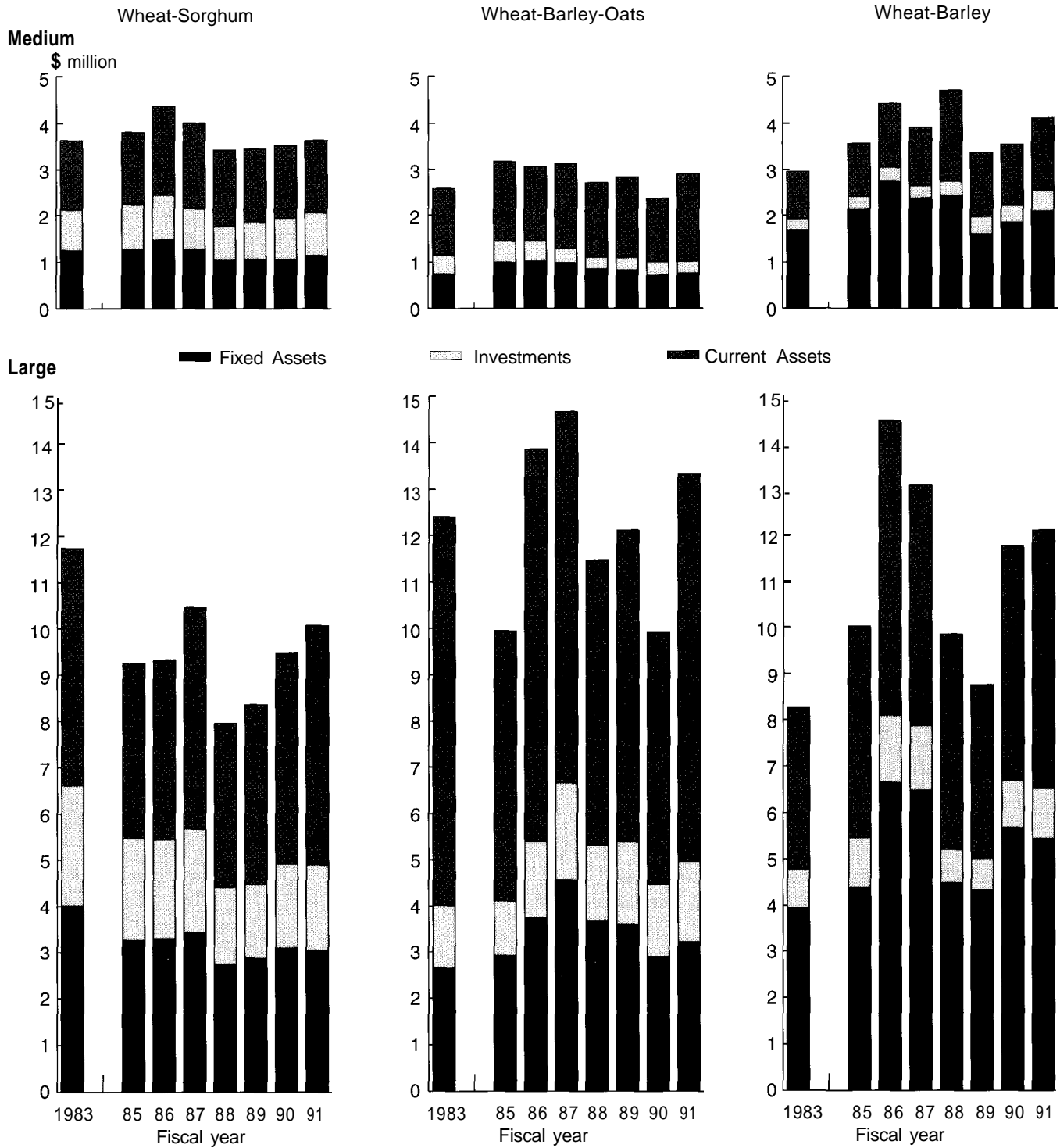
Item	Unit	1983	1985	1986	1987	1988	1989	1990	1991
<i>\$5- 14.9 million</i>									
Current assets	Dollars	1,023,161	1,137,180	1,373,070	1,266,242	1,951,493	1,398,405	1,312,450	1,577,047
Investments	Dollars	245,804	287,187	293,052	272,457	308,262	369,203	381,897	456,950
Fixed assets	Dollars	1,678,994	2,127,632	2,746,011	2,378,373	2,431,744	1,598,076	1,839,974	2,084,493
Other assets	Dollars	48,542	13,173	39,050	15,545	53,258	13,497	23,007	23,513
<b>Total</b>	<b>Dollars</b>	<b>2,996,501</b>	<b>3,565,172</b>	<b>4,451,183</b>	<b>3,932,617</b>	<b>4,744,757</b>	<b>3,379,181</b>	<b>3,557,328</b>	<b>4,142,003</b>
Current liabilities	Dollars	576,703	826,985	782,264	734,862	1,307,151	825,628	820,034	885,276
Long-term liab.	Dollars	363,206	538,256	609,234	377,063	435,922	307,809	226,443	164,195
Equity	Dollars	2,056,592	2,199,931	3,059,685	2,820,692	3,001,684	2,245,744	2,510,851	3,092,532
<b>Total</b>	<b>Dollars</b>	<b>2,996,501</b>	<b>3,565,172</b>	<b>4,451,183</b>	<b>3,932,617</b>	<b>4,744,757</b>	<b>3,379,181</b>	<b>3,557,328</b>	<b>4,142,003</b>
Working capital <sup>1</sup>	Dollars	446,458	310,195	590,806	531,380	644,342	572,777	492,416	691,771
Total debt	Dollars	507,666	881,262	799,686	546,136	1,135,641	777,134	671,646	669,037
Ratios:									
Current Liab./equity	Number	1.77	1.38	1.76	1.72	1.49	1.69	1.60	1.78
Equity/total assets	Number	0.69	0.62	0.69	0.72	0.63	0.66	0.71	0.75
Debt/total assets	Number	0.17	0.25	0.18	0.14	0.24	0.23	0.19	0.16
Debt/equity	Number	0.25	0.40	0.26	0.19	0.38	0.35	0.27	0.22
<i>\$15 million or more</i>									
Current assets	Dollars	3,470,665	4,566,116	6,356,948	5,198,443	4,657,268	3,751,797	5,062,833	5,563,204
Investments	Dollars	831,626	1,081,194	1,441,428	1,395,162	699,198	684,520	1,011,424	1,088,055
Fixed assets	Dollars	3,943,659	4,376,177	6,643,468	6,470,062	4,494,510	4,326,423	5,673,403	5,443,058
Other assets	Dollars	161,956	47,882	134,183	125,255	199,229	111,454	141,915	132,233
<b>Total</b>	<b>Dollars</b>	<b>8,407,906</b>	<b>10,071,369</b>	<b>14,576,027</b>	<b>13,188,922</b>	<b>10,050,205</b>	<b>8,874,194</b>	<b>11,889,575</b>	<b>12,226,550</b>
Current liabilities	Dollars	2,734,148	3,554,241	5,428,780	3,922,323	3,654,561	2,499,368	3,710,786	4,012,970
Long-term liab.	Dollars	1,137,116	1,144,110	1,293,225	1,210,888	887,327	753,407	1,237,116	1,233,087
Equity	Dollars	4,536,642	5,373,018	7,854,022	8,055,711	5,508,317	5,621,419	6,941,673	6,980,493
<b>Total</b>	<b>Dollars</b>	<b>8,407,906</b>	<b>10,071,369</b>	<b>14,576,027</b>	<b>13,188,922</b>	<b>10,050,205</b>	<b>8,874,194</b>	<b>11,889,575</b>	<b>12,226,550</b>
Working capital <sup>1</sup>	Dollars	736,517	1,011,875	928,168	1,276,120	1,002,707	1,252,429	1,352,047	1,550,234
Total debt	Dollars	2,227,067	2,413,998	3,317,210	2,116,921	3,097,204	1,392,911	2,628,828	2,584,809
Ratios:									
Current Liab./equity	Number	1.27	1.28	1.17	1.33	1.27	1.50	1.36	1.39
Equity/total assets	Number	0.54	0.53	0.54	0.61	0.55	0.63	0.58	0.57
Debt/total assets	Number	0.26	0.24	0.23	0.16	0.31	0.16	0.22	0.21
Debt/equity	Number	0.49	0.45	0.42	0.26	0.56	0.25	0.38	0.37

\*1984 data not available.

<sup>1</sup> Current assets minus current liabilities.

Figure 23

**Total Assets Categories, First-Handler Co-ops**



Fiscal year 1984 not available

Medium = \$5–14.9 million total sales. Large = \$15 million plus total sales

Drought in 1988-89 in the Northern Plains contributed to reduced inventories for wheat-barley-oats cooperatives. The variation in total current asset value largely reflects changes in the inventory value of crops.

Local first-handler investments, mostly in other cooperatives, for most size/type groups slid until turning and reversing the decline in the latter 1980s. Clear early-period exceptions were large wheat-barley-oats and wheat-barley cooperatives. Mid-period lows were related to the declines in the asset value of their regionals.

Despite this pattern, the level of investments by locals in the early 1990s had not returned to earlier levels. The extent of regional affiliation varied significantly among the three areas. Locals' investments in regionals varied from 21 to 23 percent of total assets for the period for wheat-sorghum locals, to 12 to 13 percent for wheat-barley-oats, and to about 9 percent for wheat-barley firms.

Member ownership (equity) of total assets varied between 63 and 73 percent for the medium-sized wheat-sorghum and wheat-barley cooperatives and rose beginning in the mid-1980s (fig. 24). Medium-sized associations generally owned a higher proportion of their assets than larger counterparts, particularly during the first half of the period. Member ownership of assets for large firms rose through 1987 and subsequently leveled off.

### Equity Capital

Equity capital represents member ownership and control of the cooperative. As a buffer for creditors, it absorbs operating losses and declining asset values. Many cooperatives found themselves adjusting to both during 1983-91.

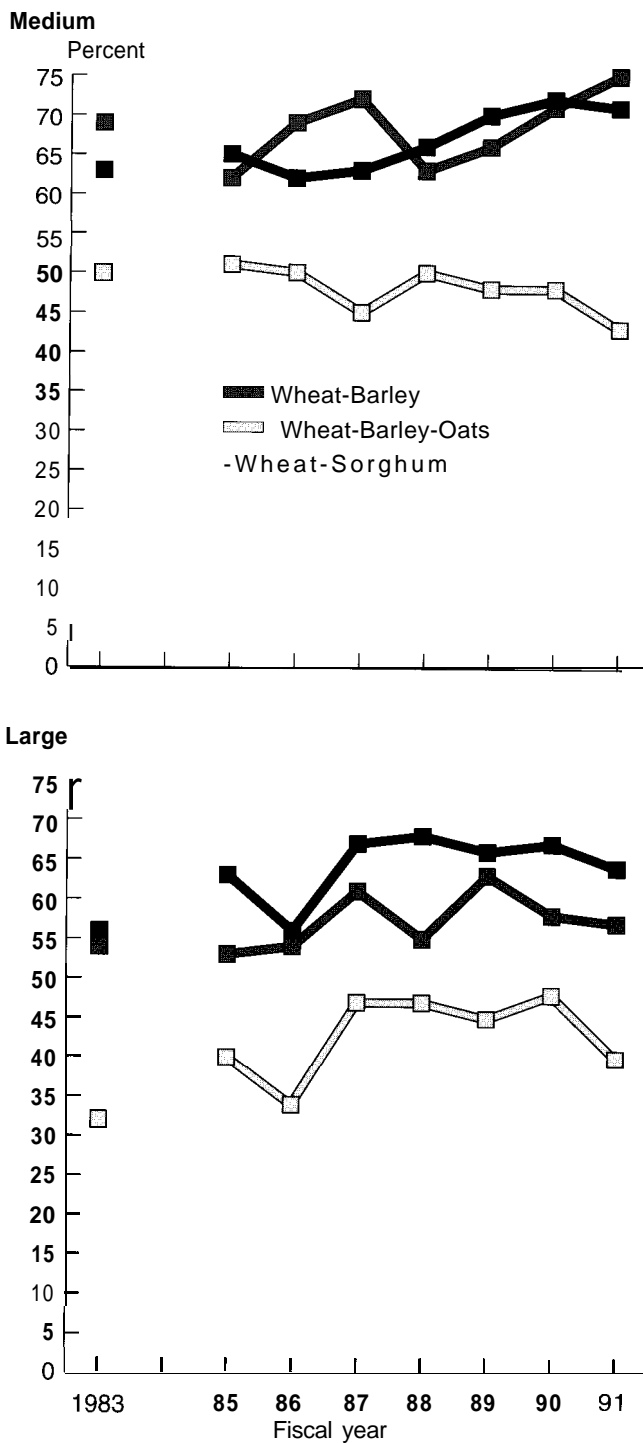
Equity capital usually takes the form of stock (common and preferred), the noncash portion of patronage dividends declared (allocated), and unallocated reserves. The relative importance of these equity forms varied considerably among the three types of wheat grain cooperatives and between the two size groups (fig. 25).

Common stock, generally linked to voting or membership by grain cooperatives, was an important source of equity capital for only wheat-

Figure 74

### Member Equity of Total Assets

Wheat First-Handler Co-ops

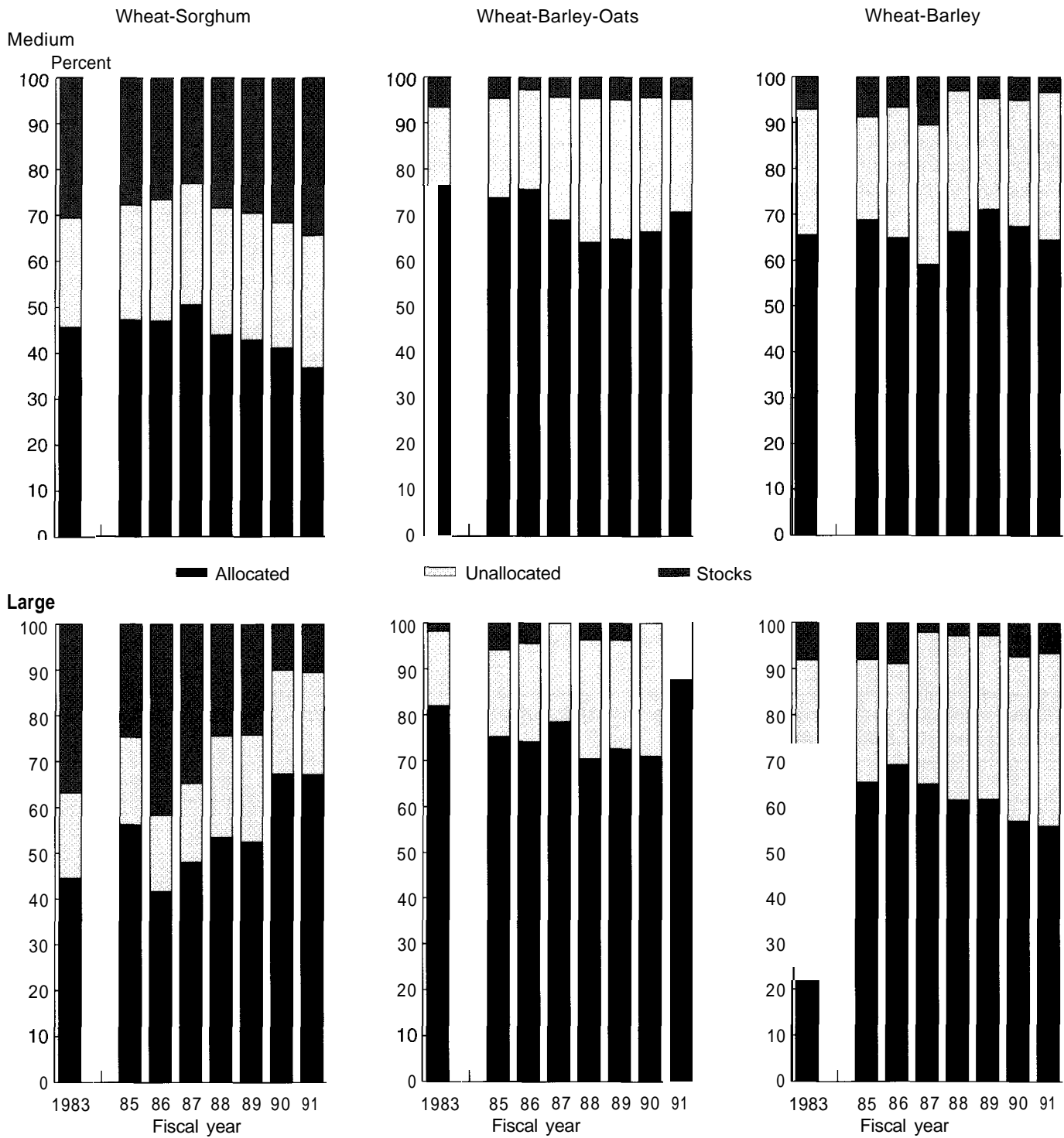


Fiscal year 1984 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales

Figure 25

**Breakdown of Member Equity, First-Handler Co-ops**



Fiscal year 1984 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales.

sorghum firms in the Southern Plains. For them, stock as a percent of total member equity was a relatively steady 29 percent during the period for medium-sized firms (table 5). The stock proportion gradually increased beginning in 1986, mostly at the expense of a decline in allocated patronage. The

rate for large wheat-sorghum firms averaged a little higher than for medium-sized firms early in the period, and then declined steadily beginning in 1987 to about 10 percent in the early 1990s. This was accompanied by a corresponding increase in allocated patronage refunds.

**Table 5—Amount and types of member equity capital of wheat-sorghum first-handlers-of-grain cooperatives, by total sales group, 1983-91\***

Item	Unit	1983	1985	1986	1987	1988	1989	1990	1991
<i>\$5- 14.9 million</i>									
MEMBER EQUITY	Dollars	2,290,969	2,491,890	2,716,335	2,559,378	2,261,227	2,420,491	2,524,471	2,588,809
Stock <sup>1</sup>	Percent	30.6	27.8	26.6	23.1	28.4	29.5	31.6	34.4
Allocated	Percent	45.6	47.2	47.0	50.5	43.9	42.9	41.1	36.6
Unallocated	Percent	23.8	25.0	26.4	26.4	27.7	27.6	27.3	29.0
<i>\$15 million or more</i>									
MEMBER EQUITY	Dollars	6,657,855	5,874,161	5,288,663	7,093,116	5,438,257	5,553,023	6,364,592	6,484,031
Stock <sup>1</sup>	Percent	36.8	24.7	41.6	34.7	24.4	24.1	10.0	10.5
Allocated	Percent	44.5	56.3	41.7	48.1	53.5	52.6	67.4	67.2
Unallocated	Percent	18.7	19.0	16.7	17.2	22.1	23.3	22.6	22.3

\*1984 data not available.

<sup>1</sup> Common, capital, and preferred stock, plus stock credits and fractional shares.

**Table 5—Amount and types of member equity capital of wheat-barley-oats first-handlers-of-grain cooperatives, by total sales group,**

Item	Unit	1983	1985	1986	1987	1988	1989	1990	1991
<i>\$5- 14.9 million</i>									
MEMBER EQUITY	Dollars	1,326,306	1,614,523	1,526,297	1,423,606	1,372,295	1,381,570	1,143,429	1,251,766
Stock <sup>1</sup>	Percent	6.5	4.6	2.7	4.3	4.6	4.9	4.4	4.7
Allocated	Percent	74.8	73.6	75.5	68.8	63.9	64.6	66.3	70.6
Unallocated	Percent	18.7	21.8	21.8	26.9	31.5	30.5	29.3	24.7
<i>\$15 million or more</i>									
MEMBER EQUITY	Dollars	4,031,240	3,962,080	4,678,815	6,943,458	5,382,460	5,429,263	4,720,013	5,394,845
Stock <sup>1</sup>	Percent	1.7	5.8	4.4	0.0	3.6	3.7	0.0	0.2
Allocated	Percent	82.0	75.2	74.1	78.5	70.4	72.6	71.0	76.0
Unallocated	Percent	16.3	19.0	21.5	21.5	26.0	23.7	29.0	23.8

\*1984 data not available.

<sup>1</sup> Common, capital, and preferred stock, plus stock credits and fractional shares.



**Table 5—Amount and types of member equity capital of wheat-barley first-handlers-of-grain cooperatives, by total sales group, 1983-91\***

Item	Unit	1983	1985	1986	1987	1988	1989	1990	1991
<i>\$5- 14.9 million</i>									
MEMBER EQUITY	Dollars	2,056,592	2,199,931	3,059,685	2,820,692	3,001,684	2,245,744	2,510,847	3,092,531
Stock <sup>1</sup>	Percent	7.1	8.7	6.6	10.4	3.0	4.7	5.0	3.3
Allocated	Percent	65.5	68.8	64.9	59.2	66.3	71.1	67.5	64.5
Unallocated	Percent	27.4	22.5	28.5	30.4	30.7	24.2	27.5	32.2
<i>\$15 million or more</i>									
MEMBER EQUITY	Dollars	4,536,642	5,373,018	7,854,022	8,055,711	5,508,317	5,621,419	6,941,673	6,980,494
Stock <sup>1</sup>	Percent	8.1	7.9	8.8	1.9	2.7	2.7	7.2	6.5
Allocated	Percent	73.2	65.3	69.1	65.0	61.5	61.6	56.9	55.8
Unallocated	Percent	18.7	26.8	22.1	33.1	35.8	35.7	35.9	37.7

\*1984 data not available.

<sup>1</sup> Common, capital, and preferred stock, plus stock credits and fractional shares.

The other two areas shifted from allocated capital credits, mostly patronage refunds, to unallocated reserves during the period for both medium- and large-sized wheat grain cooperatives. Entering the 1990s, the proportion allocated as patronage began increasing in the Northern Plains.

### Debt Structure

Local wheat grain cooperatives reduced long-term debt during 1983-91. Medium- and large-sized firms had generally attained manageable debt levels by the end of the period (fig. 26 and table 6). Long-term debt in the early 1990s averaged less than 45 percent of 1983-86 levels, except for medium-sized wheat-barley-oats and large wheat-barley cooperatives. Long-term debt for both was up sharply from their lows in 1988-89.

Short-term debt fluctuated widely throughout the period, largely due to grain inventory value changes. This was most noticeable in the Southern Plains and Pacific Northwest, where wheat firms have considerable storage capacity and low turnover rates. An example is 1988, when short-term debt increased sharply related to an unusually large buildup of grain inventories by wheat-barley-oats and wheat-barley cooperatives. This was par-

ticularly true for the large firms. Short-term debt variation was far greater for large firms and greatest in the Pacific Northwest.

### FINANCIAL STATEMENT ANALYSIS

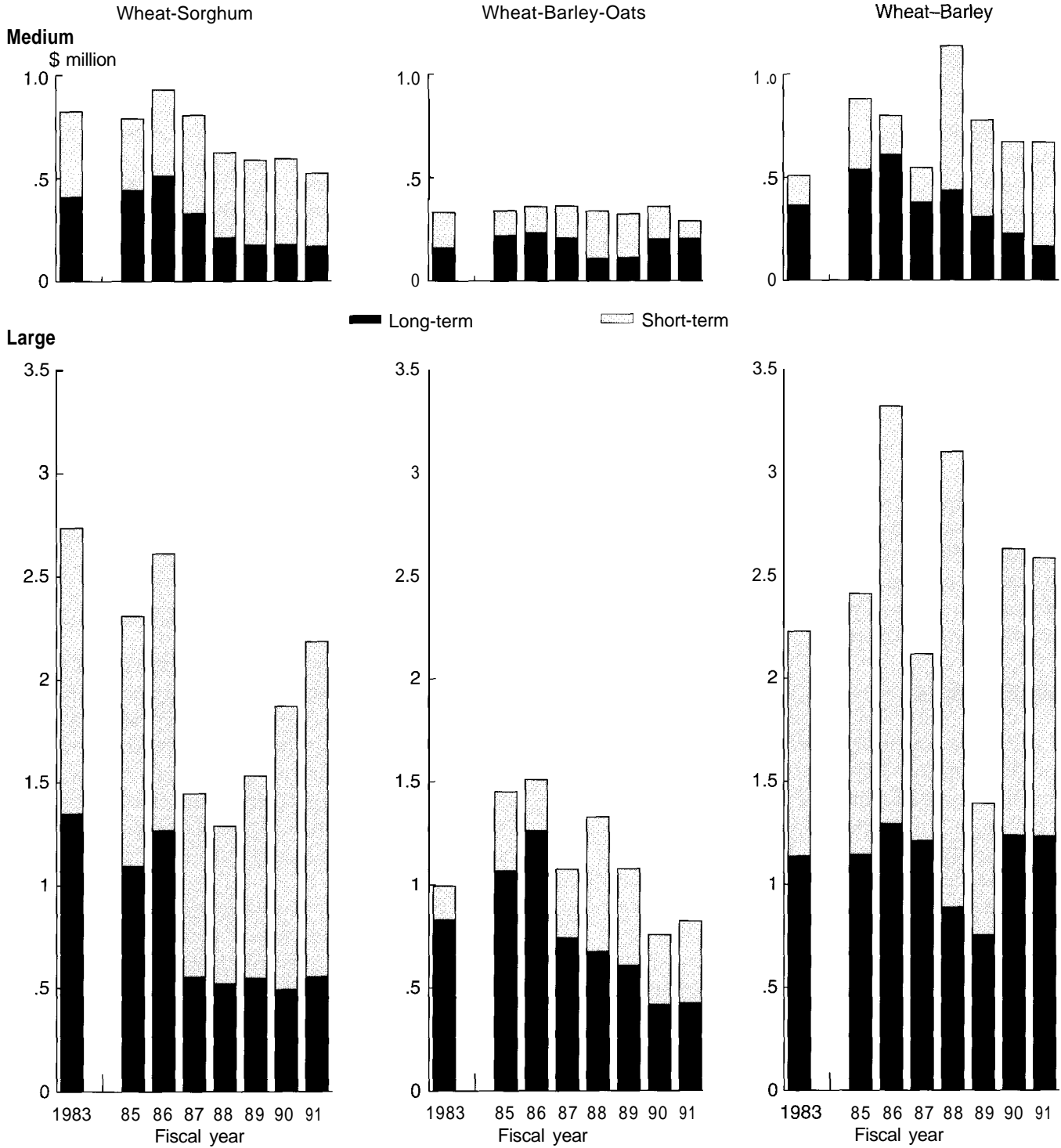
Analysis of a financial statement entails isolating various factors and constructing key relationships (usually ratios) for evaluating overall economic condition. Important factors to consider are an association's ability to (1) meet current obligations, (2) earn a competitive return on investment, (3) cope with external and internal financial problems, (4) raise needed capital, and (5) operate efficiently.

Ratios showing relationships between items in the balance sheet and income statement of a business operation help analyze a cooperative's economic and financial situation.

They are largely descriptive and may indicate problem areas, but cannot be used to solve problems. Ratios are used as planning guides and aid in formulating actions. Caution must be exercised in their use because both items in a ratio are subject to considerable variation. Their interpretation is largely subjective in the absence of fixed standards or hard and fast rules.

Figure 26

**Breakdown of Debt, First-Handler Co-ops**



Fiscal year 1984 not available

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales.

**Table 6-Debt structure of wheat-sorghum first-handlers-of-grain cooperatives, by total sales group, 1983-91\***

Item	Unit	1983	1985	1986	1987	1988	1989	1990	1991
<i>\$5- 14.9 million</i>									
Short-term	Dollars	415, 478	347, 842	416, 629	475, 459	412, 245	411, 991	416, 274	353, 761
Long-term	Dollars	407, 788	441, 600	510, 581	329, 302	211, 081	175, 698	177, 859	169, 625
Total	Dollars	823, 266	789,442	927, 210	804, 761	623, 326	587,689	594, 133	523, 386
Long-term	Percent	49. 5	55.9	55.1	40. 9	33. 9	29.9	29. 9	32. 4
<i>\$15 million or more</i>									
Short-term	Dollars	1,384,192	1,214,411	1,342,764	892, 431	768, 498	984,772	1,379,625	1,630,467
Long-term	Dollars	1,348,401	1,093,795	1,266,481	553, 169	520, 554	546,390	491, 509	553, 827
Total	Dollars	2,732,593	2,308,206	2,609,245	1,445,600	1,289,052	1,531,162	1,871,134	2,184,294
Long-term	Percent	49. 3	47. 4	48. 5	38. 3	40. 4	35. 7	26. 3	25. 4

'1984 data not available

**Table 6-Debt structure of wheat-barley-oats first-handlers-of-grain cooperatives, by total sales group, 1983-91\***

Item	Unit	1983	1985	1986	1987	1988	1989	1990	1991
<i>\$5-74. 9 million</i>									
Short-term	Dollars	170, 606	119, 227	126, 085	154, 318	227, 742	208, 635	157, 197	85, 804
Long-term	Dollars	158, 303	216, 389	230, 155	203, 952	106, 443	111, 253	199, 208	200, 998
Total	Dollars	328,909	335, 616	356, 240	358, 270	334, 185	319, 888	356, 405	286, 802
Long-term	Percent	48. 1	64. 5	64. 6	56. 9	31. 9	34. 8	44. 1	29. 9
<i>\$15 million or more</i>									
Short-term	Dollars	164, 428	383, 261	247, 524	335, 348	655, 390	470, 286	339, 135	397, 710
Long-term	Dollars	828, 815	1,067,089	1,262,055	739, 095	673, 548	607, 063	416, 703	424, 073
Total	Dollars	993,243	1,450,350	1,509,579	1,074,443	1,328,938	1,077,349	755, 838	821, 783
Long-term	Percent	83. 4	73. 6	83. 6	68. 8	50. 7	56. 3	44. 9	48. 4

'1984 data not available.

**Table 6—Debt structure of wheat-barley first-handlers-of-grain cooperatives, by total sales group, 1983-91\***

Item	Unit	1983	1985	1986	1987	1988	1989	1990	1991
<i>\$5- 14.9 million</i>									
Short-term	Dollars	144,460	343,006	190,452	169,073	699,719	469,325	445,203	504,842
Long-term	Dollars	363,206	538,256	609,234	377,063	435,922	307,809	226,443	164,195
<b>Total</b>	<b>Dollars</b>	<b>507,666</b>	<b>881,262</b>	<b>799,686</b>	<b>546,136</b>	<b>1,135,641</b>	<b>777,134</b>	<b>671,646</b>	<b>669,037</b>
<b>Long-term</b>	<b>Percent</b>	<b>71.5</b>	<b>61.1</b>	<b>76.2</b>	<b>69.0</b>	<b>38.4</b>	<b>39.6</b>	<b>33.7</b>	<b>24.5</b>
<i>\$15 million or more</i>									
Short-term	Dollars	1,089,951	1,269,888	2,023,985	906,033	2,209,877	<b>639,504</b>	1,391,712	1,351,722
Long-term	Dollars	1,137,116	1,144,110	1,293,225	1,210,888	<b>887,327</b>	<b>753,407</b>	1,237,116	1,233,087
<b>Total</b>	<b>Dollars</b>	<b>2,227,067</b>	<b>2,413,998</b>	<b>3,317,210</b>	<b>2,116,921</b>	<b>3,097,204</b>	<b>1,392,911</b>	<b>2,628,828</b>	<b>2,584,809</b>
<b>Long-term</b>	<b>Percent</b>	<b>51.1</b>	<b>47.4</b>	<b>39.0</b>	<b>57.2</b>	<b>28.6</b>	<b>54.1</b>	<b>47.1</b>	<b>47.7</b>

\*1984 data not available.

The application of ratios is limited because of differences attributed to factors like cooperative size, time-of-year closing, different accounting procedures, and use of financial resources. Several ratios have widely accepted value for the cooperatives represented in this study.

Probably the best ratio for measuring a cooperative's ability to meet its current financial obligations is the current ratio. Except for the large wheat-barley-oats firms in the Pacific Northwest, the current ratio revealed general improvement in the short-run liquidity situation during 1983-91 for first-handlers-of-grain wheat cooperatives (fig. 27 and table 4). This accompanied generally rising levels of working capital. Medium-sized firms were in a sounder liquidity situation than large ones.

Despite improvement, the current ratio for large wheat-barley cooperatives still was comparatively low in the early 1990s. The *current* ratio for large cooperatives in the Northern Plains remained low at about 1.12:1 throughout the period. Such ratios suggests that a number of cooperatives

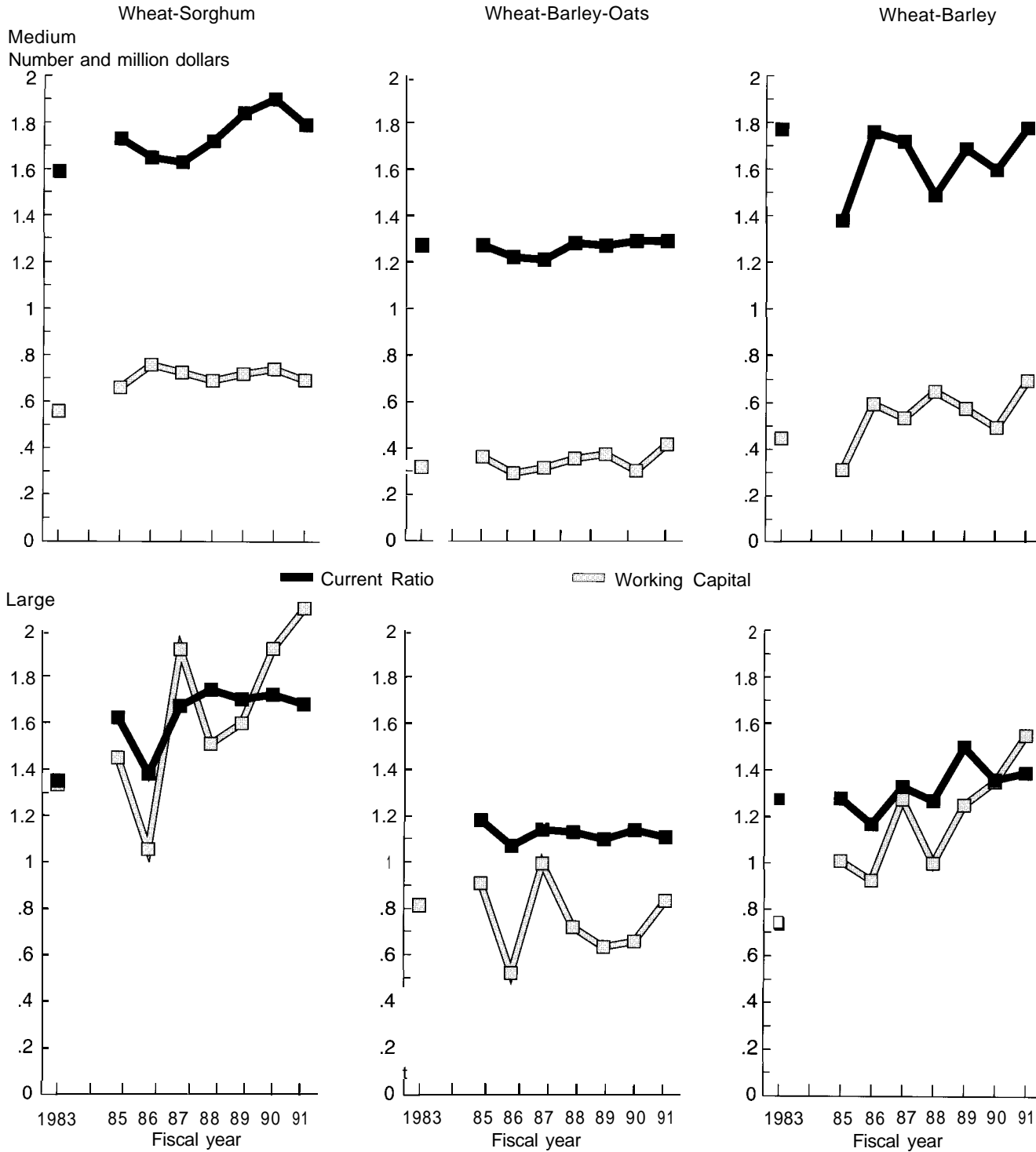
might have been experiencing or heading for a short-run liquidity problem. Although ratio values greater than 1 technically mean short-run liquidity, widely accepted guideline values are around 1.7:1 to 1.8:1.

The current ratio position can be misleading in isolation. It should be interpreted with caution regarding the overall financial health of an individual cooperative or group of cooperatives. A current ratio should be analyzed in conjunction with other information pertaining to the cooperative's ability to generate sufficient revenue to meet current debt obligations.

The liabilities-to-net worth (*equity*) ratio measures the amount of money members owe creditors in relation to how much they have invested. It varied significantly among the three areas and for the two size groups. This ratio was mostly below 55 cents owed per \$1 owned for medium-sized wheat-sorghum and wheat-barley firms (fig. 28 and table 4). In contrast, wheat-barley-oats cooperatives in the Northern Plains owed creditors at least as

Figure 27

**Current Ratio and Working Capital, First-Handler Co-ops**

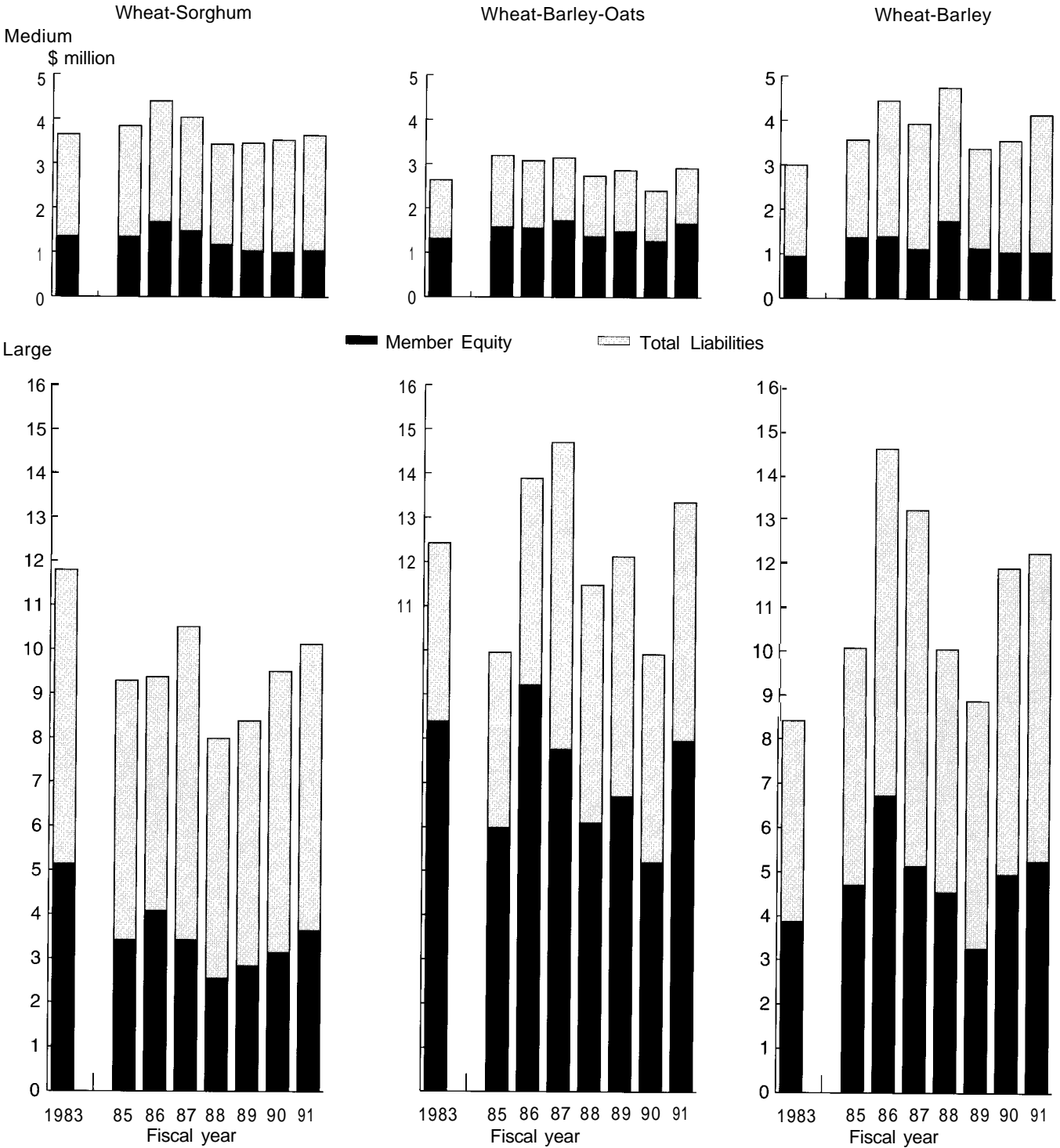


Fiscal year 1984 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales.

Figure 28

**Total Liabilities and Member Equity, First-Handler Co-ops**

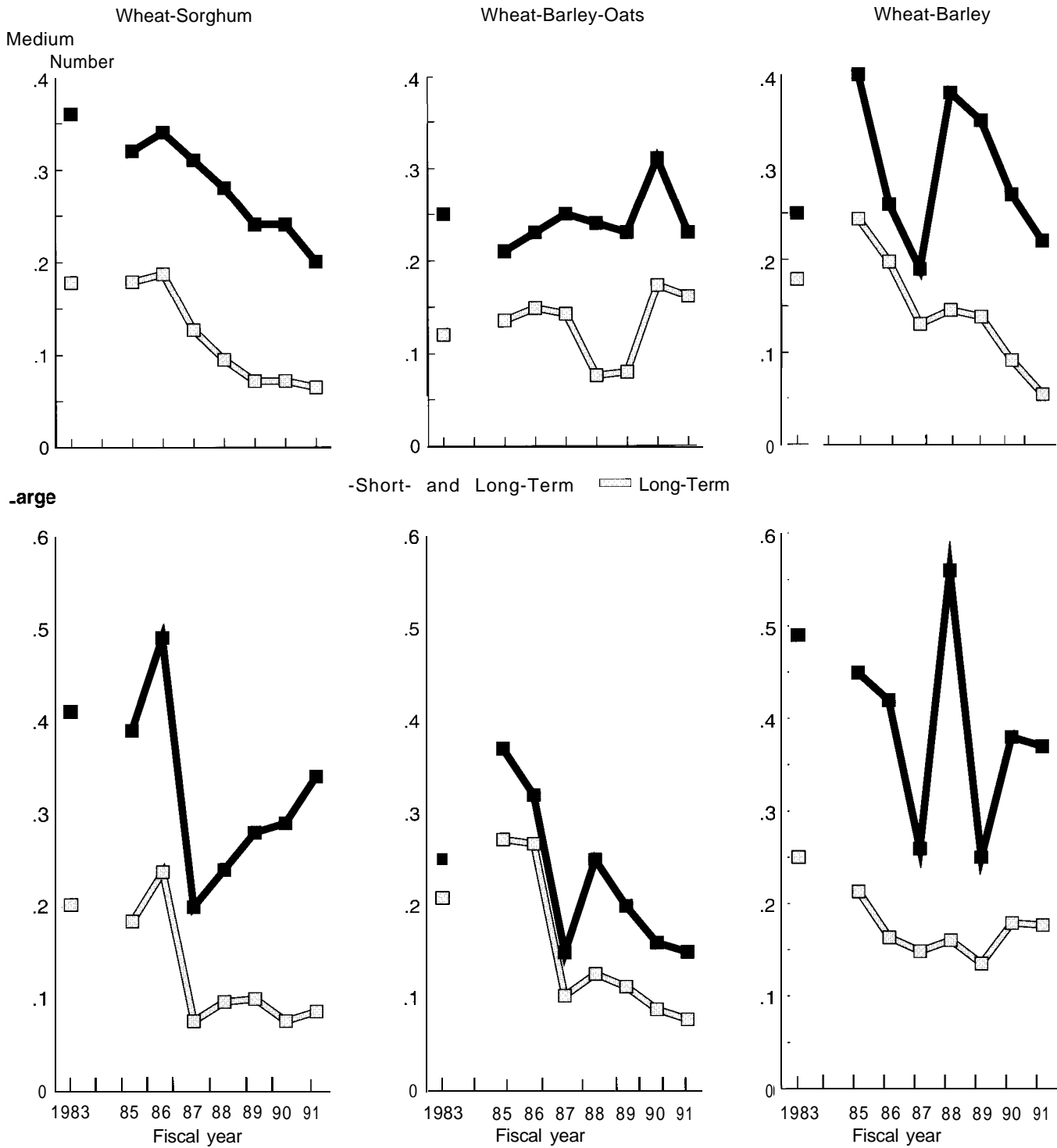


Fiscal year 1984 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales.

Figure 29

**Debt/Equity Ratios, First-Handler Co-ops**



Fiscal year 1984 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales

**Table 7—Net savings and return to member equity for wheat-sorghum first-handlers-of-grain cooperatives by debt/equity ratio, by total sales group, 1983,85,90,91**

Debt/equity ratio	Unit	1983	1985	1990	1991
<b>NET SAVINGS</b>					
<i>\$5- 14.9 million sales</i>					
0.0	Dollars	—	—	<b>169, 671</b>	266,853
.01-.39	Dollars	<b>327, 863</b>	267,256	<b>78, 187</b>	107,448
.40-.69	Dollars	<b>103, 513</b>	81,842	<b>97, 077</b>	90,665
.70 plus	Dollars	<b>(11, 757)</b>	23,675	<b>9, 464</b>	71,510
<i>\$15 million or more sales</i>					
0.0	Dollars	—	—	—	—
.01-.39	Dollars	1,000,025	492,096	<b>616, 644</b>	746,838
.40-.69	Dollars	538,888	239,846	<b>442, 809</b>	—
.70 plus	Dollars	349,999	(238,380)	<b>259. 494</b>	164.346
<b>RETURN TO EQUITY</b>					
<i>\$5- 14.9 million sales</i>					
0.0	Percent	—	—	6.04	8.36
.01-.39	Percent	12.49	9.23	2.88	4.38
.40-.69	Percent	4.71	3.91	4.79	4.17
.70 plus	Percent	-0.80	1.34	0.74	4.54
<i>\$15 million or more sales</i>					
0.0	Percent	—	—	—	—
.01-.39	Percent	12.70	6.69	8.14	9.61
.40-.69	Percent	13.81	5.45	9.66	—
.70 plus	Percent	6.06	-8.25	5.49	3.34



**Table 7-Net savings and return to member equity for wheat-barley-oats first-handlers-of-grain cooperatives by debt/equity ratio, by total sales group, 1983,85,90,91**

Debt/equity ratio	Unit	1983	1985	1990	1991
<i>NET SAVINGS</i>					
<i>\$5- 14.9 million sales</i>					
0.0	Dollars	123,012	185,614	89,399	62,491
.01-.39	Dollars	132,861	111,723	64,518	54,151
.40-.69	Dollars	115,647	136,160	—	47,502
.70 plus	Dollars	111,676	72,932	(69,005)	(128,802)
<i>\$15 million or more sales</i>					
0.0	Dollars	—	—	—	—
.01-.39	Dollars	409,999	(1)	1,002,385	810,250
.40-.69	Dollars	174,538	(1)	61,474	—
.70 plus	Dollars	—	(1)	—	—
<i>RETURN TO EQUITY</i>					
<i>\$5-74.9 million sales</i>					
0.0	Percent	11.00	7.32	8.95	4.25
.01-.39	Percent	10.26	7.54	5.00	4.84
.40-.69	Percent	6.50	8.11	—	5.30
.70 plus	Percent	7.01	6.59	-7.31	-13.16
<i>\$15 million or more sales</i>					
0.0	Percent	—	—	—	—
.01-.39	Percent	8.89	(1)	10.52	10.25
.40-.69	Percent	6.77	(1)	4.93	—
.70 plus	Percent	—	(1)	—	—

<sup>1</sup> Too few observations for meaningful data.

**Table 7-Net savings and return to member equity for wheat-barley first-handlers-of-grain cooperatives by debt/equity ratio, by total sales group, 1983,85,90,91**

Debt/equity ratio	Unit	1983	1985	1990	1991
<i>NET SAVINGS</i>					
<i>\$5- 14.9 million sales</i>					
0.0	Dollars	413,124	—	—	186,262
.01-.39	Dollars	284,175	286,533	134,439	184,507
.40-.69	Dollars	161,780	201,585	—	268,010
.70 plus	Dollars	—	(15,985)	—	(652,798)
<i>\$15 million or more sales</i>					
0.0	Dollars	—	(1)	258,204	215,671
.01-.39	Dollars	1,030,060	(1)	—	499,639
.40-.69	Dollars	702,154	(1)	(1,693)	1,450,430
.70 plus	Dollars	359,811	(1)	—	548,306
<i>RETURN TO EQUITY</i>					
<i>\$5- 14.9 million sales</i>					
0.0	Percent	17.21	—	—	5.10
.01-.39	Percent	14.04	10.65	4.93	6.37
.40-.69	Percent	8.56	8.61	—	11.96
.70 plus	Percent	—	-5.09	—	-22.87
<i>\$15 million or more sales</i>					
0.0	Percent	—	(1)	4.83	7.06
.01-.39	Percent	18.62	(1)	—	7.26
.40-.69	Percent	16.22	(1)	-0.04	8.15
.70 plus	Percent	11.08	(1)	—	6.51

<sup>1</sup> Too few observations for meaningful data.

much as members had invested throughout the period. Considerable long-term debt and current liabilities (mainly crop inventories) typified the early years.

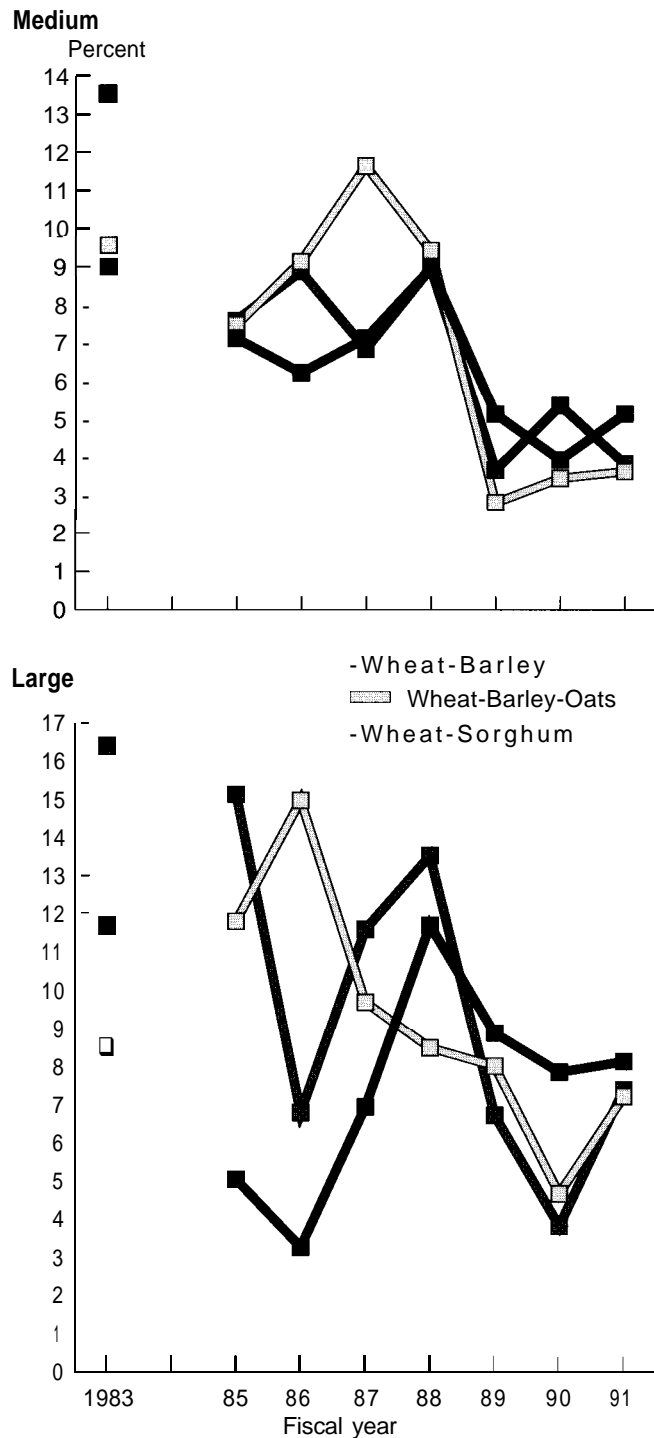
The debt-to-equity ratios indicated improvement in the amount of debt capital in relation to the amount of member investment dollars. Two exceptions were the large wheat-sorghum and medium-sized wheat-barley-oats firms. This increased solvency was attributed to debt reduction (fig. 29 and table 4). Steadily rising short-term debt on large wheat-sorghum cooperatives since 1986 resulted in a corresponding, but inverse, deteriorating solvency situation. The debt-to-equity ratio gradually increased for wheat-barley-oats firms, largely because of declining member equity.

The debt-to-equity ratio reflects not only the universal importance of debt to a cooperative's solvency, but also its influence on profitability. Associations with higher debt-to-equity ratios averaged significantly lower net savings than those with lower ratios. This was as generally true for the 1990s as for 1983 and 1985 (table 7). This also was the general pattern for net savings as a percentage of member equity (return to equity). Rates of return were nominal and even negative in several years for most association groups with debt-to-equity ratios of at least 0.70.

The net savings-to-equity ratio, the one used frequently to measure return on member investment, showed considerable short-period variation with several turning points during 1983-91. Returns tended to decline early in the period, rise for a couple of years, fall more than the rise until around 1990, and then increase. The pattern of change was similar for both size groups. Rates of return for the large cooperatives were usually about 3 to 5 percentage points higher (fig. 30 and table 2). Except for large wheat-sorghum firms, the period trend was a decline, with latter half returns generally averaging 3.5 to 4.5 percentage points lower than first half returns.

Figure 30

### Net Savings of Member Equity Wheat First-Handler Co-ops



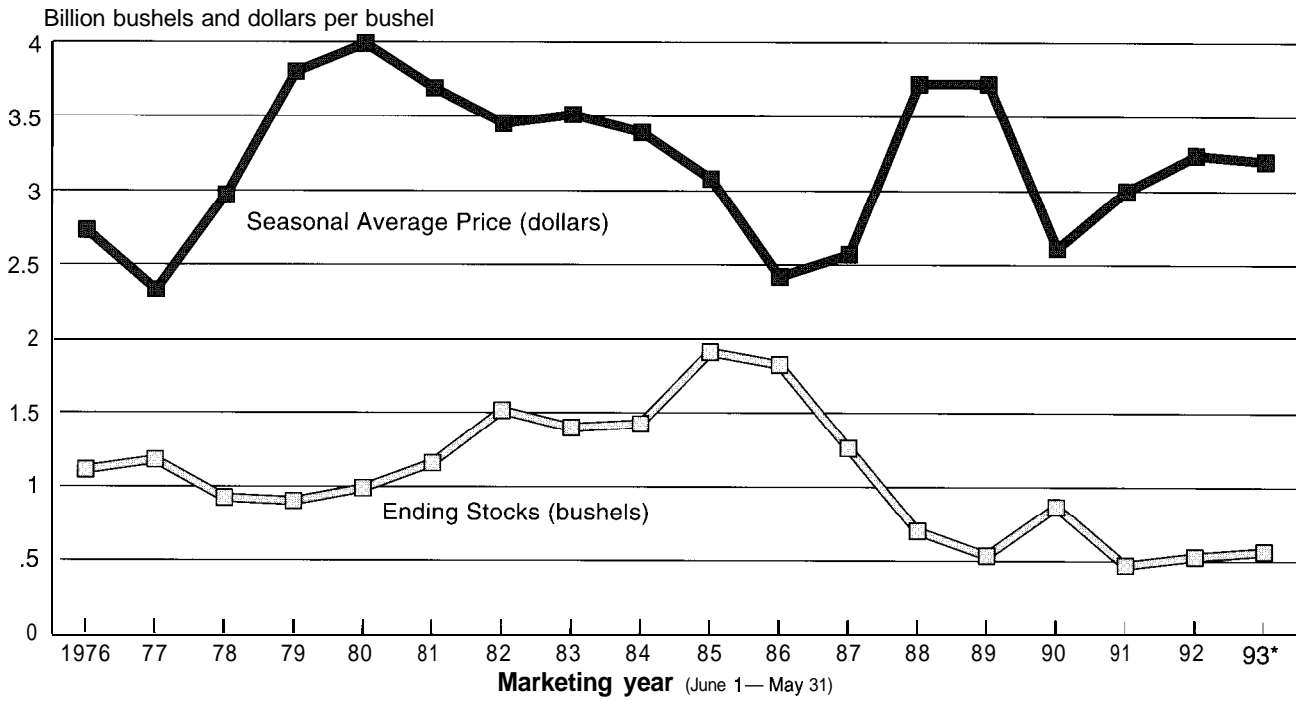
Fiscal year 1984 not available.

Medium = \$5-14.9 million total sales. Large = \$15 million plus total sales

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- (3) "Co-ops Using Unit-Trains Lead Corn Belt Recovery," Farmer Cooperatives magazine. David E. Cummins, ACS, August 1991, pp. 6-7.
- (4) "Led by Larger Cooperatives, Grain Handlers Turn the Corner," Farmer Cooperatives magazine. David E. Cummins, ACS, July 1990, pp. 8-10.
- (5) Comparative Financial Profile of Cooperatives Handling Grain: First-Handlers With \$1 Million or More in Sales. David E. Cummins and Francis I? Yager, ACS Research Report 63, June 1987.
- (6) Financial Profile of Cooperatives Handling Grain: First-Handlers, \$1 Million to \$4.9 Million in Sales. Francis P. Yager and David E. Cummins, ACS Research Report 58, January 1987.
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- (10) Regional Grain Cooperatives, 1980 and 1981. Stanley K. Thurston and David E. Cummins, ACS Research Report 27, April 1983.

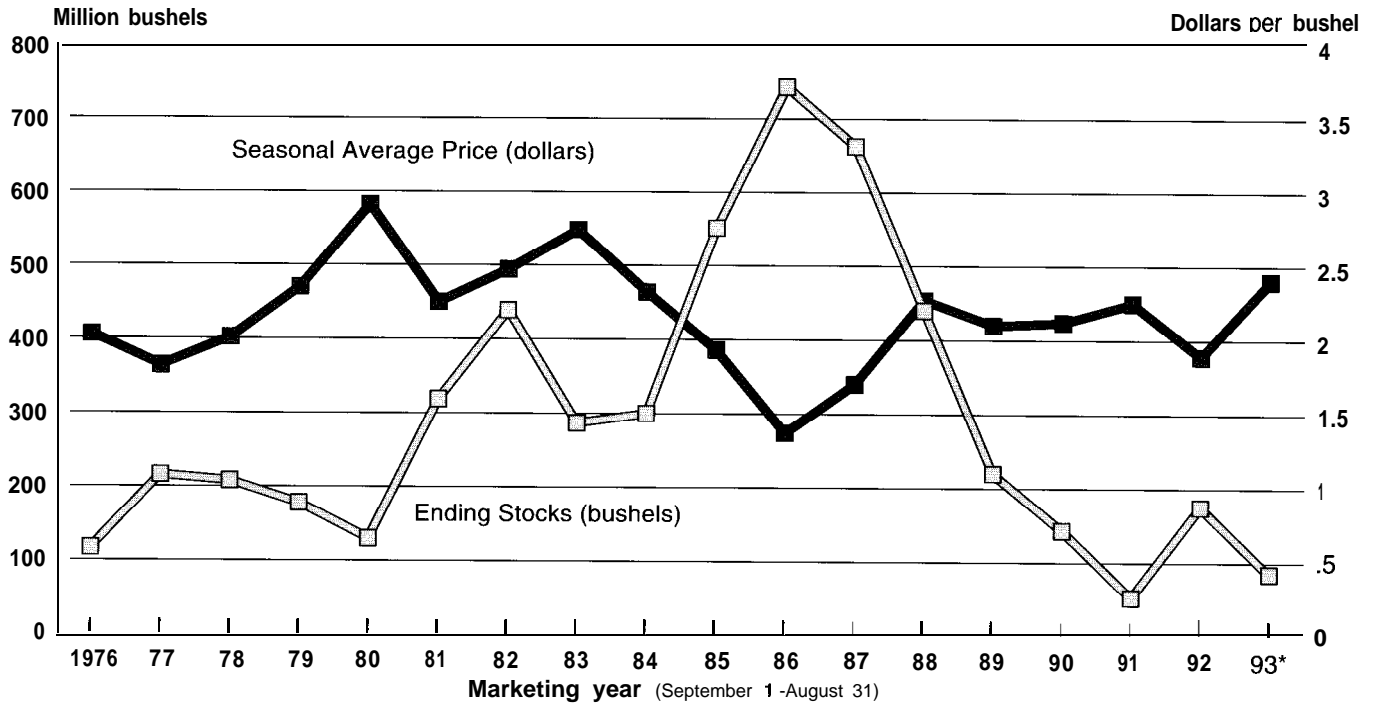
**All Wheat: Prices Received by Farmers and Ending Stocks, U.S. 1976-93**



\* November projections (1992 estimated).

Source: USDA, ERS, FAS, World Agricultural Supply and Demand Estimates, Washington, D.C., selected issues

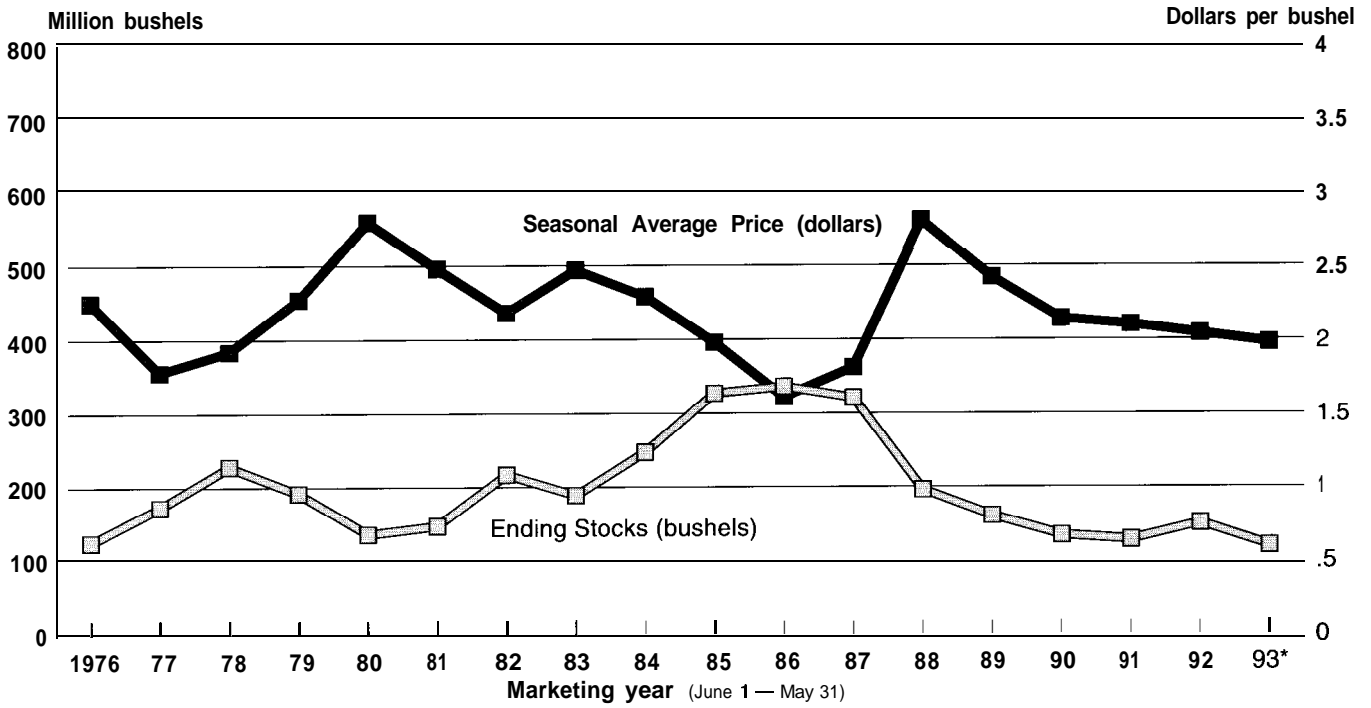
**Grain Sorghum: Prices Received by Farmers and Ending Stocks, U.S. 1976-93**



\* November projections (1992 estimated).

Source: USDA, ERS, FAS, World Agricultural Supply and Demand Estimates, Washington, D.C., selected issues.

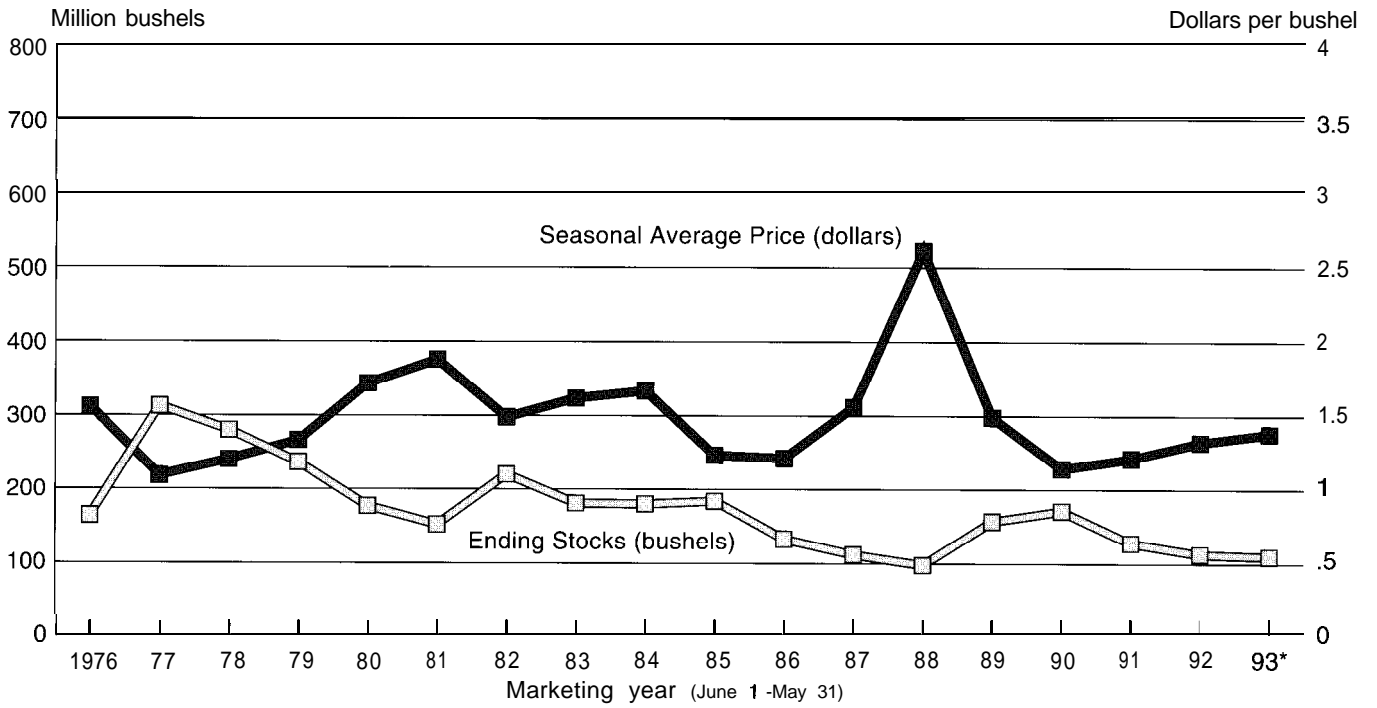
**Barley: Prices Received by Farmers and Ending Stocks, U.S. 1976-93**



\* November projections (1992 estimated).

Source: USDA, ERS, FAS, World Agricultural Supply and Demand Estimates, Washington, D.C., selected issues

**Oats: Prices Received by Farmers and Ending Stocks, U.S. 1976-93**



\* November projections (1992 estimated).

Source: USDA, ERS, FAS, World Agricultural Supply and Demand Estimates, Washington, D.C., selected issues



**Appendix B Table I-Selected operating statement cost and income data, by size\*, wheat-barley-oats first-handlers-of-grain cooperatives, 1989**

Cost/income item	Total sales group (million dollars)				All cooperatives	
	\$15 or more		\$5.0-14.9		Dollars	Percent
	Dollars	Percent	Dollars	Percent	Dollars	Percent
<b>EXPENSES:</b>						
Labor	646,876	37.15	204,281	37.48	330,736	37.30
Facility	727,552	41.79	242,119	44.42	380,814	42.94
General/adm.	130,937	7.52	41,132	7.55	66,791	7.53
Subtotal	1,505,365	86.46	487,532	89.45	778,341	87.77
Interest	222,101	12.76	52,243	9.58	100,774	11.36
Subtotal	1,727,466	99.22	539,775	99.03	879,115	99.13
Income taxes	13,663	0.78	5,298	0.97	7,688	0.87
Total	1,741,129	100.00	545,073	100.00	886,803	100.00
<b>INCOME/SALES:</b>						
Gross income	1,884,141		574,283		948,528	
Per \$ exp. <sup>1</sup>	1.09		1.06		1.08	
Net savings	143,012		29,211		61,725	
Of sales		0.48		0.33		0.42
Total sales	29,593,297		8,929,802		14,833,658	
Per \$ exp. <sup>1</sup>	17.13		16.54		16.87	
Grain sales	26,349,998		8,031,625		13,265,445	
Of total		89.04		89.94		89.43
Price/bu. <sup>2</sup>	3.38		3.58		3.55	
Bushels sold	7,784,801		2,242,343		3,825,902	
Bushels storage	2,074,918		695,088		1,089,325	
Turnover rate <sup>3</sup>		3.75		3.23		3.51

\*Size based on cooperative total sales for FY 1989.

<sup>1</sup> Includes interest paid; excludes Federal/state income taxes paid

<sup>2</sup> Weighted average price per bushel received for all grain sold.

<sup>3</sup> Ratio of bushels grain sold to bushels grain storage capacity.

**Appendix B Table P-Total operating costs, by major cost category, by size\*, wheat-barley-oats first-handler grain cooperatives, 1989**

Cost category	Total sales group (million dollars)				All cooperatives	
	\$15 or more		\$5.0-14.9		Dollars	Percent
	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	<i>Percent</i>
Labor	646,876	37.44	204,281	37.85	330,736	37.62
Facility	727,552	42.12	242,119	44.86	380,814	43.32
General/adm.	130,937	7.58	41,132	7.62	66,791	7.60
Subtotal	<u>1,505,365</u>	87.14	<u>487,532</u>	90.32	<u>778,341</u>	88.54
Interest	<u>222,101</u>	12.86	<u>52,243</u>	9.68	<u>100,774</u>	11.46
Total	<u>1,727,466</u>	100.00	<u>539,775</u>	100.00	<u>879,115</u>	100.00

\*Size based on cooperative total sales for FY 1989.

**Appendix B Table 3-Total operating costs, by major cost category, by size\*, wheat-barley-oats first-handler grain cooperatives, 1989**

Cost category	Total sales group (million dollars)				All cooperatives	
	\$15 or more		\$5.0-14.9		Dollars	Percent
	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	<i>Percent</i>
Labor	646,876	42.97	204,281	41.90	330,736	42.49
Facility	727,552	48.33	242,119	49.66	380,814	48.93
General/adm.	130,937	8.70	41,132	8.44	66,791	8.58
Total <sup>1</sup>	<u>1,505,365</u>	100.00	<u>487,532</u>	100.00	<u>778,341</u>	100.00

\*Size based on cooperative total sales for FY 1989.

<sup>1</sup> Excludes interest paid.

**Appendix B Table 4-Labor/labor-related cost, by cost category, by size\*, wheat-barley-oats first-handler grain cooperatives, 1989**

Cost category	Total sales group (million dollars)				All cooperatives	
	\$1.5 or more		\$5.0-14.9		Dollars	Percent
	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	<i>Percent</i>
Wages/salaries	538,882	83.30	169,975	83.21	275,377	83.26
Benefits	64,014	9.90	19,397	9.49	32,145	9.72
Taxes	43,980	6.80	14,909	7.30	23,215	7.02
<b>Total</b>	<b>646,876</b>	<b>100.00</b>	<b>204,281</b>	<b>100.00</b>	<b>330,737</b>	<b>100.00</b>

\*Size based on cooperative total sales for FY 1989.

**Appendix B Table 5-Facility operating cost, by cost category, by size\*, wheat-barley-oats first-handler grain cooperatives, 1989**

Cost category	Total sales group (million dollars)				All cooperatives	
	\$15 or more		\$5.0-14.9		Dollars	Percent
	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	<i>Percent</i>
Repairs	66,644	9.16	20,999	8.67	34,040	13.42
Truck/trac./auto	37,775	5.19	11,083	4.58	18,710	10.81
Dryer fuel	4,409	0.61	1,379	0.57	2,245	1.33
Plant supplies	21,270	2.92	5,935	2.45	10,317	2.15
Grain weighing	7,531	1.04	2,573	1.06	3,990	0.71
Pest treatment	2,770	0.38	797	0.33	1,361	0.07
Nongrain testing	4,285	0.59	1,413	0.58	2,234	0.07
Licenses/fees	3,094	0.43	4,159	1.72	3,855	0.50
Insurance	104,783	14.40	43,777	18.08	61,207	11.18
Taxes	53,197	7.31	16,707	6.90	27,133	9.12
Utilities	83,055	11.42	19,865	8.20	37,919	9.55
Telephone	19,170	2.63	4,932	2.04	9,000	1.47
Rents/leases	35,930	4.94	6,622	2.73	14,996	3.13
Misc.	1,344	0.18	147	0.06	489	0.66
Depreciation	282,295	38.80	101,729	42.02	153,319	35.83
<b>Total</b>	<b>727,552</b>	<b>100.00</b>	<b>242,119</b>	<b>100.00</b>	<b>380,814</b>	<b>100.00</b>

Size based on cooperative total sales for FY 1989.

**Appendix B Table 6—General/admin. operating cost, by cost category, by size\*, wheat-barley-oats first-handler grain cooperatives, 1989**

Cost category	Total sales group (million dollars)				All cooperatives	
	\$15 or more		\$5.0-14.9		Dollars	Percent
	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	<i>Percent</i>
Directors fees	4,620	3.53	1,930	4.69	2,698	4.04
Bookkeeping	16,688	12.75	3,349	8.14	7,160	10.72
Legal	1,163	0.89	135	0.33	428	0.64
Prof. services	20,507	15.66	9,295	22.60	12,498	18.71
Data processing	1,221	0.93	438	1.07	662	0.99
Office supplies	22,848	17.45	7,025	17.08	11,546	17.29
Advertising	20,622	15.75	6,695	16.28	10,674	15.98
Dues/subscriptions	4,314	3.29	1,206	2.93	2,094	3.13
Meetings/travel	14,737	11.26	4,282	10.41	7,270	10.88
Annual meeting						
Public relations	2,854	2.18	892	2.17	1,453	2.18
Bad debt	13,850	10.58	1,238	3.01	4,841	7.25
Electron. services	3,109	2.37	1,464	3.56	1,934	2.90
Misc. services	2,501	1.91	227	0.55	876	1.31
Misc. taxes	175	0.13	153	0.37	159	0.24
Bank charges			195	0.48	140	0.21
Miscellaneous	1,729	1.32	2,608	6.34	2,357	3.53
<b>Total</b>	<b>130,937</b>	<b>100.00</b>	<b>41,132</b>	<b>100.00</b>	<b>66,791</b>	<b>100.00</b>

Size based on cooperative total sales for FY 1989.

**U.S. Department of Agriculture  
Rural Development Administration  
Cooperative Services  
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