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1992 68th annual

SUMMARY OF ILLINOIS FARM BUSINESS RECORDS



COMMERCIAL FARMS: Production / Costs / Income / Investments
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN / COLLEGE OF AGRICULTURE / COOPERATIVE EXTENSION SERVICE

CIRCULAR 1329

CONTENTS

Source of Data	1
Uses for This Report	1
Definition of Terms and Accounting Methods.....	2
Soil-productivity rating	2
Hay equivalents, tons	2
Sampling technique	2
Type of farm	2
Cost items	2
Return items	3
Recent Changes in Income on Illinois Farms	3
Farm business trends in 1992	3
Labor and management income	4
Family living expenditures	5
Income changes on Illinois farms	7
Northern and central Illinois farms	7
Southern Illinois farms	11
Livestock Enterprises	13
Hog enterprises	14
Feeder cattle and feeder-pig finishing enterprises	16
Dairy enterprises	18
Beef-cow herds	20
Sheep enterprises	20
Costs, Returns, Financial Summaries, Investments, Land Use, and Crop Yields for Different Sizes and Types of Illinois Farms.....	22

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SOURCE OF DATA

This report is based on data obtained from farm business records on 7,176 Illinois farms. It is the 68th annual summary of such records obtained from farmers cooperating with the University of Illinois Cooperative Extension Service, the Department of Agricultural Economics, and the Illinois Farm Business Farm Management (FBFM) Association.

At present, about one out of every five Illinois commercial farms with over 500 acres and one out of every four Illinois farms with total farm sales over \$100,000 is enrolled in this service, which grew steadily until 1982. Except for 1988, enrollment has declined slightly each year since 1982. One factor contributing to this decline has been the lower levels of farm income during the last half decade, resulting in fewer farm operators. In 1993, 10 associations in 102 counties are being served by 68 full-time field staff and one half-time field staff specialist. Participation in this farm-business analysis program is voluntary; cooperating farmers pay a fee for the educational services.

The program's development since 1940 is shown below.

Year	Associa- tions	Counties partici- pating	Field staff employed	Farmers enrolled
1940	3	23	3	680
1950	8	59	15	2,760
1960	10	100	33	5,494
1970	10	102	42	6,553
1980	10	102	67	8,205
1990	10	102	70	7,192

Estimates for 1992 indicate that 90 percent of the 7,176 farms covered in this report are larger than 240 acres. For the most part, this 90 percent falls within the size of business that includes farms selling \$50,000 or more of farm products per year. In the 1987 Census of Agriculture, farms selling \$50,000 or more accounted for 87 percent of all sales from Illinois farms.

The segment of Illinois agriculture that includes farms with more than 180 acres is often referred to as "commercial farming." In 1987, there were 44,810 farms in Illinois with more than 180 acres and with sales of \$10,000 or more. The figures that follow, taken from the 1987 Census of Agriculture, show that these farms represented 76 percent of the 59,181 farms larger than 50 acres and that these farms produced more than 98 percent of the agricultural products sold from Illinois farms.

Acres per farm	Percent of all farms over 50 acres	Percent of census farms enrolled in FBFM	Number of farms enrolled in FBFM
180-499	43.1	9.3	2,374
500-999	24.1	17.8	2,537
1,000+	8.5	19.6	983

Although most of the 1992 recordkeeping farms covered in this report are within the two smaller size groups, the figures show that they are not distributed proportionately among the groups. There were 5,017 farms identified by the Census with more than 1,000 acres in 1987. About a fifth of these farms (19.6 percent) were enrolled in the Illinois FBFM Association. Of the 14,257 farms in the group having from 500 to 999 acres, 17.8 percent also participated in the farm record program. Only about 5 percent of the farms enrolled had fewer than 160 acres. The average size of all farms enrolled in 1992 was 759 acres, compared with an average of 352 acres for all Illinois farms.

The data presented in this report is the total of operator and landlord income, expenses, and investments in the farm business. The group averages are identified by size of business, type of farm, and quality of soil found on the farm. Where segments of Illinois agriculture are identified by these criteria, the data from recordkeeping farms may be used with reasonable confidence, even though the recordkeeping farms as a group do not represent a cross section of all commercial farms in the state.

USES FOR THIS REPORT

The management of a modern commercial farm involves decision making in the application of technology, the choice of a proper combination of crop and livestock enterprises, and effective business administration of the farming operations. A basic analysis of a farm business involves a careful study of past performance to detect problems and strengths in the farming operation. Also involved is the process of planning and developing future operations to realize the full potential of the land, labor, and capital resources available and to improve the economic efficiency of the farm business.

The farm-business summaries contained in this report are used by individual farmers to analyze their business operations and to develop plans for future farming operations. This report summarizes the information so that specialists involved in agricultural extension, research, teaching, and agribusiness activities may use the data to help them perform their duties effectively. The definition of terms and accounting measures on the following pages will be of assistance in using the data.

The first part of the report (Tables 2 to 8) summarizes selected recent changes in farm income on Illinois farms. It also identifies economic forces and factors that contribute to these changing trends. The data presented in Tables 5 through 8 are the total of operator and landlord data. Some of the data used in the text are drawn from previous issues of this report.

The second section (Tables 9 to 18) presents data on livestock enterprises. The comprehensive and detailed information contained in this section is a valuable resource for anyone interested in livestock production. Because part of the feed grains and roughages produced on Illinois farms is marketed through livestock, the margins of income from livestock enterprises are important in interpreting the economic results of some farming operations.

The third section (Tables 19 to 27a) discusses costs, returns, financial summaries, investments, land use, and crop yields for different sizes and types of farms in northern, central, and southern Illinois. It is the total of operator and landlord data. It reports on the 25 percent of grain farms that received the highest return to management per dollar of cost and the 25 percent that received the lowest return. It also reports on two-man and three-man hog and beef farms. A two-man hog and beef farm uses from 21 to 27 months of labor; a three-man hog and beef farm, from 31 to 39 months.

DEFINITION OF TERMS AND ACCOUNTING METHODS

Soil-productivity rating

This rating is an average index representing the inherent productivity of all tillable land on the farm. Individual soil types on each farm are assigned an index ranging downward from 100. All ratings were revised in 1971 to reflect a basic level of management as outlined in Circular 1156 of the Illinois Cooperative Extension Service, *Soil Productivity in Illinois*. New land values were assigned in 1980. The adjusted land values brings them to current market levels.

Hay equivalents, tons

To get the equivalents, we took the total of 1.0 multiplied by the pounds of hay, 0.45 multiplied by the pounds of hay silage, 0.33 multiplied by the pounds of corn silage, and 24 multiplied by the pasture days per feed unit (which are also multiplied by the total feed units per cow). This total is then divided by 2,000.

Sampling technique

Data from all records certified usable for analysis by field staff were aggregated by size (acres or number of cows), type of organization, value of the feed fed, and soil-productivity rating. Electronic data-processing was used to summarize the data.

Type of farm

Grain farms are farms where the value of the feed fed was *less* than 40 percent of the crop returns

and where the value of feed fed to dairy or poultry was not more than a sixth of the crop returns. Since 1973, farms with livestock have been essentially excluded from the sample of grain farms in northern and central Illinois in Table 19; since 1978, from the grain-farm sample in Table 20; and since 1982, from the grain-farm sample in Table 5.

Hog or beef farms are farms where the value of feed fed was *more* than 40 percent of the crop returns and where either the hog or beef-cattle enterprise received more than half of the value of feed fed.

Dairy farms are farms where the value of feed fed was *more* than 40 percent of the crop returns and where the dairy enterprise received *more* than one-third of the value of feed fed.

Cost items

The *value of feed fed* includes on-the-farm grains with the following average prices per bushel: corn, \$2.35; oats, \$1.52; and wheat, \$3.34. Commercial feeds were priced at actual cost, hay and silage at farm values, and pasture at 40 cents per animal unit per pasture day. A pasture day represents an intake of about 20 to 25 pounds of dry matter, defined as 16 pounds of total digestible nutrients (TDN) from the pasture used.

Cash operating expenses include the annual cash outlays for these nondepreciable items: fertilizer, pesticides; seeds (including homegrown seeds); machinery repairs; machine hire and lease; fuel and oil; the farm share of electricity, telephone, and light vehicle expenses; building repairs; drying and storage; hired labor; livestock expenses; taxes; insurance; and miscellaneous expenses. Purchased feed, grain, and livestock are not included because they have been deducted from gross receipts in computing the value of farm production. The interest paid is not included because an interest charge is made on the total farm investment. But the total interest paid by the operator only on all debt—operating debt plus longer-term debt—is listed separately in Tables 19a to 27a under "Selected Cost and Return Items per Tillable Acre."

Machinery and equipment include depreciation, repairs, machine hire and lease, fuel and oil, and the farm share of electricity, telephone, and light vehicle expenses.

Labor includes hired labor plus family and operator's labor, charged in 1992 at \$1,500 a month.

Interest on nonland capital covers the interest charged at 7 percent on the sum of one-half the average of the January 1 and December 31 inventory values of grain, plus the average of the January 1 and December 31 inventories of remaining capital investment in livestock, machinery and light vehicles, buildings, and soil fertility, plus *one-half* the cash-operating expense, exclusive of interest paid. In Tables 5, 7, and 8, this charge is combined with the land charge or net rent and labeled interest charge

on capital. The average cash interest paid per farm by all farm operators was \$15,194. Details on operator and landlord shares of expenses and income are published annually in research reports by the Department of Agricultural Economics.

Land charge or *net rent* is the bare land priced at current land values multiplied by 4.2 percent to reflect net rents received by the landlord.

Total nonfeed costs include cash-operating expenses, adjustments for accrued expenses and farm-produced inputs, depreciation, and charges for unpaid labor and interest including land charge. Purchased feeds and livestock are omitted.

The *basic value of land* (the *current basis*) is adjusted each year according to the February index of land prices in Illinois as reported by the United States Department of Agriculture (USDA). An additional adjustment was made to this index in 1984 to reflect the large drop in land values. The land value index for 1992, using a base earning value of 1979 = 100, was 70.

The *capital account adjustment* includes the gain or loss on capital items sold less any amortization deduction.

Return items

Crop returns are the sum of grain, seed and feed sales, the value of homegrown seed used, the value of all feed fed (except milk), government-deficiency and diverted-acre payments received and accrued, and the change in value for feed and grain inventories, less the value of feed and grain purchased. Government PIK (payment in kind) certificates purchased to redeem grain under government loan are included in the feed-and-grain purchase account.

The *total value of farm production* is the cash and accrued value of sales of products and services, less the cost of purchased feed, grain, and livestock, plus the change in inventory values for grain and livestock, plus the value of farm products used.

Net farm income is the value of farm production, less total operating expenses and depreciation, plus gain or loss on machinery or buildings sold. Net farm income includes the return to the farm and family for unpaid labor, the interest on all invested capital, and the returns to management.

Labor and management income per operator is total net farm income, less the value of family labor and the interest—including net rent—charged on all capital invested. This figure, as the residual return to all unpaid operator's labor and management efforts, is then divided by the months of unpaid operator labor and multiplied by 12 to reflect income for one operator on multiple-operator farms.

Capital and management earnings are net farm income, less a charge for all unpaid labor.

Management return is the residual surplus after a

charge for unpaid labor and the interest or land charge on capital are deducted from net farm income.

The *rate earned on investment* is capital and management earnings—interest on all capital and land charge, plus management returns—per \$100 of the total farm average annual investment.

RECENT CHANGES IN INCOME ON ILLINOIS FARMS

Farm business trends in 1992

Illinois agriculture is based largely on crop production, especially corn and soybeans. In 1992, Illinois ranked first in the nation in the production of soybeans and second in the nation in the production of corn. The total value of corn and soybeans produced on Illinois farms was 18 percent of the total U.S. production for these crops. In 1991, the total value was 63 percent of the total value of production in Illinois from all crops and livestock and 90 percent of the value of production from all crops produced.

Crops. Year-to-year variations in net income are related to crop yields, grain prices, and acres in high cash-value crops. Corn and soybean yields in 1992 broke records and were considerably higher than the drought-reduced yields of 1991. In 1992, the average corn yield for Illinois was 149 bushels per acre, 42 bushels above 1991 and 14 bushels above the previous record set in 1985 and 1986. Recordkeeping farms averaged 153 bushels per acre in 1992, also 42 bushels above the 1991 yield. Soybean yields were 43 bushels per acre in 1992, compared with 37.5 in 1991. Recordkeeping farms averaged 46 bushels per acre in 1992. Crop yields on the 7,176 recordkeeping farms covered in this report averaged 3 to 7 percent above the average for all Illinois farms reported by the Illinois Crop Reporting Service.

This was the first year that crop sales have been divided between old and new crop sales. The prices received for old crop soybeans sold during the year averaged 10 to 13 cents per bushel below 1991 prices (Table 1). Corn prices received in 1992 averaged 4 to 5 cents less than those received in 1991. The price received for new crop corn averaged 31 cents lower than old crop, and the price received for new crop soybeans averaged 26 cents lower. Wheat sold for 77 to 92 cents more per bushel during the year. Crops under loan with the Commodity Credit Corporation (CCC) and forfeited at the end of the loan period are included as grain sales. The selling price would be the loan rate for that particular crop. Negative marketing margins on old-crop corn inventoried at the beginning of the year averaged about 2 cents. The average price received for old-crop soybeans was 13 cents above the beginning of year inventory price. The year-end, new-crop corn inventory price was 30

Table 1. Average Prices Received and Paid by Farm Recordkeepers for Grain, Livestock, and Milk

	1992		1991	
	Northern Illinois	Southern Illinois	Northern Illinois	Southern Illinois
Grain prices per bushel				
Purchased — corn ..	\$2.28	\$2.39	\$2.30	\$2.35
Sold — corn,				
old crop ..	2.32	2.33	2.37 ^a	2.37 ^a
corn,				
new crop	2.02	2.01	—	—
soybeans,				
old crop ..	5.65	5.61	5.75 ^a	5.74 ^a
soybeans,				
new crop	5.42	5.31	—	—
wheat	3.20	3.25	2.43	2.33
Livestock prices per cwt				
Hogs, all weights..	\$41.83		\$48.52	
Fed cattle, all				
weights	73.41		72.55	
Feeder cattle, all				
weights, prices				
paid.....	81.64		85.94	
Dairy cattle, all				
weights	60.45		59.45	
Sheep and wool,				
all weights.....	48.51		42.82	
Milk per cwt	13.07		11.70	

^a Average price for old and new crop combined.

cents lower than it was the year before, and the year-end, new-crop soybean inventory price was the same.

Production of the major crops in 1992 was considerably higher than 1991 and at record high levels. Compared to 1991, corn production was up 40 percent; soybean production was up 19 percent; oat production was up 20 percent; grain sorghum production was up 94 percent. Wheat production was up 39 percent with an average yield of 54 bushels per acre, second highest on record. Hay production was up 5 percent. The Illinois 1992 All Crop Production Index, using a base value of 1977 = 100, was 128. This figure was at a record high, breaking the previous high of 120 set in 1985. Acreages of corn harvested for grain was unchanged from 1991 to 1992, while soybean acreage was up 4 percent from 1991. The acreage planted to soybeans is the largest acreage planted to soybeans in Illinois. Wheat acreage harvested for grain decreased 18 percent. Normally, farmers harvest about 90 percent of the planted acreage. In 1992, only 79 percent of the planted acreage was harvested due to the extensive winter-kill damage.

Although 1992 produced record corn and soybean yields, weather conditions during the growing season were unusual. Planting of the 1992 corn crop progressed ahead of average in early April, was delayed by rain in later April, but finished rapidly in early May. Farmers planted the same amount of corn acres in 1992 as in 1991. Planting was complete by

the third week of May, about two weeks ahead of normal.

Crop progress soon began to lag behind normal levels due to cool and dry weather in May and June. By July, the corn was well behind schedule and in danger of deteriorating due to lack of moisture. Rain began in July and continued throughout the month. This, combined with cool temperatures, resulted in an excellent corn crop, although behind in maturity. Corn harvest began later than usual and continued that way, resulting in the latest harvest in 20 years. The northern area of the state suffered the most problems due to the late harvest.

Soybean planting got off to a slow start in late April and early May due to cool and wet weather. Planting progressed rapidly as temperatures rose and soils dried. By late May, planting was two weeks ahead of normal. June was cool and dry but July rains improved the condition of the crop drastically. Harvest began in early September but progressed slowly. Harvest was nearly complete by the end of October. Timely rains over most of the state resulted in record yields.

Livestock. A second major determinant in farm income is the price farmers receive for livestock and livestock products. In 1992, the average prices received by farm recordkeepers in the Illinois FBFM Association were 14 percent lower for hogs, 1 percent higher for fat cattle, and 12 percent higher for milk than they were in 1991 (Table 1). The prices paid for all weights of feeder cattle and feeder pigs averaged 5 percent below the 1991 price for feeder cattle and 24 percent below the 1991 price for feeder pigs. Higher returns due to higher prices received for fat cattle and higher year-end inventory values caused returns above feed and purchased animals for the feeder-cattle enterprise to increase from \$3.97 per hundredweight produced to \$25.40 (Table 10). Lower hog prices decreased returns above feed cost from \$17.67 per hundredweight produced to \$16.45. Returns above feed were below the 5-year average for 1988 through 1992 by \$1.95 per hundredweight produced. Higher milk prices in 1992 made dairy returns above feed cost per cow increase from \$1,064 in 1991 to \$1,398 in 1992 and 9 percent above the average for the 5-year period from 1988 through 1992.

Labor and management income

The average operator's share of labor and management income for the 5-year period from 1988 through 1992 on all northern Illinois recordkeeping farms (located north of a line from Kankakee to Moline) was \$19,546. Operators on 1,700 grain and hog farms in central Illinois had 5-year average earnings of \$26,977 (Table 2). Central Illinois occupies the area between the Kankakee-Moline line in the north and the Mattoon-Alton line in the south. Smaller

Table 2. Operator's Five-Year Average Share of Labor and Management Income by Size and Type of Farm, 1988 Through 1992

	Number of acres per farm			
	Under 340	340 to 649	650+	All
Northern Illinois				
Acres of tillable land	239	471	935	572
Labor and management earnings by type of farm				
Grain	\$ 5,919	\$17,962	\$29,914	\$21,822
Hog	13,444	19,758	28,995	19,301
Beef ^a	830	6,086	10,898	6,482
Dairy	16,092	22,420	...	18,578
All	10,804	17,797	28,043	19,546
Central Illinois				
Acres of tillable land	266	499	958	701
Labor and management earnings by type of farm				
Grain ^b	\$11,048	\$21,947	\$41,067	\$30,534
Grain ^c	5,386	17,136	30,837	23,795
Hog	12,575	19,709	31,501	21,778
All	9,967	20,029	36,273	26,977
Southern Illinois				
Acres of tillable land	256	584	1,132	771
Labor and management earnings by type of farm				
Grain	\$ 8,864	\$14,704	\$27,309	\$21,914
Hog	11,392	25,047	...	21,863
Dairy	26,977	33,048	...	30,237
All	14,763	20,933	27,309	22,728

^a Includes central Illinois.
^b Highly productive soils with soil-productivity ratings from 86 to 100.
^c Heavy-till and transition soils with soil-productivity ratings from 56 to 85.
^d Data not available.

farms and variable soil quality in northern Illinois have generated smaller earnings from crops. The farms in northern Illinois typically average 5 to 10 percent lower crop yields than those in central Illinois.

Northern Illinois has a heavier concentration of livestock, which, except for hogs, had higher earnings in 1992 compared to 1991. The difference in earnings between central and northern Illinois increased by \$2,552 in a comparison of the 5-year averages for the periods from 1987 through 1991 and from 1988 through 1992. The northern Illinois area in general suffered more from frost damage during the early growing season and a late, wet fall than central Illinois. The recordkeeping farms in northern Illinois averaged 572 tillable acres per farm, compared with an average of 701 tillable acres on farms in central Illinois.

The figure for labor and management income varies considerably, depending on the location and type of farm. For the period from 1988 through 1992, operators in southern Illinois averaged \$22,728 for labor and management. This average increased by \$2,070, compared with the average for the 5-year period from 1987 through 1991. When the average earnings for the 5-year period from 1988 through 1992 are compared with the earnings from 1987

through 1991, earnings increased in all areas of the state.

In 1992, the labor and management income for all areas of Illinois averaged \$37,965 per farm. This figure is \$27,512 above the 1991 state average. The higher returns were a result of record corn and soybean yields and higher returns to cattle and milk producers. The average corn yield for all farms in the study was 42 bushels per acre above 1991 and 11 bushels higher than the previous record. The average soybean yield tied the previous record high. Gross crop returns for grain farms were \$58 per tillable acre higher in 1992 than in 1991. Prices received for slaughter cattle and milk were higher while market hog prices were lower. Returns were unusually consistent across the central and southern Illinois areas and lower in northern Illinois.

The income or salary of the farm operator—whether tenant or part-owner—is the return for the labor and management provided by the operator. The level of income received is a measure of overall farming efficiency and includes compensation for the risk involved. The income includes the operator's gross sales and the net change in inventory. This income is reduced by operating expenses, depreciation, a charge for unpaid family labor, 7 percent interest on nonland investment, and a land-use charge equivalent to the average net rent received by land-owners for crop-share leases from 1988 to 1991.

Whenever the income figures in Table 2 fall below the amounts required for living expenses and income and Social Security taxes, operators must use the charges deducted for interest on equity capital to pay these expenses. If we assume that \$35,000 is needed to pay living expenses and income and Social Security taxes, these figures for 5-year average, labor and management income indicate that to pay these expenses, the average farm operator's family uses between \$5,000 and \$30,000 of the return for equity capital, depending on the location and type of farm. Using part of the return to equity to pay family living expenses indicates that the farm operator is not receiving a competitive return to either his labor and management or his equity in the business. Off-farm income could be used to pay for some of the family living expenses.

Family living expenditures

Total cash living expenditures for a sample of 452 central Illinois, sole-proprietor, farm-operator families in 1992 averaged \$34,336 (Table 3). This figure is 6 percent higher than the 1991 average. Capital purchases for family living expenses of \$4,745 include the family's share of the auto, plus items that exceed \$250 and will last more than one year. Capital purchases for family living were 12 percent of the total cash outlay for all family living expenditures in 1992.

Table 3. Average Sources and Uses of Funds Over a Four-Year Period and by Noncapital Living Expenses for Selected Illinois Farms

	All records, average per farm				Family of 3 to 5, 1992 ^a	
	1992	1991	1990	1989	High-third	Low-third
Number of farms	452	456	408	402	94	94
Tillable acres farmed.....	755	731	719	709	943	639
Acres owned	132	131	120	119	149	110
Farm assets, January 1 ^b	\$426,539	\$381,588	\$358,394	\$335,756	\$517,932	\$349,679
Farm assets, December 31 ^b	450,722	383,283	384,363	335,420	549,902	370,201
Liabilities, January 1	218,402	198,764	183,161	175,939	309,592	173,931
Liabilities, December 31	229,076	202,708	203,168	182,841	339,448	177,736
Net farm income	55,759	30,596	50,825	45,047	69,859	45,141
Source of dollars						
Net nonfarm income	\$ 12,166	\$ 12,226	\$ 12,624	\$ 10,502	\$ 11,289	\$ 10,617
Money borrowed	144,676	118,446	116,122	90,394	258,791	92,795
Farm receipts	193,259	177,832	180,737	156,717	259,747	166,444
Total sources	\$350,101	\$308,504	\$309,483	\$257,613	\$529,827	\$269,856
Use of dollars						
Interest paid.....	\$ 16,006	\$ 15,550	\$ 15,070	\$ 13,850	\$ 24,294	\$ 12,564
Cash operating expenses	125,392	111,037	112,943	97,737	172,623	112,067
Capital farm purchases.....	19,867	22,829	27,834	18,299	25,366	16,261
Payments on principal.....	134,566	113,510	98,101	85,797	228,715	89,414
Income and Social Security taxes	10,172	11,326	9,444	8,040	11,280	7,574
Net new savings and investment.....	5,017	-2,646	9,710	1,070	13,028	4,411
Total living expenses.....	\$ 34,336	\$ 32,480	\$ 32,090	\$ 28,499	\$ 49,833	\$ 23,661
Living — capital purchases	4,745	4,418	4,291	4,321	4,688	3,904
Total uses	\$350,101	\$308,504	\$309,483	\$257,613	\$529,827	\$269,856

^a Records were sorted into thirds according to total noncapital living expenses.

^b Modified-cost basis, except the land value, which was held at the same current value for January 1 and December 31.

The average farmer in this sample paid \$16,006 in interest in 1992 on operating, machinery, and long-term real estate debts. This interest expense was 11 percent of total operating expenses (including interest paid) and 8 percent of total farm receipts, or \$21 per tillable acre farmed in 1992. The average amount of interest paid in 1992 was \$456 more than the amount paid in 1991. This is the fourth year in a row that the amount of interest paid exceeded the amount paid in the previous year.

The most significant financial facts about 1992 are as follows:

- Net farm income, plus net nonfarm income, was \$18,672 more than the sum of family living capital purchases, total living expenses, and payments for income and Social Security taxes. This was the largest this margin has been since the 1970s;
- Liabilities of \$229,076 as of December 31, 1992, were 51 cents for each dollar of farm-only assets, including land at current value and machinery at depreciated value. The 51 cents was the same as 1989 and lowest of any year in the last decade;
- Capital purchases of \$19,867 dropped for the second year in a row, averaging \$26 per tillable acre. That compared to \$39 per tillable acre in 1990 and \$31 in 1991;
- The amount of money borrowed exceeded principal payments for the fourth year in a row, after three years in which principal payments exceeded money borrowed;
- The amount of noncapital living expenses per till-

able acre farmed was \$45, which was the highest amount in recent years;

- Income and Social Security taxes paid decreased by \$1,154 but the total amount of taxes paid, \$10,172, was the second largest amount since this study began.

The 1992 records from three- to five-member families were sorted into high one-third and low one-third groups according to the family's total living expenses (see Table 3). The total cash living expenses for the high-third group averaged \$49,833, compared with \$23,661 for the low-third group. The high-third group farmed 304 more acres than the other group and owned 16 percent of the land farmed; the low-third group owned 17 percent of the land farmed. The results indicate that the high-third group had more nonfarm taxable income. The high-third group had 91 percent more outstanding debt and a higher net farm income. When net farm income is added to net nonfarm income, and total family living expenses—including capital purchases for family living—and payments for income and Social Security tax are subtracted, the low one-third group had \$5,272 more dollars remaining than the high one-third group.

Living expenses included cash expenditures for food, operating expenses, clothing, personal items, recreation, entertainment, education, transportation, life insurance, contributions, and medical expenses. The sample of 452 farms contained 54 more tillable acres than the average of all the recordkeeping farms

in the state. Management was also considered slightly above average. In view of these factors, average total living expenses for all recordkeeping families (excluding capital purchases) are estimated to be between \$27,000 and \$29,000 or 15 to 20 percent below the average total living expenses of these 452 central Illinois farms. When the \$12,166 net nonfarm income for 1992 is used for living expenses, the remaining \$26,915 must be generated from the farm business to pay the \$39,081 used for total living expenses including family living capital purchases. The figure, \$26,915, amounts to \$36 per tillable acre farmed.

Income changes on Illinois farms

The average operator's net farm income for all farms in 1992 was \$54,097; it was \$25,502 in 1991 (Table 4). Operator net farm incomes decrease steadily as a higher percent of gross farm returns is used to pay interest. On the average, when more than 25 to 30 percent of gross farm returns is used to pay interest, the operator's net farm income is usually negative. Due to the higher incomes in 1992, a net farm income did not become negative until 30 to 35 percent of the gross farm returns were used to pay interest. Interest paid as a part of gross farm returns for all operators averaged 7.9 percent in 1992; 9.9 in 1991; 8.8 in 1990; 8.9 in 1989; and 9.8 in 1988.

Comparative costs and returns between years and among major types of farming operations in northern and central, and in southern Illinois are reported in Tables 5, 7, and 8. The separation of farms into northern and central, and southern Illinois is based on soil-type regions that divide the state approximately on an east-west line from Mattoon to Alton. The sample consisted of grain, hog, beef, and dairy farms having between 340 and 799 acres or an average of 568 acres. Labor available on farms of this size averaged 13 months on grain farms, 24 months on hog farms, 18 months on beef farms, and 27 months on dairy farms. The data in the tables are presented as if the farms were all owner operated. For leased farms, the landlord and tenant shares of the business were combined. Depending on the location, between 55 and 75 percent of the land in Illinois is tenant operated, primarily under crop-share, some cash-rent, and a small number of livestock-share leases.

Size of farm, type of farm, quality of soil, and managerial inputs have been held reasonably constant by the sampling procedure used in selecting farms within each category. Variations among figures for 1990, 1991, and the 5-year average are due to changes in farm prices and to costs, weather, and internal farming adjustments. The data in Tables 5, 7, and 8 are particularly helpful for comparing types of farming and for evaluating changes in farm costs and returns for a particular size and kind of farm. The data do not reflect overall farming adjustments due

to the enlargement of farms or to major changes in the use of resources.

The figure for net farm income comprises returns to the farm family for all unpaid labor, interest on all invested capital, and the managerial inputs used in farming. Changes in the value of farm inventories and that of consumed farm products are included as income. Net farm income is calculated by accounting methods comparable to the accrual method used in calculating taxable farm income for the federal income tax. Two important differences in the accrual method of income tax accounting should be noted: the provision for capital gains on livestock sales, which was in effect until 1987, and the inclusion of interest paid as a farm expense. The operator's share of net farm income, which is listed below total net farm income in many tables, does have the interest expense deducted from it.

The figures for net farm income are the amount available from the farm business for living costs, income and Social Security taxes, debts, new investments, and savings. Interest must also be paid from total net farm income, but not the operator's share because it has already been subtracted. New capital investments for the farm business have been included with total cash expenditures. Although the cash balance reflects the cash position of the farm business, the figure is influenced by purchases and sales of feed and livestock and by changes in liabilities and borrowed funds.

The investment per farm is established as an average of the investments in farm inventory on January 1 and December 31. Physical quantities of grain and livestock are valued at farm market prices. Machinery, buildings, and soil fertility are valued at the remaining capital cost: original cost less depreciation as allowed for income tax deductions to date. Land is priced at current values, with the same value used for the beginning- and end-of-the-year land inventories. A base land value is established for each farm on the basis of a soil-productivity rating adjusted to a current value each year by using the February index of land prices in Illinois. The procedure used for adjusting the land value is described in the definitions of soil-productivity rating and of the value of land (the current basis) on pages 2 and 3. The annual change in land values represents an adjustment in accounting to bring land values to current market levels. The land adjustment index for 1992 was 6 percent above that of 1991.

Northern and central Illinois farms

Grain farms. The net farm income for northern and central Illinois grain farms having 340 to 799 acres and no livestock averaged \$97,655 in 1992, with the operator's and landlord's shares combined (Table 5). This income was \$33,114 above that of 1991 and \$19,779 above the 5-year average income

Table 4. Percent of Illinois Farms and Operator Net Farm Income by Interest Paid as a Percent of Gross Farm Returns, 1988 Through 1992

	Interest paid as a percent of gross farm returns							All
	Under 10	10-14.9	15-19.9	20-24.9	25-29.9	30-34.9	35+	
Percent of farms								
1988	62	15	9	6	4	1	3	100
1989	65	15	9	5	3	1	2	100
1990	65	16	9	5	3	1	1	100
1991	59	16	10	6	4	2	3	100
1992	69	16	7	4	2	1	1	100
Net farm income								
1988	\$32,526	\$24,040	\$14,720	\$ 8,712	\$ -799	\$-6,419	\$-19,517	\$24,917
1989	51,632	42,415	31,688	23,894	14,677	61	-2,990	44,652
1990	56,786	41,803	34,008	27,946	19,210	5,407	-13,768	48,211
1991	36,437	21,663	12,110	3,850	95	-6,907	-30,034	25,502
1992	60,758	50,713	35,264	28,201	11,267	7,738	-19,068	54,097

from 1988 through 1992. This income was the highest of any during the last decade. The next highest was \$87,883 in 1989. The value of farm production was also the highest of any of the last ten years, increasing by \$36,937 compared to 1991. The value of farm production increased due to a \$17,363 increase in inventory value and a \$8,342 increase in accounts receivable. Net cash operating income was actually slightly less than the year before. Total operating expenses increased only \$897. Depreciation expense increased from \$10,612 in 1991 to \$10,908 in 1992. The amount of annual depreciation of these farms is now about half of the depreciation these farms had eight years ago.

The main factor causing incomes on northern and central Illinois grain farms to increase as compared to the year before was the record-high corn and soybean yields. The average corn yield on these farms in 1992 was 162 bushels per acre, compared to 116 in 1991. The average soybean yield was 47 bushels per acre, compared to 41 the year before. Corn was inventoried 30 cents lower at the end of 1992 compared to the beginning, while soybeans were inventoried at the same price. The increase in accounts receivable was due to an increase in accrued deficiency payments from the government farm program. Most farmers continue to participate in the government farm program, setting aside 5 percent of their corn acreage base.

The average price received in 1992 for corn and soybeans was slightly lower than the year before. The average price received for old crop corn was slightly lower than the inventory price at the beginning of the year while the soybean price was higher than the beginning-of-the-year inventory price. This resulted in a positive marketing margin for soybeans and a negative marketing margin for corn. Cash operating expenses increased by 3 percent and depreciation increased by 3 percent. Capital purchases of \$13,259 in 1992 were \$1,715 less than in 1991.

While accrual net farm incomes increased

\$33,114, net cash incomes decreased \$1,258. A major reason for the difference is due to a large inventory increase which only affects the accrual income. Cash operating income decreased \$638. Management returns were \$21,186, the highest in a number of years. The last five-year average is \$1,531. The rate earned on investment was 6.10 percent, compared with 3.86 percent in 1991 and the last 5-year average of 5.16 percent. This rate earned on investment for grain farms was the second lowest rate earned in 1992 for any type of farm.

A study of the cost to grow corn and soybeans on central Illinois farms is summarized in Table 6. These farms had a soil-productivity index ranging from 86 to 100. The farms used 97 percent of their tillable land to grow corn and soybeans, with 49.9 percent of the acres in corn and 46.6 percent in soybeans. The table compares 1992 costs per acre with the 1991 costs. In 1992, the total cost per acre averaged \$344 for corn and \$276 for soybeans. From 1991 to 1992, it decreased 1 percent for soybeans and did not change for corn.

Nonland costs of \$1.29 per bushel for corn and \$3.24 for soybeans in 1992 are the most relevant costs for continuing production in the short run, especially where land is free of debt. Although the total costs to produce a bushel of corn and soybeans did not change much from 1991 to 1992, the total costs per bushel decreased due to higher yields. Total costs per bushel decreased 68 cents for corn and 41 cents for soybeans. If the 1992 yields had been 150 for corn and 48 for soybeans or the same as the average for the period from 1989 through 1992, the total cost per bushel would have been \$2.29 for corn and \$5.75 for soybeans. These costs do not include a charge for management.

The cost of fertility for soybeans was allocated on the basis of phosphorus, potassium, and lime removals, with the residual allocated to corn. The total unpaid labor charge was based on the labor available. The nonland interest rate was 7 percent of

Table 5. Averages for Selected Total Farm Items on 340- to 799-Acre Northern and Central Illinois Grain, Hog, and Beef Farms

	Grain farms			Hog farms			Beef farms		
	1992	1991	1988-1992 average	1992	1991	1988-1992 average	1992	1991	1988-1992 average
Number of farms	744	787	803	177	203	216	46	52	49
Total acres	578	577	570	557	550	550	534	525	527
Soil-productivity rating	86	86	87	81	81	82	78	76	78
Cash operating income	\$ 166,197	\$ 167,054	\$ 166,625	\$ 337,375	\$ 332,478	\$ 329,033	\$ 505,538	\$ 486,023	\$ 524,693
Less purchased feed and livestock	540	759	4,111	112,758	96,515	103,168	335,305	289,894	333,941
Net cash operating income	\$ 165,657	\$ 166,295	\$ 162,514	\$ 224,617	\$ 235,963	\$ 225,845	\$ 170,233	\$ 196,129	\$ 190,752
Accounts receivable change	8,342	-1,101	-969	7,271	-941	-568	9,044	-1,588	-235
Inventory change	17,363	-10,777	5,010	14,452	-21,712	4,849	23,283	-37,390	3,580
Farm products used	239	247	265	528	579	582	955	1,107	973
Value of farm production	\$ 191,601	\$ 154,664	\$ 166,820	\$ 246,868	\$ 213,889	\$ 230,708	\$ 203,515	\$ 158,258	\$ 195,070
Total cash operating expenses	81,306	79,094	77,475	120,251	115,501	111,697	97,551	96,867	96,959
Prepaid-unpaid change	1,732	417	292	1,537	-20	-166	309	2,166	421
Annual depreciation	10,908	10,612	11,177	23,303	21,729	24,765	17,437	21,988	22,389
Net farm income	\$ 97,655	\$ 64,541	\$ 77,876	\$ 101,777	\$ 76,679	\$ 94,412	\$ 88,218	\$ 37,237	\$ 75,301
(Operator's share) ^a	(42,895)	(21,119)	(31,009)	(47,112)	(27,011)	(42,696)	(40,560)	(-5,238)	(26,780)
Unpaid labor charge	17,796	16,759	16,039	20,703	19,850	19,389	18,848	19,457	17,413
Returns to capital and management	79,859	47,782	61,837	81,074	56,829	75,023	69,370	17,780	57,888
Interest charge on capital	58,673	61,519	60,306	63,858	69,212	69,517	65,368	72,373	74,761
Management returns	\$ 21,186	\$ -13,737	\$ 1,531	\$ 17,216	\$ -12,383	\$ 5,506	\$ 4,002	\$ -54,593	\$ -16,873
Total cash income ^b	167,536	168,499	168,092	338,316	333,821	330,163	507,000	486,345	525,602
Total cash expenditures ^b	94,891	94,596	94,593	256,299	239,090	240,768	449,147	409,871	452,664
Cash balance	\$ 72,645	\$ 73,903	\$ 73,499	\$ 82,017	\$ 94,731	\$ 89,395	\$ 57,853	\$ 76,474	\$ 72,938
Capital purchases	13,259	14,974	13,254	23,448	27,232	26,057	16,341	23,128	21,825
Farm Investment:									
Livestock inventory	\$ 172	\$ 232	\$ 199	\$ 103,241	\$ 97,374	\$ 98,268	\$ 224,131	\$ 206,184	\$ 219,294
Grain inventory	107,182	102,803	100,686	98,576	98,349	93,347	92,376	93,796	87,531
Remaining capital cost in:									
Machinery and auto	25,354	23,172	20,395	42,656	36,910	35,579	35,297	39,689	34,031
Buildings and fence	14,724	15,344	16,870	48,707	49,363	51,242	39,537	45,369	46,408
Soil fertility	60	71	61	63	122	120	0	2,630	527
Value of land (current basis)	\$1,162,640	\$1,096,531	\$1,061,245	\$ 998,551	\$ 940,654	\$ 926,202	\$ 887,264	\$ 815,506	\$ 822,587
Total farm investment	\$1,310,132	\$1,238,153	\$1,199,456	\$1,291,794	\$1,222,772	\$1,204,758	\$1,278,605	\$1,203,174	\$1,210,377
Rate earned on investment, percent	6.10	3.86	5.16	6.28	4.65	6.23	5.43	1.48	4.78

^a Interest expense deducted from operator's share only. Shown in parentheses because it pertains to operator's net farm income only.
^b Includes sales or purchases of capital items.

one-half the average of the beginning- and end-of-year inventory values for the crops on hand, plus one-half the cash-operating expenses (excluding interest paid), plus the depreciated value of machinery and buildings. The adjusted net rent was the average net rent received by crop-share landlords as reported on recordkeeping farms for the period from 1988 through 1992.

Hog farms. The net farm income in 1992 for northern and central Illinois hog farms having 340 to 799 acres averaged \$101,777, with the operator's

and landlord's shares combined (Table 5). Net incomes were \$25,098 higher than net incomes in 1991, and \$7,365 higher than the average for the 5-year period from 1988 through 1992. The net farm incomes for this group in 1992 were the third highest for any year out of the last 10 years. Earnings for these type of farms were record-high in 1990. Incomes for this type of farm were the second highest for any type of farm in 1992 and for the average of 1988 through 1992. Higher grain yields resulted in a \$14,452 inventory increase in 1992 compared to a

\$21,712 decrease in 1991. Net cash operating income was actually lower in 1992 than in 1991. The value of farm production increased 15 percent and cash operating expenses other than feed increased 4 percent.

Management returns were \$17,216, an increase of \$29,599 from 1991 returns and \$11,710 above the 5-year average from 1988 through 1992. Capital purchases decreased by \$3,784, compared with 1991's purchases, and were \$2,609 below the 1988 through 1992 average. Cash livestock sales increased by \$12,366 compared with 1991 figures. The average number of litters farrowed for this group was 266, the highest ever.

Higher earnings caused the rate earned on investment to increase to 6.28 percent in 1992, compared with 4.65 percent in 1991. This was the highest for any type of farm in northern and central Illinois. The 5-year average rate was 6.23 percent. The 5-year average earning rate was the second highest of any type of farm in northern and central Illinois.

Beef farms. The net farm income for northern and central Illinois beef farms having 340 to 799 acres averaged \$88,218 in 1992, with the operator's

and landlord's shares combined (Table 5). This figure was \$50,981 higher than the 1991 figure and \$12,917 higher than the average from 1988 through 1992.

Higher slaughter cattle prices and inventory values contributed to the higher earnings. The average price received for fat cattle increased 1 percent in 1992 compared with 1991. The average price paid to replace feeder cattle decreased 5 percent. Compared with 1991, the value of farm production increased by \$45,257, or 29 percent. It was \$8,445 above the 5-year average for 1988 through 1992. The 1991 value of production was the lowest of any in the last 10 years, and the 1990 value of farm production was the highest of any of the preceding 10 years. These farms produced 2,388 hundred-weight of beef per farm, or the weight-gain equivalents of 503 head, each gaining 475 pounds.

Management returns of a \$4,002 in 1992 for these farms were \$58,595 above 1991 returns and \$20,875 above the 5-year average from 1988 through 1992, which was a *negative* \$16,873. The 1992 management returns were the third highest of any year in the last 10 years. The only years that management returns have been positive in the last 10 years were in 1987, 1990, and 1992. Capital purchases were \$16,341 in 1992 compared to \$23,128 in 1991 and \$21,825 for the 1988 through 1992 average. Cash operating expenses, excluding purchases of feed and livestock, increased 1 percent. The net cash balance for these farms was \$57,853, or \$18,621 less than in 1991 and \$15,085 below the average for 1988 through 1992. The net cash balance for these farms in 1992 was the lowest for any year out of the last 10 years.

Cost and returns to produce beef from 1989 through 1992, based on a detailed breakdown of individual costs from a selected sample of beef farms, are shown in Table 14. Total returns exceeded total costs in 1992. This analysis is discussed in detail under the livestock section on feeder-cattle enterprises.

The average rate earned on investment increased from 1.48 percent in 1991 to 5.43 percent in 1992. The 5-year average rate earned on investment from 1988 through 1992 was 4.78 percent. The 1992 and the 1988 through 1992 average rate earned on investment is the lowest for any type of farm. The average total farm investment was \$1,278,605. The average investment in cattle of \$92,376 therefore represents the third highest of any year during the last eight years.

Farms on which beef cattle are raised or fed continue to compete for resources in Illinois, where nonmarketable resources, such as roughage, labor, and buildings, or very high levels of management are available. Lower feeder cattle prices along with stable feed costs helped increase returns in 1992 to feeder-cattle enterprises. In recent years, this type of farm has survived primarily where there are large amounts of debt-free capital that has been combined with very high levels of management.

Table 6. Average Cost per Tillable Acre to Grow Corn and Soybeans on Central Illinois Grain Farms with No Livestock

	Corn		Soybeans	
	1992	1991	1992	1991
Number of farms	615	631	615	631
Acres grown per farm . . .	403	368	377	352
Yield per acre, bu.	176	131	49	46
Variable nonland costs				
Soil fertility	\$ 52	\$ 55	\$ 17	\$ 18
Pesticides	24	24	25	25
Seed	24	23	13	13
Drying and storage	14	8	6	4
Machinery repairs, fuel, and hire	26	27	22	23
Total, variable costs . . .	\$140	\$137	\$ 83	\$ 83
Other nonland costs				
Labor	\$ 30	\$ 29	\$ 28	\$ 27
Buildings and storage . . .	6	6	3	3
Machinery depreciation	20	19	16	15
Nonland interest	18	23	16	20
Overhead	13	12	13	12
Total, other costs	\$ 87	\$ 89	\$ 76	\$ 77
Total, nonland costs . . .	\$227	\$226	\$159	\$160
Land costs				
Taxes	\$ 20	\$ 20	\$ 20	\$ 20
Adjusted net rent	97	98	97	98
Total, land costs	\$117	\$118	\$117	\$118
Total, all costs	\$344	\$344	\$276	\$278
Nonland cost per bu	\$ 1.29	\$ 1.73	\$ 3.24	\$ 3.48
Total, all costs per bu . . .	\$ 1.95	\$ 2.63	\$ 5.63	\$ 6.04
Average yield,				
past 4 years	150	127	48	43
Total, all costs per bu. . .	\$ 2.29	\$ 2.71	\$ 5.75	\$ 6.47

Dairy farms. The net farm income for northern and central Illinois dairy farms having 340 to 799 acres averaged \$84,861 in 1992, with the operator's and landlord's shares combined (Table 7). This figure was \$20,653 above the 1991 figure and \$1,547 above the 5-year average from 1988 through 1992. The 1991 income was the lowest of any of the last 6 years. The average number of cows on these farms was 74, four above the average for 1991.

Higher milk prices which increased cash operating income and higher crop yields which increased the value of inventories resulted in higher value of production and net farm income. The value of farm production was \$220,358, 5 percent above the average for the 5-year period from 1988 through 1992. Cash operating expenses increased 7 percent in 1992 compared to 1991. A detailed breakdown of the cost of producing milk can be found in Table 16. Management returns of \$8,640 were \$27,155 above 1991 and \$5,116 above the average for the 5-year period from 1988 through 1992. For the last 10 years, management returns were positive 4 years. Capital purchases increased to \$26,432 compared to \$21,951 and the 1988 through 1992 average of \$23,215.

The 1992 rate earned on investment for these farms was 6.16 percent; the 1991 rate was 4.14 percent. The 5-year average rate earned on investment was 6.70 percent. The 1992 rate earned on investment was the second highest for any type of farm in central and northern Illinois. The average price received for milk in 1992 was 12 percent higher than the average price received in 1991. At the beginning of 1992, milk prices were above prices received in 1991 and continued to be higher until the last two months. Milk prices received for the first half of 1993 are similar to the first half of 1992. However, dairy producers may face higher feed costs due to a short supply of hay and other roughages caused by unseasonable wet conditions during the summer of 1993.

The price received for beef from all cull animals and vealers sold from the dairy herd can be an important factor in determining total returns. When beef prices were high, those sales accounted for as much as 20 percent of the total income from the dairy enterprise. But when the beef prices are low, this source of income is only 10 to 12 percent of the total. In 1992, the returns from beef accounted for 16 percent of the total returns to the dairy herd, in comparison with 17 percent in 1991.

Southern Illinois farms

Grain farms. The net farm income for southern Illinois grain farms having 340 to 799 acres averaged \$73,875 in 1992, with the landlord's and operator's shares combined (Table 8). This income is \$26,257 above net farm income in 1991 and \$14,054 above the average from 1988 through 1992. Higher corn

Table 7. Averages for Selected Total Farm Items on 340- to 799-Acre Northern Illinois Dairy Farms

	1992	1991	1988-1992 average
Number of farms.....	62	65	60
Total acres.....	470	479	472
Soil-productivity rating....	71	71	71
Cash operating income...\$	256,764	\$ 250,972	\$ 256,578
Less purchased feed and livestock.....	53,320	50,142	53,458
Net cash operating income.....\$	203,444	\$ 200,830	\$ 203,120
Accounts receivable change.....	5,552	-681	-61
Inventory change.....	9,153	-11,996	5,106
Farm products used.....	2,209	2,272	2,314
Value of farm production..\$	220,358	\$ 190,425	\$ 210,479
Total cash operating expenses.....	113,643	106,651	105,655
Prepaid-unpaid change...	174	775	-35
Annual depreciation.....	21,680	18,791	21,545
Net farm income.....\$	84,861	\$ 64,208	\$ 83,314
(Operator's share) ^a	(44,927)	(28,683)	(46,802)
Unpaid labor charge.....	26,661	25,825	24,453
Returns to capital and management.....	58,200	38,383	58,861
Interest charge on capital.....	49,560	56,898	55,337
Management returns.....\$	8,640	\$ -18,515	\$ 3,524
Total cash income ^b	257,207	253,834	257,473
Total cash expenditures ^b	191,863	177,451	180,895
Cash balance.....\$	65,344	\$ 76,383	\$ 76,578
Capital purchases.....	26,432	21,951	23,215
FARM INVESTMENT			
Livestock inventory.....\$	111,234	\$ 119,491	\$ 108,085
Grain inventory.....	66,888	74,253	66,229
Remaining capital cost in:			
Machinery and auto....	45,006	40,523	37,303
Buildings and fence....	49,102	50,108	54,603
Soil fertility.....	79	895	400
Value of land (current basis).....	673,092	642,402	611,540
Total farm investment....\$	945,401	\$ 927,672	\$ 878,160
Rate earned on investment, percent....	6.16	4.14	6.70

^a Interest expense deducted from operator's share only.
^b Includes sales or purchases of capital items.

and soybean yields resulted in increased cash operating income and a \$17,828 increase in inventories. These increases resulted in the value of farm production to increase \$28,293, or 23 percent in 1992 compared to 1991. Corn yields were 47 bushels per acre higher and soybean yields were 4 bushels per acre higher in 1992 compared to 1991. Farm operating expenses increased slightly while depreciation expenses dropped \$194. The cash balance of \$55,323 was \$8,337 above 1991 and the highest since 1989.

Capital purchases were \$11,007 in 1992, \$1,087 less than 1991 and \$2,190 below the 5-year average for 1988 through 1992. Capital purchases were the lowest since 1987. Capital purchases in 1992 equaled \$19 per tillable acre compared to \$43 per tillable acre in 1981.

Management returns for these farms of \$19,161 was the highest of any year during the last 10 years.

Table 8. Averages for Selected Total Farm Items on 340- to 799-Acre Southern Illinois Grain, Hog, and Dairy Farms

	Grain farms			Hog farms			Dairy farms		
	1992	1991	1988-1992 average	1992	1991	1988-1992 average	1992	1991	1988-1992 average
Number of farms	231	224	244	59	83	81	28	39	39
Total acres	585	591	583	567	559	557	499	525	511
Soil-productivity rating	59	60	60	59	58	59	60	59	60
Cash operating income	\$141,545	\$132,623	\$140,713	\$274,925	\$247,854	\$264,471	\$319,735	\$306,596	\$306,134
Less purchased feed and livestock ..	8,795	9,088	10,587	92,458	74,472	84,384	74,120	73,217	68,174
Net cash operating income	\$132,750	\$123,535	\$130,126	\$182,467	\$173,382	\$180,087	\$245,615	\$233,379	\$237,960
Accounts receivable change	1,517	-85	-8	747	-161	-73	398	-125	136
Inventory change	17,828	482	5,686	17,624	-14,759	4,073	22,042	3,228	10,789
Farm products used ..	803	673	893	1,044	845	974	2,694	1,957	2,507
Value of farm production	\$152,898	\$124,605	\$136,697	\$201,882	\$159,307	\$185,061	\$270,749	\$238,439	\$251,392
Total cash operating expenses	68,927	66,319	65,894	98,365	88,382	91,265	125,612	123,924	116,385
Prepaid-unpaid change	167	545	-86	1,271	-142	57	-3,798	1,836	-956
Annual depreciation ..	9,929	10,123	11,068	17,388	15,875	19,236	24,432	22,688	24,542
Net farm income	\$ 73,875	\$ 47,618	\$ 59,821	\$ 84,858	\$ 55,192	\$ 74,503	\$124,503	\$ 89,991	\$111,421
(Operator's share) ^a ...	(38,531)	(14,246)	(25,550)	(42,903)	(21,770)	(37,771)	(89,481)	(55,246)	(77,281)
Unpaid labor charge ..	18,325	17,418	16,796	19,640	19,816	18,664	26,384	26,465	24,564
Returns to capital and management ...	55,550	30,200	43,025	65,218	35,376	55,839	98,119	63,526	86,857
Interest charge on capital	36,389	39,608	38,841	42,938	44,267	46,661	48,129	57,693	53,888
Management returns	\$ 19,161	\$ -9,408	\$ 4,184	\$ 22,280	\$ -8,891	\$ 9,178	\$ 49,990	\$ 5,833	\$ 32,969
Total cash income ^b ...	143,349	133,939	142,026	275,333	248,187	265,733	321,354	306,930	306,773
Total cash expenditures ^b	88,026	86,953	88,926	205,279	180,481	195,398	229,041	216,025	211,044
Cash balance	\$ 55,323	\$ 46,986	\$ 53,100	\$ 70,054	\$ 67,706	\$ 70,335	\$ 92,313	\$ 90,905	\$ 95,729
Capital purchases	11,007	12,094	13,197	15,173	18,100	20,323	31,061	20,094	28,119
FARM INVESTMENT									
Livestock inventory ...	\$ 13,640	\$ 11,457	\$ 13,290	\$ 78,702	\$ 75,412	\$ 77,375	\$154,146	\$157,724	\$135,309
Grain inventory	73,739	66,843	66,770	73,844	63,245	67,786	68,911	66,966	66,007
Remaining capital cost in:									
Machinery and auto	25,449	26,152	22,525	30,664	29,721	28,584	59,299	61,839	50,505
Buildings and fence	8,438	7,446	8,896	30,734	23,269	31,510	28,489	33,864	30,894
Soil fertility	55	57	50	62	61	59	0	0	0
Value of land (current basis)	662,908	650,945	622,700	638,043	566,733	540,853	568,599	572,338	545,123
Total farm investment	\$784,229	\$762,900	\$734,231	\$852,049	\$758,441	\$746,167	\$879,444	\$892,731	\$827,838
Rate earned on investment, percent	7.08	3.96	5.86	7.65	4.66	7.48	11.16	7.12	10.49

^a Interest expense deducted from operator's share only.

^b Includes sales or purchases of capital items.

The second highest was \$11,439 in 1989. The 5-year average from 1988 through 1992 for management returns was \$4,184. The rate earned on investment increased in 1992 to 7.08 percent; in 1991, this rate was 3.96 percent. This was the lowest rate earned on investment for any type of farm in southern Illinois. The average rate earned on investment for the period from 1988 through 1992 was 5.86 percent and below the average rates for any other types of farms in southern Illinois.

Hog farms. The net farm income for southern Illinois hog farms having 340 to 799 acres averaged

\$84,858 in 1992, with the landlord's and operator's shares combined (Table 8). This income was \$29,666 higher than net farm income in 1991 and \$10,355 higher than the average net farm income of \$74,503 earned from 1988 through 1992. Stable hog prices and higher corn and soybean yields were the main factors in the increase in earnings. The value of farm production was up \$42,575, or 27 percent, in 1992 compared to 1991.

Management returns for 1992 were \$22,280, compared to a *negative* \$8,891 in 1991 and \$9,178 for the 5-year period from 1988 through 1992.

Management returns were at their third highest for any year during the last 10 years. Capital purchases were \$15,173 in 1992, \$2,927 lower than 1991 and \$5,150 lower than the 1988 through 1992 average. Cash operating expenses increased \$9,983, or 11 percent; depreciation increased \$1,513 but was still \$1,848 below the average for 1988 through 1992.

As with central and northern Illinois hog farms, the rate earned on investment by southern Illinois hog farms increased significantly. In 1992, the rate increased to 7.65 percent from 4.66 percent in 1991. The average rate earned on investment for the period from 1988 through 1992 was 7.48 percent. The rate earned on investment in this 5-year period for this type of farm was the second highest of any type of participating farm in Illinois. The 1992 rate earned on investment was the second highest of any type of farm.

Dairy farms. The net farm income in 1992 for southern Illinois dairy farms having 340 to 799 acres averaged \$124,503, with the operator's and landlord's shares combined (Table 8). This figure is \$34,512 above the net farm income earned in 1991 and \$13,082 above the average for the period from 1988 through 1992. This net farm income was the highest earned by any type of participating farm of this size in Illinois in 1992. Higher milk prices and higher grain yields caused the value of farm production to increase by \$32,310 in 1992 compared to 1991. The 1992 value of farm production was the second highest for any year in the last decade. Net cash operating income increased by \$12,236 in 1992 compared to 1991, while the value of grain and livestock inventories increased by \$22,042. Cash operating expenses increased \$1,688.

Capital purchases of \$31,061 were \$10,967 above 1991 capital purchases and \$2,942 above the average capital purchases for 1988 through 1992.

Management returns for this type of farm were \$49,990 in 1992; these returns were \$5,833 in 1991. The 5-year average from 1988 through 1992 was \$32,969. These types of farms had the highest management returns for any types of farms in 1992. The rate earned on investment of 11.16 percent was the highest in the state for this size of participating farm. The average rate earned on investment in 1991 was 7.12 percent, and the 5-year average from 1988 through 1992 was 10.49 percent. The average rate earned on investment by these southern Illinois dairy farms from 1988 through 1992 was the highest of any type of participating farm with 340 to 799 acres in Illinois. In 1992, the average value of bare land on these farms was \$1,241 per tillable acre. On northern Illinois dairy farms, this value was \$1,717 per tillable acre.

The average number of milk cows per farm in 1992 was 100, compared with 96 in 1991, and 93, the past 5-year average. The average of 100 cows in 1992 was 26 more than the average on farms of

similar size and type in northern Illinois. In 1992, southern Illinois farms increased the size of their herds by 4 cows over the 1991 herd size, while northern Illinois farms also increased theirs by 4.

LIVESTOCK ENTERPRISES

The return per \$100 of feed fed from various livestock enterprises and the price of corn during each of the past 15 years are given in Table 9. Fifteen-year and 5-year averages are also shown. The difference between the average return figure and a feed cost of \$100 represents the margin available for labor, depreciation on equipment, cash expenses other than feed, interest on investment, and profit.

The margin needed to cover nonfeed costs varies with the kind of livestock and depends on the proportion of total production costs represented by feed. The 15-year averages from 1977 through 1991 represent the approximate level of return at which farmers have been willing to maintain livestock production. The average may not represent a break-even return on all farms because some farmers may discount market prices for some of the resources used in producing livestock. If farmers already have facilities for livestock, they only need to cover direct operating costs to continue production. However, when livestock production is a new or a long-term enterprise, farmers hope to cover all fixed and variable costs. Otherwise they should not undertake the enterprise.

As individual farmers try to increase profits, they tend to curtail livestock production when the return per \$100 of feed fed is below the 15-year average. This tendency on the part of producers causes supplies of livestock products to fluctuate.

In farrow-to-finish hog production, returns tend to follow a noticeably cyclical pattern (Table 9). They tend to exceed the 5-year average for one or 2 years and then drop below this average for one or 2 years. Returns per \$100 feed fed of \$166 in 1992 were slightly below the last 5-year average of \$172.

The returns from feeder cattle vary greatly from year to year. The long-run averages shown in Table 10 indicate that the cattle-feeding business has not been paying average market rates for all resources used by the enterprise. The return of \$146 per \$100 feed fed for the most recent 5-year period (1988-92) was slightly below the previous 5-year period but above the 15-year average of \$144 (Table 9). Above-average skills are needed in buying, selling, and feeding to meet the competition from other uses for time and money on farms with feeder cattle. Identifying cyclical income movements over a 15-year period in the beef-cattle industry is difficult because this industry is more complex and adjusts more slowly than other livestock enterprises.

The returns above feed costs for dairy enterprises of \$1,398 per cow in 1992 were \$121 above the 5-

Table 9. Returns per \$100 of Feed Fed to Different Classes of Livestock

Year	Farrow-to-finish hogs	Feeder-pig finishing	Feeder-pig production	Feeder cattle bought	Dairy cow herds	Beef cow herds	Native sheep raised	Yearly price of corn
dollars								
1978	208	151	255	170	217	199	159	2.13
1979	136	106	194	149	220	183	148	2.44
1980	138	122	153	111	207	144	131	2.80
1981	138	115	174	107	200	100	84	2.98
1982	213	165	237	147	205	115	83	2.43
1983	141	118	163	134	178	115	78	3.06
1984	155	140	170	141	188	105	102	3.12
1985	166	129	170	121	202	101	130	2.54
1986	215	178	254	149	210	125	156	2.01
1987	217	168	232	196	237	168	141	1.61
1988	152	127	158	150	198	150	115	2.32
1989	162	141	167	145	209	144	96	2.48
1990	206	165	247	162	220	165	98	2.44
1991	168	128	199	109	188	129	64	2.41
1992	166	140	167	164	211	142	116	2.35
Averages								
1978-1992	172	140	196	144	206	139	113	2.47
1978-1982	167	132	203	137	210	148	121	2.56
1983-1987	179	147	198	148	203	123	121	2.47
1988-1992	171	140	188	146	205	146	98	2.40

Table 10. Variation in Returns to Livestock Enterprise Units, 1988 Through 1992

	Farrow-to-finish hogs (per cwt)	Feeder-pig finishing (per cwt)	Feeder cattle (per cwt)	Dairy cattle (per cow)	Beef herd calves sold (per cow) ^a
Returns above cost of feed and purchased animals					
1988	\$14.01	\$ 6.63	\$20.56	\$1,116	\$157
1989	16.71	10.20	18.66	1,334	144
1990	27.15	15.79	25.74	1,471	203
1991	17.67	6.80	3.97	1,064	88
1992	16.45	9.39	25.40	1,398	125
Five-year average					
average	\$18.40	\$ 9.76	\$18.87	\$1,277	\$143
Nonfeed costs, 1988 through 1992					
Direct cash	\$ 6.60 ^b	\$ 4.20 ^c	\$13.10 ^c	\$ 431 ^c	\$ 30 ^c
Other costs	10.21 ^b	6.50 ^c	11.05 ^c	632 ^c	175 ^c
Total	\$16.81	\$10.70	\$24.15	\$1,063	\$205
Nonfeed cost for future production					
Direct cash	\$ 7.00	\$ 4.35 ^d	\$13.25 ^d	\$ 440	\$ 30
Other costs	16.00	7.00	15.00	800	200
Total	\$23.00	\$11.35	\$28.25	\$1,240	\$230

^a The feed cost for beef herds includes up to \$60 of hay equivalent from salvage roughage.

^b Estimates of annual nonfeed costs are based on enterprise cost studies of operative units from 1988 to 1992.

^c Includes veterinary costs, utilities, fuel, equipment repair costs, and depreciation, from Table 6 in the *Farm Management Manuals* from 1988 to 1992.

^d Includes interest on purchase cost: one-third year for feeder-pig finishing, and one-half year for feeder cattle.

year average of \$1,277 (Table 10). These returns indicate that the average dairy enterprise has covered the total estimated cost of production of \$1,063 per cow from 1988 through 1992.

For the beef-herd enterprise, the average returns above the cost of feed for the period from 1988 through 1992 provided a margin over cash costs, but fell short of the return needed to cover all nonfeed costs (Table 10). The implication is that the beef enterprise competes most favorably on farms where the resources of labor, capital, and management are plentiful and have few alternate uses. In the beef-

cow enterprise, returns above the cost of feed per cow averaged \$143 during the last 5 years. The 1992 returns of \$125 were \$80 below the total costs, estimated at \$205 per cow. The 1992 returns to the beef-cow enterprise were the second lowest during the past 5-year period.

Raising livestock has become more competitive. Average profit margins are narrow. Fewer farmers are willing to stay in business because returns in some enterprises barely cover direct operating costs. Plans for expansion that require large investments for new facilities should be based on an estimated return that is high enough to cover all costs. Fluctuations in livestock returns can involve a risk in low-return years. The estimated nonfeed cost for future livestock production is also shown in Table 10.

Hog enterprises

The information on farrow-to-finish enterprises in Table 11 is based on a sample of 619 enterprises farrowing 10 litters or more per year. Farms were omitted from the sample if the number of hogs purchased exceeded 10 percent of the pigs weaned. This procedure eliminated from the sample those farms with combined farrowing and feeder-pig operations. (Information on feeder-pig finishing enterprises is given in Table 13.) The average size of farrow-to-finish enterprises on all recordkeeping farms was 227 litters in 1992. The 1992 records summarized here for the "all farms" group show that returns of \$16.45 above feed costs per 100 pounds of pork produced were \$1.22 below the 1991 return of \$17.67.

The 5-year average for returns above feed costs per 100 pounds produced was \$18.40 (Table 10). Even the 5-year average can vary significantly because of the wide fluctuations in returns from year to year. Detailed cost records show that an average farmer with existing facilities needed a return above feed costs of \$16.81 per 100 pounds to pay for all nonfeed costs during the past 5 years. The return above all costs during this 5-year period of \$1.59 (\$18.40 minus \$16.81) may still not be large enough to make a majority of farmers or lenders feel comfortable about expanding production with borrowed capital. Risk must be carefully assessed.

The farrow-to-finish enterprise records for 1992 reported in Table 11 were also sorted by the number of litters produced. One group farrowing 350 or more litters averaged 606 litters. Compared with the average feed cost for all farrow-to-finish enterprises, the feed cost per 100 pounds of pork produced was 89 cents lower for the 606-litter group. The large producers paid \$13.40 less per ton for commercial feed and had slightly better feed conversion. The prices received for hogs sold by large producers or the net at the farm was 57 cents higher than the net received by all producers.

Table 11. Hog Enterprises, 1992 Averages per Farm

	Farrow-to-finish enterprises		
	All farms	350 or more litters per farm	Feeder-pig production
Number of farms.....	619	110	13
Pork produced, pound	442,841	1,165,192	87,521
Pork produced per litter, pound.....	1,950	1,922	658
Total returns.....	\$182,228	\$484,699	\$48,002
Value of feed fed.....	\$109,327	\$277,300	\$28,624
Returns per \$100 of feed fed.....	\$ 166	\$ 174	\$ 167
Number of litters farrowed.....	227	606	133
Pigs farrowed per litter.....	9.70	9.72	10.02
Pigs weaned per litter...	8.18	8.34	8.83
Litters farrowed per female year.....	1.90	2.05	2.08
Pigs weaned per female year.....	15.68	17.19	18.33
Number of pigs weaned.....	1,857	5,054	1,174
Death loss, percent of pounds produced....	1.9	2.0	1.7
Weight per market hog sold, pound.....	238	235	54
	per 100 pounds produced		
Price received—market.....	\$ 42.78	\$ 43.35	\$ 67.51
Total return.....	\$ 41.14	\$ 41.59	\$ 54.84
Feed cost.....	\$ 24.69	\$ 23.80	\$ 32.71
Return above feed...	\$ 16.45	\$ 17.79	\$ 22.13
Farm grains, pound..	284	273	273
Commercial feed, pound.....	84	85	111
Total concentrates, pound.....	368	358	384
Cost per 100 pounds of commercial feed...	\$ 15.03	\$ 14.36	\$ 18.86
Cost per 100 pounds of concentrates.....	\$ 6.68	\$ 6.62	\$ 8.47

A summary of the feeder-pig production enterprises is also reported in Table 11. In 1992, the average enterprise in this group produced 133 litters with a return of \$167 per \$100 of feed fed. On an average, 8.8 pigs per litter were weaned and sold at 54 pounds per head. The 1992 average price received per 100 pounds of feeder pigs sold was \$67.51 or \$36.46 per head. The average feed cost per 100 pounds of pork produced (pigs and breeding stock) was \$32.71 for 384 pounds of concentrate.

A substantial profit margin is required to compensate for the risk and detailed management involved in hog production compared with other resource uses. Large-scale hog production in modern confinement facilities requires high capital investments. The future recovery of this capital investment is uncertain. The salvage value of confinement hog facilities is low. In addition, acquiring the managerial skills for the large-scale production of hogs in confinement may discourage any rapid expansion of large

hog-producing units. However, the level of profits in recent years has resulted in an increase in production. Pork production for 1993 is projected to be at record levels. Although improvements in production efficiency and some increase in consumer demand have helped offset lower prices due to increased production, future returns will depend to a great extent on whether producers continue to increase production or liquidate some of the breeding herd.

The data on hog enterprises in Table 12 show a detailed breakdown of costs and returns from a group of specialized commercial hog farms for 1990, 1991, and 1992. The value of the feed fed to hogs was more than 75 percent of the crop returns produced on these farms. This intensity of livestock feeding indicates a commitment of major resources to the hog enterprise. The producers in this group probably exercise a higher level of management and use more confinement production facilities than the average hog producer in Illinois.

The hog enterprise records summarized in Table 12 were sorted by the number of litters produced. The group farrowing fewer than 250 litters averaged 149 litters from 1990 to 1992; the group farrowing 250 or more litters averaged 479 litters during the same period.

The cost data reported in Table 12 have been divided into two categories: cash costs and other costs. This classification of production costs is important when short-term management decisions are being made concerning the volume of production, particularly during periods of low prices.

As reported in Table 12, cash costs of production in 1992 ranged from \$31.22 to \$31.73 per 100 pounds of pork produced, depending on the grouping size. Feed is included as a cash cost although for most producers a major share of the grain is raised on the farm. The readily available alternative cash market for grain makes the raised feed the same as cash.

The other category of costs includes depreciation, labor, and an interest charge on all capital. Part of the labor and interest charge is a cash cost on most farms. The proportion of labor that is hired depends largely on the size of the farm. A one-person farm does not hire much labor, whereas a major share of the labor will be hired on a four-person farm.

Most categories of nonfeed costs decreased somewhat for both groups of enterprises in 1992. Total nonfeed costs decreased \$1.46 per 100 pounds of pork produced (9 percent) for the small enterprises and \$1.17 (7 percent) for the large enterprises from 1991 to 1992. For both groups, both total operating expenses and total other costs decreased. With slightly lower feed costs, the total cost of production decreased from 1991 to 1992 by \$2.14 per 100 pounds of pork produced for the group of small enterprises as compared to a decrease of \$1.80 for the large enterprise group.

Table 12. Average Costs and Returns for Farrow-to-Finish Hog Enterprises by Size of Enterprise, 1990 Through 1992

	Under 250 litters			250 litters or more		
	1992	1991	1990	1992	1991	1990
Number of farms	41	52	48	92	101	89
Tillable acres	231	255	231	504	564	607
Number of litters	155	155	138	466	495	475
----- per 100 pounds of pork produced -----						
Total returns.....	\$ 40.36	\$ 42.88	\$ 53.55	\$ 42.01	\$ 44.46	\$ 53.81
Cash costs						
Feed	\$ 25.93	\$ 26.61	\$ 28.30	\$ 24.39	\$ 25.02	\$ 25.46
Operating expenses:						
Maintenance and power ^a	3.03	3.80	4.16	3.18	3.96	4.24
Livestock expenses.....	1.63	1.99	2.22	2.38	2.24	2.16
Insurance, taxes, and overhead.....	1.14	1.05	.97	1.27	1.02	1.02
Total operating expenses.....	\$ 5.80	\$ 6.84	\$ 7.35	\$ 6.83	\$ 7.22	\$ 7.42
Total cash costs	\$ 31.73	\$ 33.45	\$ 35.65	\$ 31.22	\$ 32.24	\$ 32.88
Other costs						
Depreciation ^b	\$ 2.23	\$ 1.84	\$ 2.52	\$ 2.74	\$ 2.34	\$ 2.68
Labor	4.18	4.33	4.37	3.84	4.28	3.70
Interest charge on all capital.....	2.54	3.20	3.64	2.51	3.25	3.55
Total other costs.....	\$ 8.95	\$ 9.37	\$ 10.53	\$ 9.09	\$ 9.87	\$ 9.93
Total nonfeed costs.....	\$ 14.75	\$ 16.21	\$ 17.88	\$ 15.92	\$ 17.09	\$ 17.35
Total all costs.....	\$ 40.68	\$ 42.82	\$ 46.18	\$ 40.31	\$ 42.11	\$ 42.81
Return above all costs.....	\$ -32	\$.06	\$ 7.37	\$ 1.70	\$ 2.35	\$ 11.00

^a Includes utilities, machinery, equipment and building repairs, machine hire, and fuel.
^b Includes machinery, equipment, and building depreciation.

Table 13. Feeder Cattle and Feeder-Pig Finishing Enterprises, 1992 Averages per Farm

	Feeder cattle	Feeder-pig finishing
Number of farms	214	168
Total pounds produced	168,834	167,579
Total returns.....	\$108,919	\$ 54,823
Value of feed fed	\$ 66,026	\$ 39,080
Returns per \$100 of feed fed.....	\$ 164	\$ 140
Death loss, percent of pounds produced.....	1.8	2.1
Average weight purchased.....	658	50
Price paid per 100 pounds	\$ 81.64	\$ 74.37
Price received per 100 pounds	\$ 73.41	\$ 42.13
Average weight sold.....	1,153	245
per 100 pounds produced		
Total returns.....	\$ 64.51	\$ 32.71
Feed cost	\$ 39.11	\$ 23.32
Return above feed.....	\$ 25.40	\$ 9.39
Farm grains, pound.....	581	277
Commercial feeds, pound.....	42	81
Total concentrates, pound.....	623	358
Hay, pound	65	... ^a
Corn silage, pound.....	479	... ^a
Other silage, pound.....	110	... ^a
Hay equivalent, pound	273	... ^a

^a Data not available.

The most significant cost difference between the two groups of farms was the feed cost. The average feed cost for 1990, 1991, and 1992 per 100 pounds of pork produced for the large enterprises was \$1.99 lower than it was for the small enterprises. This difference in feed cost was an average of about \$18,000 per farm with the larger enterprises. Differences in the amount of feed used per 100 pounds of

pork produced and the price paid for commercial feeds caused this difference in feed costs.

From 1990 through 1992, the returns above all costs averaged \$2.37 per 100 pounds of pork produced for the small enterprises and \$5.02 for the large enterprises—a difference of \$2.65. Management practices, such as the choice of building systems, method of transporting hogs to market, type of market used, and on- versus off-farm systems for feed-processing affect the individual cost items reported in Table 12. But the return above all costs should accurately reflect the relative efficiency of the two groups of hog enterprises.

Feeder cattle and feeder-pig finishing enterprises

Data for 1992 on the feeder-cattle and feeder-pig finishing enterprises are presented in Tables 13 and 14. These enterprise summaries include weights and values on partly finished animals purchased in previous years and on animals purchased during the current year.

The average amount of pork produced per farm from feeder-pig enterprises was 167,579 pounds in 1992 (Table 13). At 175 pounds of gain per head, this figure amounted to 958 head fed per farm in 1992, up from the 927 head fed per farm in 1991.

The return above the cost of feed and purchased animals from 1988 through 1992 averaged \$9.76 per 100 pounds of gain. This return was 94 cents below the \$10.70 of all nonfeed costs for the past 5 years. It is also below the estimated \$11.35 required to cover all costs for future production (Table 10).

Table 14. Average Costs and Returns for Beef-Feeding Enterprises, 1989 Through 1992

	1992	1991	1990	1989	1989-1992 average
Number of farms.....	28	34	36	40	34
Tillable acres	625	571	610	583	597
Hundredweight beef produced.....	3,694	3,069	3,585	3,446	3,448
Number head @ 475-pound gain equivalents.....	778	646	755	725	726
Average weight purchased, pound	673	665	654	658	663
Average weight sold, pound.....	1,163	1,180	1,133	1,140	1,154
Price received per 100 pounds sold.....	\$ 74.12	\$ 72.66	\$ 76.77	\$ 72.32	\$ 73.97
Price paid per 100 pounds purchased.....	\$ 82.79	\$ 88.11	\$ 86.65	\$ 83.35	\$ 85.23
----- per 100 pounds of beef produced -----					
Cash costs					
Feed ^a	\$ 38.44	\$ 41.17	\$ 40.09	\$ 39.67	\$ 39.84
Operating expenses:					
Maintenance and power ^b	3.25	3.81	3.71	3.44	3.55
Livestock expense.....	2.38	2.32	2.25	2.60	2.39
Insurance, taxes, and overhead.....	1.15	1.30	1.18	1.32	1.24
Interest on cattle ^c	6.09	7.46	8.47	9.06	7.77
Total operating expense.....	\$ 12.87	\$ 14.89	\$ 15.61	\$ 16.42	\$ 14.95
Total cash costs.....	\$ 51.31	\$ 56.06	\$ 55.70	\$ 56.09	\$ 54.79
Other costs					
Depreciation ^d	\$ 3.18	\$ 3.76	\$ 4.05	\$ 4.07	\$ 3.77
Labor.....	2.66	2.61	2.20	2.31	2.44
Interest on other capital.....	2.37	2.44	2.65	2.54	2.50
Total other costs.....	\$ 8.21	\$ 8.81	\$ 8.90	\$ 8.92	\$ 8.72
Total all costs.....	\$ 59.52	\$ 64.87	\$ 64.60	\$ 65.01	\$ 63.51
Total returns ^e	\$ 63.50	\$ 45.65	\$ 67.23	\$ 58.60	\$ 58.75
Return above all costs.....	\$ 3.98	\$ -19.22	\$ 2.63	\$ -6.41	\$ -4.76

^a All grain fed was priced at the average market price for the year. Market values were used for roughage fed while protein and minerals were charged at cost. All the feed fed is assumed to have been marketable.

^b Includes utilities, machinery, equipment and building repairs, machine hire, and fuel.

^c Interest is a charge on the average value of beginning and end-of-year inventories on hand. The rate was 11 percent for 1989, 10 percent for 1990, 9 percent for 1991, and 7 percent for 1992.

^d Includes machinery, equipment, and building depreciation.

^e Sales less cost of purchased animals, plus or minus inventory value change. No credit has been calculated for reduced fertility cost when manure is applied to crops.

Given that a 475-pound unit of gain equals one head of feeder cattle, the average of 168,834 pounds of beef produced per farm in 1992 (Table 13) equals 355 head of feeder cattle per farm. That figure is an increase of 23 from the average of 332 head fed per farm in 1991. The return per \$100 of feed for feeder-cattle enterprises was \$164 in 1992 in comparison with a 5-year average of \$146 and a 15-year average of \$144 (Table 9). This was the highest return per \$100 feed fed since 1987, when it was \$196.

The price paid for feeders was \$4.30 per 100 pounds lower in 1992 than it was in 1991; the price received for cattle sold in 1992 was 86 cents higher per 100 pounds than the price received in 1991. The average weight of purchased animals was 658 pounds; the average weight of animals sold was 1,153 pounds. Feed cost was \$39.11 per 100 pounds produced in 1992; it was \$41.05 in 1991.

Each 100 pounds of beef produced required 623 pounds of concentrates and 65 pounds of hay. The amount of corn silage used in 1992 averaged 479 pounds; other silage averaged 110 pounds, making a total of 589 pounds. Silage utilization by the feeder-cattle enterprise has decreased the last 5 years since the 10-year average for the period from 1977 through 1986 reached 906 pounds per 100 pounds of beef produced. The use of 589 pounds per 100 pounds

of beef produced in 1992 was the second smallest amount fed since 1963. The high initial investment required for many silage feeding operations and a slowdown in capital purchases may denote more reliance on higher concentrate and dry roughage facilities.

These data do not show the wide variation in profits among cattle-feeding programs. The data in Tables 9, 10, and 13 on Illinois feeder-cattle enterprises reflect the composite results of all qualities and ages of cattle fed. The data are heavily weighted, with good-to-choice calves and yearlings as the predominant cattle-feeding system. Most farmers now feed more than one drove of cattle each year to better utilize their fixed investments in mechanized feedlots.

The return above the cost of feed and purchased animals averaged \$18.87 per 100 pounds of beef produced from 1988 through 1992 (Table 10). During this period, returns ranged from \$3.97 in 1991, to \$25.74 in 1990. The returns above feed costs have remained below the estimated costs required to pay for all nonfeed costs for the average cattle feeder in 3 of the last 5 years. The 1992 returns above feed cost of \$25.40 were the third highest since 1975. The 1991 returns were the lowest since 1981.

The data in Table 14 on feeder-cattle enterprises show a detailed breakdown for the period from 1989 through 1992 on cost and returns to produce beef

on beef-feeding farms. The farms included had no other livestock. All costs were accounted for either in crops or in the beef-feeding enterprise. The figure for feed costs is based on the assumption that all the grain and roughage fed was produced on the farm and was marketable.

The data show that these farms were finishing an average of 726 feeders each year from 1989 through 1992. The 4-year average total cash cost including feed and interest charged on cattle was \$54.79 per 100 pounds of beef produced. The average total return of \$58.75 for the same period exceeded total cash costs by \$3.96 per 100 pounds produced, or about \$19 per feeder.

Some feeders may be able to discount some of these cash costs for roughage fed and for interest on cattle if they had no market for the roughage or were able to use their own money invested in cattle without paying interest. Other costs of \$8.72 per 100 pounds of beef produced or \$41 per feeder (\$8.72 multiplied by 4.75 hundredweight of gain per feeder) include depreciation, labor, and interest. Adding the other costs to cash costs results in total costs of \$63.51 per hundredweight over the 4-year period.

A number of cattle feeders in Illinois apparently will feed cattle if their return covers feed and cash costs but is short of paying market rates for some nonmarketable roughage, and fixed and overhead costs. But this number is expected to decline.

Farmer's values, goals, and attitudes have been important in maintaining production; but the dictates of the market, technological changes, and shifts in the basic factors of supply and demand continue to cause changes. The return reflected in these averages for the feeder-cattle enterprise suggests that to be profitable, farmers must produce the kind of beef the consumer wants at the lowest possible cost. Even though farms may have nonmarketable feeds, unemployed labor, or fixed capital investments in facilities, these data indicate returns are not consistently high enough to justify the building of new facilities.

Dairy enterprises

The minimum size for a herd included in this analysis was 10 milk cows. The average herd size on recordkeeping farms increased steadily at an average of 1.8 cows per year from 42 in 1970 to 63 in 1982. The herd size has remained steady, between 63 and 69 cows, since 1982.

The return per \$100 of feed fed to dairy cattle in 1992 was \$211. The average for the period from 1988 through 1992 was \$205 (Table 9). In 1992, milk prices per hundredweight increased 12 percent from 1991 but were 5 percent below prices received in 1990. Milk prices increased an annual average rate of 8 percent for 1989 and 1990. From 1991 to 1992, beef prices for all weights sold increased \$1.09 per

hundred pounds, while feed costs decreased 2 cents per unit of milk or beef produced.

Dairy farmers have reduced the amount of pasture and dry hay and have increased the amounts of grain and silage fed over the past two decades. Pasture days per animal unit dropped from 145 in 1960, to 50 in 1970, to 10 in 1992. This shift indicates that significant pasture days are a thing of the past on nearly all dairy farms in this sample.

The dairy herds in Table 15 were subdivided into two groups according to their efficiency as measured by returns above the cost of feed per cow. In comparison with the low-efficiency group, the high-efficiency group had more cows in the herd, and 70 percent higher returns above feed per cow. Returns above feed per cow for the high-efficiency group were

Table 15. Dairy Cattle Enterprises, 1992 Averages per Farm

	All farms	Efficiency	
		High ^a	Low ^b
Number of farms	178	57	62
Number of cows	69.5	69.7	64.8
Milk cows dry, percent	12.9	12.6	12.8
Animal units in herd	127	133	119
Total returns	\$184,611	\$212,984	\$147,168
Value of feed fed	\$ 87,431	\$ 91,058	\$ 80,587
Returns per \$100 of feed fed	\$ 211	\$ 233	\$ 182
Returns above feed per cow	\$ 1,398	\$ 1,749	\$ 1,027
Total milk produced, 100 pounds	11,902	13,058	9,998
Pounds of milk per cow	17,125	18,734	15,429
Pounds of butterfat per cow	637	702	570
Total beef produced, pound	47,686	57,309	37,494
Pounds of beef per cow	686	822	578
Death loss, percent of pounds produced	9.0	6.7	12.7
Price received for:			
100 pounds of milk	\$ 13.07	\$ 13.29	\$ 12.89
100 pounds of beef	\$ 60.54	\$ 63.57	\$ 56.59
Per unit of milk and beef: ^c			
Feed cost	\$ 52.44	\$ 48.46	\$ 58.61
Grain, pound	306	297	327
Protein and minerals, pound	110	102	125
Total concentrates, pound	416	399	452
Hay and dry roughage, pound	250	217	296
Corn silage, pound	475	436	547
Other silage, pound	439	376	504
Pasture days ^d
Pasture days per animal unit	10	11	12
Hay equivalent per cow, ton	7.4	7.4	7.7
Concentrates per cow, pound	9,978	10,755	9,586

^a High one-third return above feed per cow exceeds 1,200.

^b Low one-third return above feed per cow is below 930.

^c 1,000 pounds of milk or 100 pounds of beef.

^d No significant pasture use.

Table 16. Average Milk Production Costs and Returns by Size of Herd, 1990 Through 1992

	40 to 79 cows in herd			80 or more cows in herd		
	1992	1991	1990	1992	1991	1990
Number of farms.....	81	80	102	52	59	57
Tillable acres.....	269	259	295	426	522	468
Number of cows.....	58.9	57.6	57.3	106.2	107.9	108.4
Milk per cow, pound.....	16,883	16,789	16,625	17,807	17,056	17,012
	----- per 100 pounds of milk produced -----					
Price received.....	\$ 13.25	\$ 11.82	\$ 13.87	\$ 13.07	\$ 11.90	\$ 14.03
Cash costs						
Feed.....	\$ 6.35	\$ 6.23	\$ 6.38	\$ 6.08	\$ 6.02	\$ 6.14
Operating expenses:						
Maintenance and power ^a	1.20	1.17	1.42	1.28	1.35	1.51
Livestock expense.....	1.18	1.13	1.11	1.12	1.13	1.11
Insurance, taxes, and overhead.....	.21	.26	.28	.21	.26	.23
Total operating expenses.....	\$ 2.59	\$ 2.56	\$ 2.81	\$ 2.61	\$ 2.74	\$ 2.85
Total cash costs.....	\$ 8.94	\$ 8.79	\$ 9.19	\$ 8.69	\$ 8.76	\$ 8.99
Other costs						
Depreciation ^b	\$.73	\$.61	\$.82	\$.63	\$.67	\$.76
Labor.....	1.66	1.59	1.81	1.36	1.49	1.50
Interest charge on all capital.....	1.22	1.34	1.56	.97	1.30	1.49
Total other costs.....	\$ 3.61	\$ 3.54	\$ 4.19	\$ 2.96	\$ 3.46	\$ 3.75
Total nonfeed costs.....	\$ 6.20	\$ 6.10	\$ 7.00	\$ 5.57	\$ 6.20	\$ 6.60
Total all costs.....	\$ 12.55	\$ 12.33	\$ 13.38	\$ 11.65	\$ 12.22	\$ 12.74
Return above all costs.....	\$.70	\$ -.51	\$.49	\$ 1.42	\$ -.32	\$ 1.29

^a Includes utilities, machinery, equipment and building repairs, machine hire, and fuel.
^b Includes machinery, equipment, and building depreciation.

\$1,749 and \$1,027 for the low-efficiency group. For the high-efficiency group, two factors were most significant: 21 percent higher milk production per cow—an average of 18,734 pounds, compared with an average of 15,429 pounds for the low-efficiency group—and a 17 percent lower feed cost per unit of milk and beef produced.

The average return above feed costs per cow for all dairy herds was \$1,398 in 1992 (Table 15). This figure compares with the 5-year average of \$1,277 per cow (Table 10). The 5-year average return above feed cost required to pay market prices for all nonfeed costs is estimated to be about \$1,063 per cow. The estimated return above feed costs currently required to attract new investments for dairy herds is about \$1,240 per cow. Although the number of dairy herds has decreased, their size and efficiency have increased, and they have continued to increase the milk supply. Normal depreciation and wear-and-tear will soon require the reinvestment of greater amounts of capital in some of these businesses.

The data in Table 16 on dairy enterprises show a detailed breakdown of milk production costs and returns for dairy farms by the number of cows in the herd in the period from 1990 through 1992. The farms included had no other livestock. All costs were accounted for either in crops or in the dairy enterprise. The total costs for the dairy enterprise were reduced by the amount of income derived from an inventory increase in the pounds of beef produced or from sales, which was valued at the average price

received for all weights of dairy animals sold from 1988 through 1992. The residual costs, amounting to 85 percent of the total enterprise costs, were then considered as the net cost of producing milk.

The differences between the herds containing 40 to 79 cows and those containing 80 or more cows for the period from 1990 through 1992 appear to be narrowing. This is probably due to the smaller, lower-efficiency herds exiting the dairy enterprise. For the 3-year period, the milk price for the larger herds averaged only 2 cents higher, while total nonfeed costs per 100 pounds of milk sold were 31 cents lower. The major cost difference was 24 cents less for labor on the large farms.

In 1992, feed costs per 100 pounds of milk produced increased slightly for both groups. The cost of feed averaged about 50 percent of total production costs in Illinois dairy enterprises. Total nonfeed costs increased 2 percent for the small dairy herds but decreased 10 percent for the large dairy herds when compared with costs in 1991. The total cost of producing 100 pounds of milk in 1992 was \$12.55 for the small herds and \$11.65 for the large herds. The average price received for milk in 1992 increased for both groups of dairy enterprises. This resulted in returns above total production costs of 70 cents and \$1.42, respectively, for both the small and large enterprise groups in 1992. The returns above all costs for the large-herd group have averaged 57 cents per 100 pounds of milk produced more than the returns for the small-herd group from 1990 through 1992.

Table 17. Beef-Cow Enterprises, 1992 Averages per Farm

	All farms	Calves sold	Calves fed out
Number of farms	254	72	62
Number of cows in herd ...	47	52	44
Animal units in herd.....	72	70	77
Total pounds produced.....	34,394	24,606	47,885
Beef per cow in herd, pound	732	473	1,088
Total returns	\$25,117	\$20,690	\$31,127
Value of feed fed	\$17,678	\$15,355	\$21,584
Returns per \$100 of feed fed.....	\$ 142	\$ 134	\$ 144
Returns above feed per cow.....	\$ 158	\$ 102	\$ 216
Death loss, pound	1,562	1,788	1,511
Percent of pounds produced	4.5	7.2	3.1
Market animals sold Weight per animal	806	608	1,051
Price received per 100 pounds	\$ 78.32	\$ 81.13	\$ 72.35
per 100 pounds produced			
Feed cost.....	\$ 51.39	\$ 62.40	\$ 45.07
Grain, pound.....	268	204	311
Protein and minerals, pound	36	34	35
Total concentrates, pound	304	238	346
Hay and dry roughage, pound	651	983	446
Corn silage, pound.....	355	317	371
Other silage, pound	134	73	221
Pasture days.....	30	47	19
Pasture days per animal unit	144	166	120
Hay equivalent per cow, tons.....	5.7	5.3	6.1

This amounts to \$10,779 more in returns per farm per year for herds in the large-size group. In general, returns to dairy farmers rebounded fairly well after the low returns experienced in 1991.

Beef-cow herds

The minimum size for a beef-cow herd included in Table 17 was 10 cows. Farms combining cow herds and purchased feeder cattle were not included. In addition to all farms, Table 17 gives an analysis of cow herds in which calves were sold at weaning time and compares them with cow herds in which calves were finished to slaughter weights. From 1956 through 1969, the average size of the herd on all farms ranged from 25 to 30 cows. From 1969 to 1973, the average grew to about 40 cows per herd and remained stable through 1989. The herd size increased to 47 cows in 1992. Most Illinois farmers who maintain a beef-cow herd do so as a supplemental enterprise to market nonsalable feeds and labor.

Table 18. Sheep Enterprises, 1992 Averages per Farm

	Native flocks
Number of farms	42
Wool and mutton produced, pound.....	6,751
Total returns	\$3,344
Value of feed fed	\$2,868
Returns per \$100 of feed fed.....	\$ 116
Percent lamb crop	147
Death loss, pound	574
Percent of pounds produced	8.5
per 100 pounds produced	
Price received	\$48.51
Feed cost	\$42.48
Concentrates, pound	280
Hay, pound	533
Corn silage, pound	0
Pasture days	14
Hay equivalent, pound.....	904

The return per \$100 of feed fed to beef-cow herds averaged \$142 in 1992. The return for the 5-year period from 1988 through 1992 averaged \$146, which is above the 15-year average of \$139 for the period from 1978 through 1992 (Table 9). Beef prices received in 1992 averaged \$78.32 per hundredweight, an increase of 94 cents over beef prices in 1991. Feed costs per 100 pounds of beef produced increased by \$2.74 to \$51.39 in 1992.

Since 1988, the return above feed cost per cow for the average farmer to feed out calves rather than to sell them at weaning has been about \$82 per cow. Additional returns are needed for the added costs of labor, buildings, and the capital required to feed out the calves. In 1992, return above feed cost for feeding calves to market weight was \$114 more per cow than for selling calves.

Sheep enterprises

Sheep production is a minor enterprise on Illinois recordkeeping farms. The minimum size of enterprise in Table 18 is 3 animal units. One animal unit of sheep is defined as 750 pounds, liveweight. The return per \$100 of feed fed in 1992 was \$116 for native flocks. The pounds of wool and mutton produced per farm have remained fairly constant for the past 10 years. The price received for sheep increased from \$42.82 per hundredweight in 1991 to \$48.51 in 1992, while feed costs per hundredweight produced decreased by \$7.90 to \$42.48. Most Illinois farmers who keep sheep do so as a supplemental enterprise in order to market nonsalable feeds and labor.

Costs, returns, financial summaries, investments, land use, and crop yields for different sizes and types of Illinois farms are reported in Tables 19 to 27a.

Table 19. 1992 Average Return, Costs, and Financial Summary by Size and Management Returns for Northern and Central Illinois Grain Farms with Soil Ratings from 86 to 100

Range in size (total acres) Management returns Number of farms	180-339	340-799	800-1199	Over 1199	Your Farm	All Farms	Low 25% 110	340-799 High 25% 110
Total acres in farm	278	572	969	1548		803	503	645
Acres of tillable land	268	551	937	1500		776	478	629
Soil rating on tillable land	92	92	92	92		92	92	93
Total months labor	11.5	13.0	16.5	25.0		15.6	13.1	12.7
Months of hired labor	0.4	1.4	4.1	10.5		3.4	2.0	1.0
Beef produced, hundredweight	1	1	3	7		2	0	1
Pork produced, hundredweight	0	0	1	1		1	0	1
Dairy cows, number	0	0	0	0		0	0	0
Dollar returns per farm								
Crop returns	89,527	192,034	333,929	543,242		275,357	150,302	236,838
Livestock returns above feed	(16)	89	266	475		186	22	51
Custom work	1,052	1,988	3,253	5,789		2,833	1,628	2,941
Other farm receipts	923	1,581	1,777	3,798		1,929	1,808	1,588
Value of farm production	91,485	195,691	339,225	553,304		280,306	153,759	241,419
Dollar costs per farm								
Crop expenses	20,343	42,014	71,167	111,424		58,662	39,822	43,171
Power and equipment	14,611	26,844	45,374	68,826		37,202	27,637	27,964
Building and fence	5,192	8,848	12,710	19,547		11,232	9,684	8,613
Labor	17,166	19,503	25,328	38,893		23,831	19,783	19,103
Livestock services and supplies	139	121	175	396		179	181	79
Taxes	5,696	10,864	18,244	29,091		15,204	9,691	12,299
Insurance and miscellaneous	3,247	5,389	8,456	13,988		7,352	5,219	5,913
Interest on nonland capital	5,311	10,196	17,761	30,124		14,867	10,231	10,732
Land charge or net rent	25,501	52,221	87,991	140,648		73,147	46,030	58,786
Total nonfeed cost	97,207	175,997	287,203	452,940		241,672	168,278	186,657
Capital account adjustment	837	923	676	2,045		1,029	467	1,315
Management returns	(4,884)	20,617	52,697	102,410		39,662	(14,051)	56,077
Farm production per \$1.00 of nonfeed costs	0.94	1.11	1.18	1.22		1.16	0.91	1.29
Farm production per man	95,615	180,994	246,229	265,105		214,948	140,712	228,227
Financial summary								
Cash operating income	83,603	171,659	293,000	481,393		244,349	150,006	198,605
Inventory change	4,405	15,385	31,177	52,304		24,351	(3,057)	31,888
Accts. receivable (net change)	3,456	8,986	15,151	23,927		12,481	7,281	11,136
Farm products used	64	247	739	632		418	96	410
Less purchased feed	22	446	541	4,561		1,081	536	601
Less purchased livestock	21	140	300	390		211	30	16
Adjusted gross farm income	91,485	195,691	339,225	553,304		280,306	153,759	241,419
Cash operating expense	44,509	82,088	137,724	219,100		114,836	80,801	84,587
Prepaid expense (-if increased)	(428)	1,687	1,870	5,023		2,103	413	2,976
Accts. payable (+if increased)	123	275	485	557		361	446	(87)
Farm-produced inputs	56	227	726	615		401	77	399
Total operating expense	44,260	84,278	140,805	225,294		117,701	81,737	87,874
Income before depreciation	47,225	111,410	198,418	328,008		162,602	72,023	153,547
Less depreciation	5,462	11,934	21,981	35,044		17,616	13,665	11,737
Capital account adjustment	837	923	676	2,045		1,029	467	1,315
Net farm income *	42,600	100,399	177,113	295,009		146,016	58,824	143,125
(operator's share) *	18,464	43,790	74,068	120,374		61,581	21,304	65,135
Labor & mgt. income per operator	11,537	37,609	68,167	102,664		53,621	2,432	73,497
Rate earned on investment, %	3.78	5.93	6.69	7.16		6.48	3.39	7.97

Note: Variations in totals due to rounding to the nearest dollar. Farms with soil ratings from 86 to 100 are those with nearly level, well-drained prairie soils. * Interest expense deducted from operator's share only. Shown in parentheses because it pertains to operator's net farm income only.

Table 19a. 1992 Average Operating Costs, Investments, and Land Use by Size and Management Returns for Northern and Central Illinois Grain Farms with Soil Ratings from 86 to 100

Range in size (total acres)	180-339	340-799	800-1199	Over 1199	Your Farm	All Farms	Low 25%	High 25%
Management returns	60	441	214	132		847	110	110
Number of farms								
Some costs and returns per tillable acre								
Soil fertility	33.83	34.39	33.61	32.58		33.59	36.92	31.35
Pesticides	23.66	23.46	23.91	23.80		23.71	26.39	20.35
Seed and other crop	18.53	18.44	18.46	17.90		18.29	19.96	16.94
Crop total	76.02	76.29	75.99	74.29		75.59	83.27	68.64
Light vehicle and utilities	6.39	4.08	3.23	2.58		3.43	4.36	3.76
Machinery repairs, supplies	16.89	13.74	13.04	12.04		13.09	15.38	12.68
Machinery hire	7.48	4.98	4.51	4.32		4.70	6.99	4.21
Fuel and oil	9.29	7.87	7.91	7.66		7.85	8.19	7.72
Machinery depreciation	14.55	18.08	19.76	19.29		18.87	22.88	16.09
Power and equipment total	54.60	48.74	48.45	45.89		47.94	57.79	44.46
Drying and storage	11.53	11.22	8.59	7.89		9.42	12.21	10.22
Building repair	2.00	1.26	1.27	1.08		1.23	2.34	0.90
Building depreciation	5.87	3.59	3.71	4.06		3.83	5.70	2.57
Building total	19.40	16.07	13.57	13.03		14.47	20.25	13.69
Labor, unpaid	62.30	31.54	19.93	14.55		23.63	34.75	27.87
Labor, hired	1.84	3.88	7.11	11.38		7.07	6.62	2.50
Labor total	64.14	35.41	27.04	25.93		30.71	41.37	30.37
Value of feed fed	0.12	0.09	0.16	0.20		0.14	0.05	0.08
Capital purchases	21.57	24.27	24.04	25.58		24.53	35.34	20.29
Operator interest paid	16.73	15.73	15.88	15.87		15.84	17.06	14.43
Crop returns	334.53	348.71	356.55	362.18		354.81	314.30	376.54
Livestock return above feed	(0.06)	0.16	0.28	0.32		0.24	0.05	0.08
Value of farm production	341.85	355.35	362.21	368.89		361.19	321.53	383.82
Total nonfeed cost	363.23	319.59	306.66	301.98		311.41	351.89	296.76
Management returns	(18.25)	37.44	56.27	68.28		51.11	(29.38)	89.15
Farm investment								
Livestock inventory	451	148	728	1,239		486	120	125
Grain inventory	56,807	115,773	199,137	331,815		166,327	100,529	137,825
Remaining cost in machinery and auto buildings and fence	12,770	25,666	52,456	95,605		42,421	29,239	23,549
soil fertility	9,281	14,871	22,839	36,725		19,894	18,385	14,479
Value of land (current)	28	50	38	171		64	1	45
Total farm investment	607,162	1,243,347	2,095,009	3,348,726		1,741,569	1,095,943	1,399,660
Total investment per acre	686,499	1,399,865	2,370,209	3,814,277		1,970,767	1,244,219	1,575,684
Machinery invest. per till. acre	2,467	2,449	2,445	2,465		2,453	2,474	2,443
Percent tillable land in	48	47	56	64		55	61	37
Corn and corn silage	52.0	51.0	49.7	50.7		50.5	51.6	50.7
Soybeans	45.2	45.2	46.7	45.2		45.7	43.7	46.5
Wheat	0.0	0.1	0.2	0.1		0.1	0.2	0.0
Other small grain	0.0	0.1	0.0	0.1		0.1	0.4	0.0
Diverted acres	2.3	2.5	2.5	2.7		2.6	2.6	2.5
All hay and pasture	0.2	0.2	0.1	0.1		0.2	0.5	0.1
Crop yields, bushels per acre								
Corn	165	169	174	177		173	153	182
Soybeans	47	48	49	50		49	46	50
Wheat	84	38	53	52		49	41	53

Note: Variations in totals due to rounding to the nearest dollar. Farms with soil ratings from 86 to 100 are those with nearly level, well-drained prairie soils.

Table 20. 1992 Average Return, Costs, and Financial Summary by Size and Management Returns for Northern and Central Illinois Grain Farms with Soil Ratings from 56 to 85

Range in size (total acres)	180-339	340-799	800-1199	Over 1199	Your Farm	All Farms	Low 25% 76	340-799 High 25% 76
Management returns	45	303	150	97		595		
Number of farms								
Total acres in farm	272	588	964	1,714		842	540	677
Acres of tillable land	256	559	916	1,609		797	497	654
Soil rating on tillable land	78	77	76	76		77	78	76
Total months labor	12.1	13.5	15.6	23.3		15.5	14.0	14.0
Months of hired labor	0.2	1.2	3.1	7.8		2.7	1.3	1.1
Beef produced, hundredweight	2	2	3	16		4	1	2
Pork produced, hundredweight	0	1	0	1		1	1	0
Dairy cows, number	0	0	0	0		0	0	0
Dollar returns per farm	84,711	182,172	304,980	521,173		261,027	144,748	231,465
Crop returns	125	109	153	960		260	84	89
Livestock returns above feed	658	2,071	3,783	6,600		3,134	1,337	2,629
Custom work	1,174	1,280	1,876	3,421		1,772	1,049	1,279
Other farm receipts	86,668	185,633	310,792	532,154		266,193	147,217	235,461
Value of farm production								
Dollar costs per farm	20,967	41,419	68,465	117,567		59,105	43,289	43,203
Crop expenses	14,919	26,643	43,518	72,536		37,492	29,572	26,990
Power and equipment	3,972	8,642	12,670	20,350		11,213	9,899	7,590
Building and fence	17,990	20,070	23,611	35,013		23,241	21,141	20,730
Labor	88	144	191	345		185	174	69
Livestock services and supplies	3,976	8,752	14,219	23,576		12,186	8,290	9,215
Taxes	3,035	5,634	8,681	12,878		7,386	5,493	6,371
Insurance and miscellaneous	4,874	9,327	15,809	26,600		13,440	9,782	9,997
Interest on nonland capital	20,794	43,893	70,836	122,600		61,770	39,864	49,450
Land charge or net rent	90,616	164,521	257,996	431,461		226,014	167,504	173,614
Total nonfeed cost	533	902	903	2,945		1,207	1,000	832
Capital account adjustment	(3,414)	22,014	53,698	103,638		41,385	(19,285)	62,679
Management returns								
Farm production per \$1.00 of nonfeed costs	0.96	1.13	1.20	1.23		1.18	0.88	1.36
Farm production per man	86,285	165,190	239,645	274,241		206,108	126,448	201,882
Financial summary								
Cash operating income	72,990	158,238	255,331	436,953		221,706	136,817	185,563
Inventory change	9,468	20,238	45,051	80,014		35,424	4,933	40,632
Accts. receivable (net change)	4,191	7,403	11,575	22,745		10,713	6,300	9,378
Farm products used	39	228	333	747		325	114	310
Less purchased feed	19	316	1,207	6,763		1,569	855	261
Less purchased livestock	0	158	291	1,541		405	91	159
Adjusted gross farm income	86,668	185,634	310,792	532,154		266,193	147,217	235,461
Cash operating expense	40,450	79,633	129,167	214,664		111,171	83,916	84,076
Prepaid expense (-if increased)	608	1,145	2,170	7,664		2,425	364	(126)
Accts. payable (+if increased)	(49)	252	251	2,548		603	598	(203)
Farm-produced inputs	17	195	312	737		299	89	277
Total operating expense	41,025	81,225	131,900	225,612		114,499	84,967	84,021
Income before depreciation	45,643	104,408	178,893	306,543		151,694	62,250	151,440
Less depreciation	6,206	11,658	20,726	33,478		17,089	13,884	10,821
Capital account adjustment	533	902	903	2,945		1,207	1,000	832
Net farm income *	39,969	93,652	159,071	276,010		135,813	49,366	141,451
(operator's share) *	21,904	41,592	66,384	104,152		56,552	17,525	65,824
Labor & mgt. income per operator	13,881	39,415	70,274	100,498		55,221	(604)	78,758
Rate earned on investment, %	3.92	6.38	7.33	7.67		7.01	2.80	9.20

Note: Variations in totals due to rounding to the nearest dollar. Farms with soil ratings from 56 to 85 are those with poorly drained, heavy-till, and timber soils. * Interest expense deducted from operator's share only. Shown in parentheses because it pertains to operator's net farm income only.

Table 20a. 1992 Average Operating Costs, Investments, and Land Use by Size and Management Returns for Northern and Central Illinois Grain Farms with Soil Ratings from 56 to 85

Range in size (total acres)	180 - 339	340 - 799	800 - 1199	Over 1199	Your Farm	All Farms	Low 25%	340 - 799	High 25%
Management returns	45	303	150	97		595	76	76	76
Number of farms									
Some costs and returns per tillable acre									
Soil fertility	37.23	31.72	32.42	33.61		32.68	37.58	340 - 799	27.71
Pesticides	25.58	23.46	24.52	22.31		23.44	27.36	76	21.36
Seed and other crop	19.08	18.93	17.81	17.13		18.02	22.22		17.04
Crop total	81.89	74.11	74.74	73.05		74.13	87.15		66.10
Light vehicle and utilities	6.64	4.60	3.79	3.14		3.93	5.09		4.01
Machinery repairs, supplies	14.57	13.26	11.98	11.89		12.47	17.35		11.39
Machinery hire	10.08	5.26	4.74	4.04		4.83	7.12		4.62
Fuel and oil	7.24	7.74	7.70	8.26		7.89	8.60		7.40
Machinery depreciation	19.73	16.81	19.29	17.73		17.90	21.38		13.88
Power and equipment total	58.27	47.67	47.51	45.07		47.03	59.54		41.30
Drying and storage	8.87	9.73	9.05	8.26		9.03	10.49		8.15
Building repair	2.13	1.71	1.47	1.31		1.52	2.97		0.78
Building depreciation	4.51	4.02	3.31	3.07		3.52	6.47		2.68
Building total	15.51	15.46	13.83	12.64		14.06	19.93		11.61
Labor, unpaid	69.19	32.96	20.45	14.40		24.11	38.26		29.57
Labor, hired	1.07	2.95	5.33	7.36		5.05	4.30		2.15
Labor total	70.26	35.91	25.78	21.76		29.15	42.56		31.72
Value of feed fed	0.07	0.11	0.16	0.25		0.17	0.13		0.08
Capital purchases	22.01	23.45	26.37	24.63		24.65	33.01		15.78
Operator interest paid	12.28	18.12	16.65	19.58		18.03	17.14		16.80
Crop returns	330.84	325.97	332.94	323.83		327.40	291.41		354.16
Livestock return above feed	0.49	0.20	0.17	0.60		0.33	0.17		0.14
Value of farm production	338.49	332.17	339.28	330.66		333.88	296.38		360.27
Total nonfeed cost	353.91	294.39	281.65	268.09		283.49	337.23		265.64
Management returns	(13.34)	39.39	58.62	64.40		51.91	(38.83)		95.90
Farm investment									
Livestock inventory	203	207	815	1,409		556	193		21
Grain inventory	52,300	94,669	153,390	254,003		132,244	82,159		115,779
Remaining cost in machinery and auto buildings and fence	11,464	24,900	53,616	88,916		41,559	30,738		24,456
soil fertility	8,330	14,510	19,195	32,982		18,235	20,455		10,439
Value of land (current)	12	74	88	93		76	134		53
Total farm investment	495,099	1,045,068	1,686,570	2,919,057		1,470,704	949,146		1,177,381
Total investment per acre	567,408	1,179,423	1,913,666	3,296,453		1,663,368	1,082,826		1,328,131
Machinery invest. per till. acre	2,088	2,006	1,986	1,923		1,975	2,005		1,961
Percent tillable land in	45	45	59	55		52	62		37
Corn and corn silage	54.0	51.3	50.3	51.3		51.3	53.8		47.7
Soybeans	39.1	42.5	41.3	40.5		41.4	40.1		43.8
Wheat	0.4	0.5	0.3	0.9		0.6	0.8		0.4
Other small grain	0.6	0.1	0.1	0.2		0.2	0.2		0.1
Diverted acres	3.6	3.4	2.9	3.4		3.3	3.1		3.3
All hay and pasture	1.0	0.4	0.5	0.4		0.4	0.7		0.2
Crop yields, bushels per acre									
Corn	153	153	154	155		154	138		163
Soybeans	46	46	47	46		46	42		48
Wheat	63	52	45	37		43	33		67

Note: Variations in totals due to rounding to the nearest dollar. Farms with soil ratings from 56 to 85 are those with poorly drained, heavy-till, and timber soils.

Table 21. 1992 Average Return, Costs, and Financial Summary by Size and Months of Labor for Northern and Central Illinois Hog Farms with Soil Ratings from 86 to 100

	60-259	260-499	500-799	Over 799	Your Farm	All Farms	21-27	Months of Labor
Range in size (total acres)	16	38	40	34		128	32	31-39
Management returns	191	377	635	1,207		655	663	11
Number of farms	183	356	602	1,034		591	617	782
Total acres in farm	14.3	20.8	35.4	38.0		29.1	90	91
Acres of tillable land	3.3	7.2	22.1	20.9		15.0	9.1	35.0
Soil rating on tillable land	132	49	101	299		142	270	21.1
Total months labor	2,396	4,838	6,569	8,428		6,028	5,342	124
Months of hired labor	0	0	0	0		0	0	7,150
Beef produced, hundredweight	58,883	111,784	201,048	345,337		195,104	200,161	264,977
Pork produced, hundredweight	38,437	85,674	104,902	156,327		104,545	85,333	138,403
Dairy cows, number	106	1,110	1,149	3,054		1,513	1,455	1,595
Dollar returns per farm	401	728	3,811	3,914		2,497	2,336	1,929
Crop returns	97,828	199,296	310,911	508,633		303,660	289,285	406,905
Livestock returns above feed	13,879	26,025	42,763	80,447		44,193	44,917	60,264
Power and equipment	20,695	36,646	51,241	85,671		52,235	49,110	66,574
Building and fence	7,370	13,680	23,629	34,292		21,475	17,819	31,531
Labor	23,566	31,755	40,994	62,846		41,877	36,190	58,925
Livestock services and supplies	4,781	12,079	16,119	19,633		14,436	11,194	18,302
Taxes	4,153	7,936	13,868	21,819		13,005	12,625	15,532
Insurance and miscellaneous	3,767	5,665	9,724	16,571		9,593	7,993	12,385
Interest on nonland capital	8,929	17,569	27,013	45,010		26,729	24,991	34,965
Land charge or net rent	17,324	33,053	55,647	97,982		55,394	55,417	69,603
Total nonfeed cost	104,464	184,407	280,999	464,272		278,938	260,256	368,081
Capital account adjustment	51	4,114	2,849	3,768		3,119	2,999	1,918
Management returns	(6,584)	19,003	32,760	48,128		27,840	32,028	40,742
Farm production per \$1.00 of nonfeed costs	0.94	1.08	1.11	1.10		1.09	1.11	1.11
Farm production per man	81,914	114,891	105,498	160,509		125,120	143,336	139,692
Financial summary								
Cash operating income	150,370	272,044	418,678	639,387		400,234	371,851	515,401
Inventory change	7,082	8,400	10,037	25,432		13,271	20,695	6,249
Accts. receivable (net change)	2,662	4,819	8,988	14,697		8,476	9,533	9,735
Farm products used	168	311	649	1,023		588	567	1,039
Less purchased feed	46,962	73,646	100,135	127,178		92,808	81,719	116,275
Less purchased livestock	15,493	12,631	27,306	44,729		26,101	31,641	9,244
Adjusted gross farm income	97,828	199,296	310,911	508,633		303,660	289,285	406,905
Cash operating expense	51,557	93,359	147,450	244,364		145,148	127,785	192,834
Prepaid expense (-if increased)	1,252	(284)	1,419	2,358		1,142	2,195	2,946
Accts. payable (+if increased)	99	(308)	(103)	469		13	(53)	332
Farm-produced inputs	0	76	274	374		208	158	571
Total operating expense	52,908	92,841	149,040	247,565		146,510	130,084	196,682
Income before depreciation	44,920	106,455	161,871	261,068		157,150	159,201	210,222
Less depreciation	8,803	20,536	29,461	48,038		29,164	27,029	46,103
Capital account adjustment	51	4,114	2,849	3,768		3,119	2,999	1,918
Net farm income *	36,168	90,033	135,259	216,797		131,104	135,171	166,037
(operator's share) *	17,151	42,073	65,027	103,803		62,528	67,125	82,147
Labor & mgt. income per operator	9,259	37,359	52,728	52,833		42,759	44,640	47,322
Rate earned on investment, %	3.71	6.79	6.83	6.48		6.54	6.74	6.81

Note: Variations in totals due to rounding to the nearest dollar. Farms with soil ratings from 86 to 100 are those with nearly level, well-drained prairie soils. * Interest expense deducted from operator's share only. Shown in parentheses because it pertains to operator's net farm income only.

Table 21a. 1992 Average Operating Costs, Investments, and Land Use by Size and Months of Labor for Northern and Central Illinois Hog Farms with Soil Ratings from 86 to 100

Range in size (total acres)	60-259		260-499		500-799		Over 799		Your Farm	All Farms	Months of Labor	
	16	38	40	34	34	128	21-27	31-39				
Management returns												
Number of farms	16	38	40	34	34	128	32	11				
Some costs and returns per tillable acre												
Soil fertility	29.23	30.03	28.63	33.04	33.04	30.95	30.73	35.04				
Pesticides	26.20	22.22	25.10	26.34	26.34	25.21	23.79	27.81				
Seed and other crop	20.28	20.85	17.31	18.39	18.39	18.56	18.30	19.80				
Crop total	75.71	73.10	71.04	77.77	77.77	74.72	72.82	82.65				
Light vehicle and utilities	24.03	16.55	13.14	13.26	13.26	14.23	10.40	13.96				
Machinery repairs, supplies	34.09	25.86	23.44	22.03	22.03	23.63	21.45	23.46				
Machinery hire	7.41	11.37	7.39	8.32	8.32	8.53	8.02	6.47				
Fuel and oil	18.62	15.13	13.63	11.09	11.09	12.91	11.52	11.26				
Machinery depreciation	28.55	34.03	27.54	28.11	28.11	29.00	28.22	36.15				
Power and equipment total	112.89	102.93	85.13	82.82	82.82	88.31	79.62	91.30				
Drying and storage	11.91	8.68	8.97	7.33	7.33	8.27	7.70	8.71				
Building repair	8.83	6.08	8.88	7.51	7.51	7.74	5.59	7.45				
Building depreciation	19.47	23.65	21.41	18.31	18.31	20.30	15.60	27.08				
Building total	40.21	38.42	39.26	33.15	33.15	36.31	28.89	43.24				
Labor, unpaid	90.01	57.32	32.96	24.82	24.82	35.74	36.86	28.43				
Labor, hired	38.55	31.87	35.15	35.93	35.93	35.06	21.81	52.38				
Labor total	128.56	89.19	68.11	60.75	60.75	70.80	58.67	80.81				
Value of feed fed	363.62	328.54	277.71	209.66	209.66	258.51	234.57	236.17				
Capital purchases	31.36	53.55	48.74	54.96	54.96	51.81	44.95	51.16				
Operator interest paid	48.26	38.42	32.12	29.59	29.59	32.43	29.59	27.30				
Crop returns	321.22	313.98	334.01	333.84	333.84	329.85	324.49	363.39				
Livestock return above feed	209.68	240.64	174.28	151.12	151.12	176.75	138.34	189.81				
Value of farm production	533.67	559.78	516.53	491.70	491.70	513.39	468.98	558.03				
Total nonfeed cost	569.87	517.96	466.83	448.81	448.81	471.59	421.91	504.79				
Management returns	(35.92)	53.37	54.43	46.53	46.53	47.07	51.92	55.87				
Farm investment												
Livestock inventory	46,599	81,007	118,474	170,177	170,177	112,100	110,423	130,534				
Grain inventory	36,811	80,199	128,149	233,377	233,377	130,448	133,926	164,573				
Remaining cost in machinery and auto buildings and fence	15,046	35,606	47,464	88,932	88,932	50,906	48,784	73,790				
soil fertility	18,640	41,419	69,854	121,193	121,193	68,648	54,095	107,812				
Value of land (current)	0	63	0	586	586	174	512	254				
Total farm investment	412,474	786,979	1,324,935	2,332,906	2,332,906	1,318,914	1,319,450	1,657,216				
Total investment per acre	529,570	1,025,273	1,688,877	2,947,171	2,947,171	1,681,190	1,667,191	2,134,178				
Machinery invest. per till. acre	2,766	2,716	2,659	2,441	2,441	2,566	2,513	2,728				
Percent tillable land in	82	100	79	86	86	86	79	101				
Corn and corn silage	58.5	56.1	57.1	54.3	54.3	55.7	58.8	52.2				
Soybeans	34.3	36.3	36.7	38.2	38.2	37.3	32.1	42.3				
Wheat	0.0	0.3	0.2	0.5	0.5	0.4	0.6	0.0				
Other small grain	1.8	1.5	1.1	0.8	0.8	1.1	1.8	0.5				
Diverted acres	2.7	2.4	2.8	2.8	2.8	2.7	2.6	2.3				
All hay and pasture	2.7	3.0	0.9	1.6	1.6	1.7	2.6	2.7				
Crop yields, bushels per acre												
Corn	152	153	156	163	163	159	157	177				
Soybeans	46	48	49	49	49	49	49	50				
Wheat	0	42	63	57	57	56	48	0				

Note: Variations in totals due to rounding to the nearest dollar. Farms with soil ratings from 86 to 100 are those with nearly level, well-drained prairie soils.

Table 22. 1992 Average Return, Costs, and Financial Summary by Size and Months of Labor for Northern and Central Illinois Hog Farms with Soil Ratings from 56 to 85

Range in size (total acres) Management returns Number of farms	60-259 42	260-499 69	500-799 71	Over 799 58	Your Farm	All Farms 240	Months of Labor 21-27 55	31-39 21
Total acres in farm	189	375	641	1,136		605	668	820
Acres of tillable land	173	331	557	966		524	575	689
Soil rating on tillable land	74	77	75	76		76	77	74
Total months labor	15.4	18.4	25.0	37.3		24.4	24.7	35.9
Months of hired labor	2.6	4.9	11.5	21.6		10.5	8.5	19.6
Beef produced, hundredweight	94	223	238	448		259	240	241
Pork produced, hundredweight	3,069	3,112	5,693	7,469		4,921	5,422	8,580
Dairy cows, number	1	0	0	0		0	0	0
Dollar returns per farm								
Crop returns	52,220	101,989	167,353	294,379		159,110	174,206	210,257
Livestock returns above feed	49,216	50,395	96,786	134,649		84,274	89,515	150,869
Custom work	421	1,231	2,051	3,998		2,001	1,765	1,676
Other farm receipts	691	1,364	4,151	4,546		2,840	2,708	8,904
Value of farm production	102,549	154,980	270,341	437,570		248,225	268,195	371,707
Dollar costs per farm								
Crop expenses	13,566	24,352	41,800	70,184		38,702	41,539	50,975
Power and equipment	26,793	31,555	49,127	77,250		46,963	52,295	61,452
Building and fence	11,567	11,354	18,000	33,211		18,639	18,577	34,555
Labor	23,118	25,258	41,039	66,843		39,602	38,818	64,690
Livestock services and supplies	6,895	7,099	12,546	16,608		10,973	12,654	18,890
Taxes	3,536	6,506	9,813	17,653		9,658	10,352	11,539
Insurance and miscellaneous	4,150	5,039	10,424	14,053		8,655	7,853	17,977
Interest on nonland capital	11,272	14,597	23,618	40,771		23,009	23,845	34,886
Land charge or net rent	13,226	26,559	43,491	76,726		41,359	44,844	50,252
Total nonfeed cost	114,124	152,319	249,858	413,295		237,559	250,777	345,216
Capital account adjustment	540	276	95	1,558		578	544	934
Management returns	(11,035)	2,937	20,578	25,832		11,243	17,962	27,425
Farm production per \$1.00 of nonfeed costs	0.90	1.02	1.08	1.06		1.04	1.07	1.08
Farm production per man	79,933	101,002	129,742	140,617		122,032	130,317	124,165
Financial summary								
Cash operating income	169,894	216,877	371,116	567,967		339,131	365,374	516,910
Inventory change	3,116	6,099	21,188	5,843		9,979	9,777	14,566
Accts. receivable (net change)	2,643	5,743	7,795	9,941		6,822	6,873	7,175
Farm products used	243	413	511	957		544	571	794
Less purchased feed	58,804	51,261	98,680	110,700		80,974	90,184	137,021
Less purchased livestock	14,541	22,870	31,590	36,439		27,271	24,217	30,717
Adjusted gross farm income	102,551	155,001	270,341	437,570		248,231	268,195	371,707
Cash operating expense	53,559	73,073	134,667	220,436		123,492	125,414	191,954
Prepaid expense (-if increased)	594	1,009	2,563	5,878		2,573	2,975	3,482
Accts. payable (+if increased)	7	177	433	155		218	84	846
Farm-produced inputs	37	102	144	288		148	217	262
Total operating expense	54,196	74,362	137,808	226,756		126,431	128,690	196,544
Income before depreciation	48,355	80,639	132,534	210,817		121,801	139,505	175,162
Less depreciation	16,290	16,539	24,638	45,459		25,880	29,070	39,035
Capital account adjustment	540	276	95	1,558		578	544	934
Net farm income *	32,605	64,377	107,991	166,915		96,499	110,978	137,062
(operator's share) *	16,645	30,887	47,863	60,188		40,498	50,034	60,502
Labor & mgt. income per operator	7,640	20,700	32,600	34,881		25,362	29,333	37,819
Rate earned on investment, %	2.91	5.29	6.52	6.05		5.86	6.23	6.84

Note: Variations in totals due to rounding to the nearest dollar. Farms with soil ratings from 56 to 85 are those with poorly drained, heavy-till, and timber so
* Interest expense deducted from operator's share only. Shown in parentheses because it pertains to operator's net farm income only.

Table 22a. 1992 Average Operating Costs, Investments, and Land Use by Size and Months of Labor for Northern and Central Illinois
Hog Farms with Soil Ratings from 56 to 85

Range in size (total acres)	Months of Labor					All Farms
	60-259	260-499	500-799	Over 799	Your Farm	
Management returns	42	69	71	58	240	
Number of farms	42	69	71	58	240	
Some costs and returns per tillable acre						
Soil fertility	29.20	30.06	32.92	29.16	30.51	29.18
Pesticides	28.28	24.83	22.98	23.57	23.88	24.07
Seed and other crop	20.92	18.64	19.08	19.89	19.47	19.00
Crop total	78.40	73.53	74.98	72.62	73.86	72.25
Light vehicle and utilities	28.31	15.02	15.21	11.25	14.17	13.21
Machinery repairs, supplies	41.32	24.93	25.53	22.06	24.79	25.31
Machinery hire	13.67	9.26	7.34	5.69	7.32	5.62
Fuel and oil	20.17	13.51	12.98	12.92	13.46	14.91
Machinery depreciation	51.38	32.57	27.06	28.02	29.90	31.91
Power and equipment total	154.85	95.29	88.12	79.93	89.63	89.19
Drying and storage	9.48	8.05	7.18	6.45	7.41	7.57
Building repair	14.68	8.86	8.18	8.92	8.69	6.09
Building depreciation	42.70	17.37	17.09	19.00	19.47	18.65
Building total	66.85	34.28	32.29	34.36	35.57	32.31
Labor, unpaid	110.64	61.25	36.42	24.41	39.86	42.31
Labor, hired	22.98	15.02	37.20	44.76	35.72	25.20
Labor total	133.61	76.27	73.62	69.16	75.58	67.52
Value of feed fed	486.97	279.13	278.11	210.47	260.22	258.88
Capital purchases	64.84	45.70	44.85	62.26	53.92	41.90
Operator interest paid	47.66	25.36	39.72	30.34	31.86	31.86
Crop returns	301.81	307.97	300.20	304.60	303.67	303.00
Livestock return above feed	284.45	152.18	173.61	139.33	160.84	155.69
Value of farm production	592.68	467.99	484.93	452.77	473.74	466.47
Total nonfeed cost	659.59	459.96	448.19	427.65	453.39	436.18
Management returns	(63.78)	8.87	36.91	26.73	21.46	31.24
Farm investment						
Livestock inventory	52,190	72,870	113,193	161,387	102,572	109,853
Grain inventory	35,258	68,548	98,563	182,084	99,040	109,087
Remaining cost in machinery and auto buildings and fence	22,146	29,465	45,787	81,982	45,704	52,824
soil fertility	38,545	29,617	51,821	115,165	58,422	51,767
Value of land (current)	63	0	124	117	76	77
Total farm investment	314,916	632,366	1,035,499	1,826,810	984,730	1,067,721
Total investment per acre	463,117	832,868	1,344,989	2,367,548	1,290,545	1,391,329
Machinery invest. per till. acre	2,456	2,222	2,099	2,084	2,133	2,083
Percent tillable land in	128	89	82	85	87	92
Corn and corn silage	68.2	60.5	59.9	53.6	57.7	56.6
Soybeans	16.9	27.1	29.8	34.8	30.8	32.5
Wheat	0.1	0.7	1.6	1.8	1.5	1.4
Other small grain	3.0	2.1	1.1	1.0	1.4	1.2
Diverted acres	2.7	2.9	3.7	4.1	3.7	4.4
All hay and pasture	6.4	6.4	3.3	3.8	4.3	3.1
Crop yields, bushels per acre						
Corn	140	141	144	151	146	148
Soybeans	45	47	45	47	47	46
Wheat	55	52	44	54	50	48

Note: Variations in totals due to rounding to the nearest dollar. Farms with soil ratings from 56 to 85 are those with poorly drained, heavy-till, and timber soils.

Table 23. 1992 Average Return, Costs, and Financial Summary by Size and Management Returns for Southern Illinois Grain Farms with Soil Ratings from 36 to 85

Range in size (total acres) Management returns Number of farms	180-339 28	340-799 231	800-1199 149	Over 1199 144	Your Farm	All Farms 552	Low 25% 58	340-799 High 25% 58
Total acres in farm	275	585	976	1,839		1,002	554	642
Acres of tillable land	250	534	905	1,719		929	481	610
Soil rating on tillable land	57	59	59	60		59	60	60
Total months labor	12.2	14.0	18.4	29.0		19.0	14.0	14.0
Months of hired labor	1	2	5	13		6	2	2
Beef produced, hundredweight	73	81	83	106		88	93	40
Pork produced, hundredweight	132	264	449	633		403	166	459
Dairy cows, number	0	0	0	0		0	0	0
Dollar returns per farm								
Crop returns	60,914	144,992	261,193	516,248		268,942	112,535	187,174
Livestock returns above feed	3,383	5,158	7,221	11,698		7,331	1,345	7,597
Custom work	612	1,302	1,783	3,471		1,963	806	1,981
Other farm receipts	972	1,443	2,741	5,338		2,785	1,227	1,536
Value of farm production	65,881	152,894	272,939	536,755		281,021	115,914	198,287
Dollar costs per farm								
Crop expenses	15,935	36,427	62,718	118,523		63,900	37,545	39,128
Power and equipment	16,075	27,905	46,011	88,385		47,970	27,940	28,478
Building and fence	1,774	4,167	6,342	13,563		7,084	3,857	4,765
Labor	18,287	20,970	27,433	44,251		28,652	21,124	21,138
Livestock services and supplies	310	672	1,014	1,502		962	578	814
Taxes	1,976	4,448	7,118	13,199		7,326	4,119	5,316
Insurance and miscellaneous	2,184	4,058	6,294	11,729		6,568	4,358	4,014
Interest on nonland capital	4,102	8,547	14,251	29,314		15,279	8,319	9,148
Land charge or net rent	12,408	27,842	45,066	86,112		46,909	26,655	31,501
Total nonfeed cost	73,051	135,032	216,242	406,574		224,646	134,494	144,302
Capital account adjustment	1,061	1,300	1,583	1,789		1,492	193	3,296
Management returns	(6,108)	19,162	58,279	131,969		57,867	(18,386)	57,281
Farm production per \$1.00 of nonfeed costs	0.90	1.13	1.26	1.32		1.25	0.86	1.37
Farm production per man	64,801	130,931	177,822	221,761		177,192	99,233	169,856
Financial summary								
Cash operating income	65,812	141,541	240,081	477,568		251,958	117,033	173,405
Inventory change	6,055	17,828	41,704	77,148		39,150	4,809	31,896
Accts. receivable (net change)	351	1,517	3,539	7,647		3,603	822	2,881
Farm products used	340	803	1,333	1,968		1,227	1,128	964
Less purchased feed	3,993	5,172	9,074	21,189		10,344	3,588	7,725
Less purchased livestock	2,685	3,623	4,644	6,388		4,572	4,289	3,135
Adjusted gross farm income	65,881	152,895	272,939	536,755		281,022	115,914	198,287
Cash operating expense	33,387	68,224	118,066	226,909		121,306	68,435	73,520
Prepaid expense (-if increased)	(1,268)	0	52	(1,467)		(433)	217	267
Accts. payable (+ if increased)	0	168	(246)	454		122	402	68
Farm-produced inputs	227	703	1,153	1,789		1,084	998	874
Total operating expense	32,345	69,093	119,025	227,684		122,079	70,052	74,728
Income before depreciation	33,536	83,804	153,915	309,068		158,944	45,862	123,560
Less depreciation	6,813	11,229	18,250	38,726		20,073	11,015	11,094
Capital account adjustment	1,061	1,300	1,583	1,789		1,492	193	3,296
Net farm income *	27,785	73,876	137,249	272,132		140,363	35,039	115,762
(operator's share) *	14,398	38,531	64,997	130,280		68,385	12,089	60,697
Labor & mgt. income per operator	10,868	36,308	71,128	125,982		67,810	(604)	74,016
Rate earned on investment, %	2.97	7.08	9.25	10.03		9.01	2.23	11.01

Note: Variations in totals due to rounding to the nearest dollar.

* Interest expense deducted from operator's share only. Shown in parentheses because it pertains to operator's net farm income only.

Table 23a. 1992 Average Operating Costs, Investments, and Land Use by Size and Management Returns for Southern Illinois Grain Farms with Soil Ratings from 36 to 85

Range in size (total acres)	180-339	340-799	800-1199	Over 1199	Your Farm	All Farms	340-799 Low 25%	High 25%
Management returns	28	231	149	144		552	58	58
Number of farms								
Some costs and returns per tillable acre								
Soil fertility	31.10	30.85	31.77	31.43		31.38	34.64	28.40
Pesticides	18.21	21.06	20.54	20.49		20.61	25.46	19.68
Seed and other crop	14.48	16.36	16.98	17.02		16.82	17.98	16.05
Crop total	63.79	68.27	69.29	68.94		68.80	78.08	64.13
Light vehicle and utilities	5.94	4.75	3.86	3.30		3.83	5.32	4.58
Machinery repairs, supplies	15.53	15.78	15.84	15.54		15.68	17.44	14.67
Machinery hire	8.29	4.43	4.23	4.24		4.34	4.41	4.23
Fuel and oil	9.89	9.64	9.50	9.12		9.36	11.15	8.64
Machinery depreciation	24.69	17.69	17.41	19.21		18.44	19.79	14.56
Power and equipment total	64.95	52.30	50.83	51.41		51.65	58.11	46.67
Drying and storage	2.01	2.46	2.56	3.08		2.78	2.33	2.70
Building repair	2.51	2.02	1.69	1.52		1.70	2.58	1.49
Building depreciation	2.58	3.34	2.76	3.30		3.15	3.12	3.62
Building total	7.10	7.81	7.01	7.89		7.63	8.02	7.81
Labor, unpaid	69.59	34.34	21.71	14.39		21.87	38.38	29.22
Labor, hired	3.61	4.96	8.60	11.35		8.98	5.56	5.42
Labor total	73.20	39.30	30.31	25.74		30.85	43.93	34.64
Value of feed fed	22.38	19.29	17.49	12.11		15.39	21.22	20.57
Capital purchases	16.60	20.63	24.81	23.77		23.19	21.19	18.27
Operator interest paid	20.28	18.63	21.03	17.16		18.58	19.94	20.66
Crop returns	243.83	271.74	288.58	300.29		289.57	234.04	306.76
Livestock return above feed	13.54	9.67	7.98	6.80		7.89	2.80	12.45
Value of farm production	263.71	286.55	301.55	312.22		302.58	241.07	324.97
Total nonfeed cost	292.41	253.07	238.91	236.50		241.88	279.71	236.49
Management returns	(24.45)	35.91	64.39	76.76		62.31	(38.24)	93.88
Farm investment								
Livestock inventory	6,880	13,640	18,642	22,818		17,042	16,753	11,516
Grain inventory	29,683	73,739	122,233	253,618		131,519	56,112	98,340
Remaining cost in								
machinery and auto	14,955	25,449	44,913	110,378		52,326	27,367	20,927
buildings and fence	3,656	8,438	12,568	29,324		14,759	8,625	8,748
soil fertility	0	55	25	452		147	95	21
Value of land (current)	295,424	662,906	1,073,005	2,050,273		1,116,884	634,640	750,020
Total farm investment	350,597	784,229	1,271,388	2,466,851		1,332,675	743,593	889,573
Total investment per acre	1,273	1,340	1,302	1,341		1,330	1,341	1,385
Machinery invest. per till. acre	60	48	50	64		56	57	34
Percent tillable land in								
Corn and corn silage	38.5	39.4	40.5	41.0		40.5	35.4	42.0
Soybeans	37.2	39.8	39.7	38.5		39.1	38.2	40.9
Wheat	13.5	12.0	12.0	12.2		12.1	14.6	11.0
Other small grain	0.0	0.0	0.1	0.0		0.0	0.0	0.0
Diverted acres	2.5	3.5	3.2	2.8		3.1	4.1	2.6
All hay and pasture	5.5	2.7	2.1	1.4		1.9	5.1	1.1
Crop yields, bushels per acre								
Corn	136	146	149	156		151	131	160
Soybeans	40	43	43	45		44	39	47
Wheat	53	55	56	59		57	55	54

Note: Variations in totals due to rounding to the nearest dollar.

Table 24. 1992 Average Return, Costs, and Financial Summary by Size and Months of Labor for Southern Illinois Hog Farms with Soil Ratings from 36 to 85

Range in size (total acres)	60-259		260-499		500-799		Over 799		Your Farm	All Farms	Months of Labor	
	Number of farms	12	37	37	37	30	21-27	23			28-30	31-39
Total acres in farm	163	364	658	1,217			658			116	648	809
Acres of tillable land	137	335	609	1,131			608				589	761
Soil rating on tillable land	61	60	60	60			60				60	60
Total months labor	15.5	17.8	21.7	37.5			23.9				24.2	34.5
Months of hired labor	3.5	5.2	8.3	18.3			9.4				8.4	19.6
Beef produced, hundredweight	83	72	111	388			167				104	44
Pork produced, hundredweight	2,496	3,597	4,696	8,293			5,048				4,838	8,363
Dairy cows, number	0	0	0	3			1				0	0
Dollar returns per farm												
Crop returns	36,036	89,625	158,354	336,207			169,774				156,431	214,551
Livestock returns above feed	30,704	53,799	68,408	141,584			78,773				71,587	124,224
Custom work	292	783	1,287	2,945			1,452				1,151	3,612
Other farm receipts	706	1,973	1,985	15,752			5,409				15,271	2,235
Value of farm production	67,737	146,179	230,034	496,488			255,408				244,440	344,622
Dollar costs per farm												
Crop expenses	8,471	22,659	41,200	82,050			42,465				41,374	47,909
Power and equipment	17,925	27,706	46,254	88,639			48,369				45,593	67,069
Building and fence	5,513	7,936	12,956	22,233			12,984				11,923	21,026
Labor	22,678	26,175	34,513	58,763			36,900				36,185	56,185
Livestock services and supplies	3,566	6,078	9,121	19,189			10,180				10,483	20,165
Taxes	1,963	3,423	5,028	9,624			5,388				5,934	6,270
Insurance and miscellaneous	2,605	4,163	7,679	21,225			9,536				17,792	13,706
Interest on nonland capital	7,878	11,702	18,677	39,341			20,679				18,582	29,629
Land charge or net rent	8,629	17,483	31,243	61,954			32,457				31,220	40,398
Total nonfeed cost	79,227	127,326	206,671	403,018			218,958				219,058	302,356
Capital account adjustment	25	244	358	748			388				474	1,220
Management returns	(11,464)	19,097	23,720	94,218			36,838				25,856	43,486
Farm production per \$1.00	0.85	1.15	1.11	1.23			1.17				1.12	1.14
Farm production per man	52,414	98,818	127,113	158,778			128,253				121,232	119,938
Financial summary												
Cash operating income	128,309	211,431	315,120	614,582			340,169				334,393	479,506
Inventory change	(4,916)	13,639	16,981	51,481			22,572				23,642	32,380
Accts. receivable (net change)	0	348	1,036	4,708			1,659				864	0
Farm products used	334	671	1,186	2,641			1,310				1,104	2,489
Less purchased feed	52,473	67,466	83,797	140,736			90,073				88,473	154,176
Less purchased livestock	3,515	12,444	20,493	36,188			20,228				27,089	15,578
Adjusted gross farm income	67,737	146,180	230,034	496,488			255,408				244,440	344,622
Cash operating expense	37,087	65,364	113,501	228,041			119,864				122,914	172,502
Prepaid expense (-if increased)	269	817	1,263	306			770				1,492	3,709
Accts. payable (+ if increased)	0	(112)	18	52			(16)				(134)	(174)
Farm-produced inputs	124	316	880	2,157			952				667	2,141
Total operating expense	37,480	66,384	115,661	230,556			121,570				124,939	178,177
Income before depreciation	30,257	79,795	114,372	265,932			133,839				119,501	166,445
Less depreciation	7,303	12,905	21,002	42,317			22,515				20,676	31,802
Capital account adjustment	25	244	358	748			388				474	1,220
Net farm income *	22,979	67,134	93,728	224,364			111,712				99,300	135,864
(operator's share) *	11,579	38,861	44,947	131,806			62,017				47,222	67,245
Labor & mgt. income per operator	5,722	36,222	39,849	87,743			47,548				42,913	46,991
Rate earned on investment, %	1.62	8.45	7.43	9.78			8.59				7.72	8.38

Note: Variations in totals due to rounding to the nearest dollar.

* Interest expense deducted from operator's share only. Shown in parentheses because it pertains to operator's net farm income only.

Table 24a. 1992 Average Operating Costs, Investments, and Land Use by Size and Management Returns for Southern Illinois Hog Farms with Soil Ratings from 36 to 85

Range in size (total acres)	60-259		260-499		500-799		Over 799		Your Farm		All Farms		Months of Labor	
	12	37	37	37	37	37	30	30	116	116	21-27	23	31-39	10
Number of farms														
Some costs and returns per tillable acre														
Soil fertility	30.16	31.50	30.25	30.34	29.99	29.99	30.34	29.99			29.30	29.30	22.67	22.67
Pesticides	13.45	19.42	21.99	22.36	24.11	24.11	22.36	24.11			23.85	23.85	23.35	23.35
Seed and other crop	18.04	16.75	15.37	17.16	18.46	18.46	17.16	18.46			17.09	17.09	16.94	16.94
Crop total	61.64	67.68	67.61	69.87	72.57	72.57	69.87	72.57			70.24	70.24	62.95	62.95
Light vehicle and utilities	25.52	14.28	13.66	12.20	9.83	9.83	12.20	9.83			14.15	14.15	16.28	16.28
Machinery repairs, supplies	34.78	26.48	23.93	23.68	21.94	21.94	23.68	21.94			21.86	21.86	28.61	28.61
Machinery hire	13.96	4.07	4.00	5.81	7.24	7.24	5.81	7.24			3.91	3.91	5.16	5.16
Fuel and oil	19.72	14.25	12.91	13.37	13.05	13.05	13.37	13.05			14.78	14.78	15.37	15.37
Machinery depreciation	36.46	23.68	21.41	24.52	26.32	26.32	24.52	26.32			22.70	22.70	22.71	22.71
Power and equipment total	130.44	82.75	75.90	79.58	78.40	78.40	79.58	78.40			77.40	77.40	88.13	88.13
Drying and storage	3.08	2.75	2.66	3.36	4.05	4.05	3.36	4.05			1.97	1.97	3.04	3.04
Building repair	20.36	6.19	5.54	5.51	4.51	4.51	5.51	4.51			5.96	5.96	5.51	5.51
Building depreciation	16.68	14.76	13.06	12.31	11.10	11.10	12.31	11.10			12.31	12.31	19.08	19.08
Building total	40.12	23.70	21.26	21.36	19.66	19.66	21.36	19.66			20.24	20.24	27.63	27.63
Labor, unpaid	130.53	56.30	32.96	35.76	25.52	25.52	35.76	25.52			40.14	40.14	29.37	29.37
Labor, hired	34.50	21.87	23.67	24.95	26.46	26.46	24.95	26.46			21.25	21.25	44.46	44.46
Labor total	165.03	78.18	56.63	60.71	51.97	51.97	60.71	51.97			61.38	61.38	73.83	73.83
Value of feed fed	544.95	289.70	212.13	230.71	206.23	206.23	230.71	206.23			223.09	223.09	290.23	290.23
Capital purchases	65.49	29.44	30.36	30.50	29.28	29.28	30.50	29.28			34.09	34.09	30.01	30.01
Operator interest paid	65.14	37.52	29.55	31.00	27.93	27.93	31.00	27.93			30.97	30.97	37.98	37.98
Crop returns	262.24	267.69	259.85	279.33	297.35	297.35	279.33	297.35			265.57	265.57	281.93	281.93
Livestock return above feed	223.43	160.68	112.25	129.60	125.22	125.22	129.60	125.22			121.53	121.53	163.24	163.24
Value of farm production	492.93	436.60	377.47	420.22	439.11	439.11	420.22	439.11			414.98	414.98	452.85	452.85
Total nonfeed cost	576.55	380.29	339.14	360.25	356.44	356.44	360.25	356.44			371.89	371.89	397.31	397.31
Management returns	(83.44)	57.04	38.92	60.61	83.33	83.33	60.61	83.33			43.90	43.90	57.14	57.14
Farm investment														
Livestock inventory	56,635	63,362	87,869	96,731	164,853	164,853	96,731	164,853			80,273	80,273	136,474	136,474
Grain inventory	23,170	49,272	84,580	93,740	188,109	188,109	93,740	188,109			81,154	81,154	130,930	130,930
Remaining cost in buildings and fence	13,131	23,833	35,063	45,782	99,134	99,134	45,782	99,134			39,622	39,622	54,073	54,073
soil fertility	12,455	18,879	40,020	38,636	71,768	71,768	38,636	71,768			36,118	36,118	70,565	70,565
Value of land (current)	0	50	49	34	10	10	34	10			157	157	0	0
Total farm investment	205,449	416,272	743,888	772,796	1,475,101	1,475,101	772,796	1,475,101			743,337	743,337	961,869	961,869
Total investment per acre	310,839	571,666	991,468	1,047,719	1,998,978	1,998,978	1,047,719	1,998,978			980,661	980,661	1,353,910	1,353,910
Machinery invest. per till. acre	1,906	1,569	1,506	1,593	1,643	1,643	1,593	1,643			1,513	1,513	1,675	1,675
Percent tillable land in	96	71	58	75	88	88	75	88			67	67	71	71
Corn and corn silage	46.3	44.2	42.6	44.3	45.3	45.3	44.3	45.3			43.2	43.2	42.1	42.1
Soybeans	17.8	31.8	34.5	35.0	37.2	37.2	35.0	37.2			38.1	38.1	32.5	32.5
Wheat	14.1	13.9	11.0	11.6	10.9	10.9	11.6	10.9			9.9	9.9	11.6	11.6
Other small grain	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.3	0.3
Diversified acres	1.9	3.2	2.8	2.7	2.5	2.5	2.7	2.5			3.0	3.0	3.5	3.5
All hay and pasture	9.9	3.3	4.5	4.1	3.9	3.9	4.1	3.9			2.8	2.8	3.4	3.4
Crop yields, bushels per acre														
Corn	148	143	141	149	157	157	149	157			143	143	159	159
Soybeans	43	43	44	45	46	46	45	46			45	45	47	47
Wheat	54	54	54	54	54	54	54	54			53	53	54	54

Note: Variations in totals due to rounding to the nearest dollar.

Table 25. 1992 Average Return, Costs, and Financial Summary by Number of Cows in Herd for Illinois Dairy Farms

Area of state	Northern Illinois				Southern Illinois			
	10-39	40-79	Over 79	All Farms	10-39	40-79	Over 79	All Farms
Number of cows in herd	19	101	35	155	3	23	33	59
Number of farms								
Total acres in farm	239	346	482	363	237	338	588	473
Acres of tillable land	197	298	410	311	192	310	548	437
Soil rating on tillable land	75	73	73	73	57	60	60	60
Total months labor	14.8	19.8	32.9	22.1	19.0	22.1	35.6	29.5
Months of hired labor	2.1	4.4	14.4	6.4	6.0	6.9	17.4	12.7
Beef produced, hundredweight	326	478	772	526	257	433	668	555
Pork produced, hundredweight	87	141	74	119	0	0	158	88
Dairy cows, number	31	58	105	65	33	61	109	86
Dollar returns per farm								
Crop returns	53,276	86,872	118,585	89,915	44,602	81,221	147,322	116,331
Livestock returns above feed	41,547	78,373	157,893	91,815	46,663	86,665	154,037	122,314
Custom work	68	998	1,328	958	193	354	123	217
Other farm receipts	754	1,126	2,556	1,403	2,415	911	3,345	2,349
Value of farm production	95,645	167,369	280,363	184,092	93,873	169,151	304,828	241,210
Dollar costs per farm								
Crop expenses	12,851	21,094	30,165	22,132	11,988	24,187	39,540	32,154
Power and equipment	22,119	38,090	62,858	41,725	17,349	40,782	63,782	52,443
Building and fence	5,670	9,393	19,234	11,159	2,555	5,332	9,946	7,771
Labor	22,224	29,639	50,038	33,336	30,318	33,401	48,891	41,908
Livestock services and supplies	7,061	15,680	29,334	17,707	4,522	10,195	19,763	15,258
Taxes	3,952	5,458	7,990	5,845	1,888	2,649	4,527	3,661
Insurance and miscellaneous	2,630	4,093	6,976	4,564	3,004	4,155	7,240	5,822
Interest on nonland capital	9,794	16,520	27,391	18,150	6,118	14,248	26,527	20,702
Land charge or net rent	16,329	22,172	30,038	23,232	9,937	16,390	27,779	22,432
Total nonfeed cost	102,629	162,138	264,024	177,850	87,679	151,308	247,995	202,152
Capital account adjustment	550	(646)	1,076	(110)	0	1,145	620	793
Management returns	(6,433)	4,584	17,415	6,130	6,194	18,988	57,452	39,851
Farm production per \$1.00 of nonfeed costs	0.93	1.03	1.06	1.04	1.07	1.12	1.23	1.19
Farm production per man	77,743	101,619	102,340	99,907	59,393	91,847	102,751	98,148
Financial summary								
Cash operating income	114,943	195,075	339,616	217,890	104,130	202,133	358,083	284,376
Inventory change	3,997	8,955	13,305	9,330	1,898	4,296	21,364	13,721
Accts. receivable (net change)	2,048	3,934	3,668	3,643	405	154	468	342
Farm products used	995	1,592	2,703	1,770	1,062	1,309	3,230	2,371
Less purchased feed	15,591	31,140	66,887	37,306	13,299	29,589	70,983	51,913
Less purchased livestock	10,048	10,078	10,155	10,092	75	8,983	6,183	6,964
Adjusted gross farm income	96,344	168,339	282,250	185,235	94,121	169,319	305,979	241,932
Cash operating expense	48,969	81,145	149,953	92,738	47,794	80,846	143,375	114,139
Prepaid expense (-if increased)	(112)	644	210	453	4	(1,269)	(2,499)	(1,893)
Accts. payable (+if increased)	(64)	409	236	312	230	(1,607)	(1,880)	(1,666)
Farm-produced inputs	717	977	1,904	1,155	292	620	2,120	1,442
Total operating expense	49,508	83,175	152,303	94,658	48,320	78,588	141,112	112,020
Income before depreciation	46,836	85,164	129,948	90,578	45,801	90,732	164,866	129,912
Less depreciation	8,672	18,176	28,538	19,351	4,052	19,426	26,410	22,550
Capital account adjustment	550	(646)	1,076	(110)	0	1,145	620	793
Net farm income *	38,715	66,341	102,486	71,116	41,749	72,452	139,076	108,155
(operator's share) *	18,107	35,160	61,924	39,113	30,303	48,175	99,185	75,797
Labor & mgt. income per operator	11,550	22,558	31,415	23,208	24,194	34,447	61,957	49,313
Rate earned on investment, %	3.81	5.82	7.09	6.04	7.06	8.74	11.18	10.42

Note: Variations in totals due to rounding to the nearest dollar. Northern Illinois includes both northern and central Illinois. * Interest expense deducted from operator's share only. Shown in parentheses because it pertains to operator's net farm income only.

Table 25a. 1992 Average Operating Costs, Investments, and Land Use by Number of Cows in Herd for Illinois Dairy Farms

Area of state	Northern Illinois				Southern Illinois			
	10-39	40-79	Over 79	All Farms	10-39	40-79	Over 79	All Farms
Number of cows in herd	19	101	35	155	3	23	33	59
Number of farms	19	101	35	155	3	23	33	59
Some costs and returns per tillable acre								
Soil fertility	27.53	30.59	30.49	30.32	25.83	43.45	34.36	36.68
Pesticides	18.53	21.21	22.04	21.25	20.34	17.93	19.12	18.81
Seed and other crop	19.15	19.09	21.06	19.68	16.38	16.72	18.71	18.11
Crop total	65.21	70.89	73.59	71.25	62.55	78.09	72.19	73.60
Light vehicle and utilities	17.31	18.85	23.30	20.06	23.20	17.71	14.96	15.90
Machinery repairs, supplies	30.79	37.29	46.71	39.59	32.86	36.52	37.33	37.01
Machinery hire	19.21	11.43	21.06	14.90	3.64	8.56	11.18	10.29
Fuel and oil	15.04	16.82	18.57	17.20	18.81	16.28	16.47	16.47
Machinery depreciation	29.88	43.61	43.70	42.57	12.01	52.49	36.51	40.38
Power and equipment total	112.25	128.00	153.34	134.33	90.52	131.57	116.44	120.05
Drying and storage	5.07	6.27	5.55	5.96	0.97	1.00	1.08	1.06
Building repair	9.58	7.92	15.45	10.29	3.23	5.99	5.37	5.49
Building depreciation	14.12	17.38	25.92	19.67	9.13	10.22	11.71	11.24
Building total	28.77	31.57	46.92	35.92	13.33	17.21	18.16	17.79
Labor, unpaid	96.55	77.51	67.44	75.99	101.74	73.69	49.87	57.61
Labor, hired	16.23	22.09	54.63	31.33	56.44	34.14	39.38	38.32
Labor total	112.78	99.60	122.07	107.32	158.18	107.83	89.26	95.93
Value of feed fed	220.41	280.49	355.20	298.08	175.98	233.84	252.94	245.95
Capital purchases	76.56	77.39	58.83	71.80	19.72	79.31	45.98	54.61
Operator interest paid	42.20	38.30	38.01	38.52	62.68	35.31	32.32	33.83
Crop returns	270.36	291.93	289.29	289.47	232.71	262.22	268.95	266.29
Livestock return above feed	210.84	263.37	385.19	295.59	243.46	279.80	281.21	279.98
Value of farm production	485.38	562.44	683.95	592.66	489.77	546.11	556.50	552.14
Total nonfeed cost	520.82	544.87	644.10	572.57	457.46	488.50	452.75	462.73
Management returns	(32.65)	15.40	42.48	19.74	32.32	61.30	104.89	91.22
Farm investment	53,808	85,878	141,368	94,477	29,727	81,607	164,072	125,094
Livestock inventory	31,255	52,886	71,567	54,453	30,321	41,188	82,347	63,656
Grain inventory	13,195	37,033	56,804	38,575	6,468	34,489	62,858	48,932
Remaining cost in buildings and fence	29,487	40,109	70,840	45,746	12,081	20,155	28,983	24,682
soil fertility	0	69	222	95	0	0	0	0
Value of land (current)	388,794	527,903	715,177	553,139	236,600	390,234	661,413	534,098
Total farm investment	516,539	743,880	1,055,977	786,486	315,197	567,673	999,672	796,462
Total investment per acre	2,163	2,150	2,191	2,164	1,330	1,679	1,699	1,684
Machinery invest. per till. acre	67	124	139	124	34	111	115	112
Percent tillable land in								
Corn and corn silage	55.9	54.9	54.0	54.7	42.8	38.8	38.7	38.8
Soybeans	10.2	9.5	9.5	9.5	27.5	17.9	23.5	22.0
Wheat	0.1	0.0	0.0	0.0	13.2	14.6	14.0	14.2
Other small grain	5.3	5.0	3.1	4.4	0.0	0.2	0.0	0.1
Diverted acres	2.1	2.4	1.7	2.2	2.1	1.7	2.5	2.3
All hay and pasture	26.2	27.8	29.9	28.3	14.4	25.0	19.0	20.6
Crop yields, bushels per acre								
Corn	120	124	125	124	113	129	129	128
Soybeans	42	41	46	43	34	40	40	40
Wheat	43	0	0	43	52	59	56	57

Note: Variations in totals due to rounding to the nearest dollar. Northern Illinois includes both northern and central Illinois.

Table 26. 1992 Average Return, Costs, and Financial Summary by Size and Months of Labor for Illinois Beef Farms

Area of state	Northern Illinois				Months of Labor		Southern Illinois
	180-339	340-799	Over 799	All Farms	21-27	31-39	
Range in size (total acres)	11	46	24	81	12	6	18
Number of farms	295	534	1,234	709	836	1,108	610
Total acres in farm	270	447	1,065	606	766	789	458
Acres of tillable land	80	78	80	79	82	77	51
Soil rating on tillable land	13.2	18.1	31.0	21.2	24.0	34.9	22.9
Months of hired labor	1.7	5.5	15.6	8.0	11.0	18.7	8.3
Beef produced, hundredweight	1,482	2,388	5,328	3,136	4,534	4,256	1,208
Pork produced, hundredweight	220	609	1,188	728	1,683	796	881
Dairy cows, number	0	0	0	0	0	0	0
Dollar returns per farm	84,861	139,979	347,365	193,941	256,263	262,083	113,289
Crop returns	28,784	61,193	151,156	83,447	138,196	146,288	30,149
Livestock returns above feed	505	1,104	4,698	2,088	2,336	6,421	1,097
Custom work	476	1,226	2,562	1,520	1,410	5,123	2,475
Other farm receipts							
Value of farm production	114,626	203,502	505,781	280,997	398,205	419,914	147,010
Dollar costs per farm							
Crop expenses	22,250	36,906	88,525	50,210	63,196	60,949	25,035
Power and equipment	24,449	37,335	93,237	52,149	75,134	78,821	36,237
Building and fence	7,525	11,957	21,023	14,041	17,863	20,428	6,335
Labor	19,904	27,021	50,558	33,028	37,965	52,584	32,298
Livestock services and supplies	3,244	7,105	14,024	8,631	12,819	11,690	6,570
Taxes	5,104	8,772	19,432	11,432	16,431	13,954	4,620
Insurance and miscellaneous	3,601	5,917	13,993	7,995	9,694	13,274	4,874
Interest on nonland capital	17,752	28,103	65,048	37,644	54,390	56,270	19,332
Land charge or net rent	22,940	37,265	88,398	50,470	65,993	68,522	20,005
Total nonfeed cost	126,769	200,381	454,238	265,601	353,485	376,491	155,306
Capital account adjustment	434	880	3,982	1,739	738	5,766	310
Management returns	(11,708)	4,002	55,525	17,134	45,458	49,189	(7,985)
Farm production per \$1.00 of nonfeed costs	0.90	1.02	1.11	1.06	1.13	1.12	0.95
Farm production per man	103,991	134,968	196,076	158,731	199,172	144,383	76,905
Financial summary							
Cash operating income	281,810	505,535	1,113,990	655,435	956,282	818,995	261,245
Inventory change	1,086	23,282	62,357	31,846	68,038	75,985	1,733
Accts. receivable (net change)	5,214	9,044	18,490	11,323	12,541	20,262	1,242
Farm products used	722	955	1,780	1,168	1,758	606	886
Less purchased feed	23,792	44,956	80,090	52,492	91,621	50,147	37,693
Less purchased livestock	150,414	290,349	610,747	366,278	548,793	445,788	80,404
Adjusted gross farm income	114,626	203,515	505,781	281,004	398,205	419,914	147,010
Cash operating expense	52,008	97,501	225,995	129,395	175,270	181,662	81,205
Prepaid expense (-if increased)	1,607	(576)	(601)	(287)	(1,149)	4,890	(796)
Accts. payable (+if increased)	292	886	450	676	1,404	0	0
Farm-produced inputs	0	50	429	156	495	6	127
Total operating expense	53,907	97,860	226,272	129,939	176,019	186,558	80,535
Income before depreciation	60,719	105,655	279,509	151,065	222,187	233,356	66,475
Less depreciation	14,852	18,317	51,457	27,666	37,583	40,892	13,501
Capital account adjustment	434	880	3,982	1,739	738	5,766	310
Net farm income *	46,301	88,218	232,034	125,138	185,341	198,230	53,284
(operator's share) *	27,975	40,560	99,955	56,449	83,879	85,034	19,790
Labor & mgt. income per operator	5,063	20,822	55,714	29,020	53,960	28,637	9,223
Rate earned on investment, %	3.64	5.43	6.96	6.10	7.09	7.26	4.25

Note: Variations in totals due to rounding to the nearest dollar. Northern Illinois includes both northern and central Illinois. * Interest expense deducted from operator's share only. Shown in parentheses because it pertains to operator's net farm income only.

Table 26a. 1992 Average Operating Costs, Investments, and Land Use by Size and Months of Labor for Illinois Beef Farms

Area of state	Northern Illinois			Months of Labor			Southern Illinois
	180-339 11	340-799 46	Over 799 24	All Farms 81	Your Farm	21-27 12	
Range in size (total acres)							
Number of farms							18
Some costs and returns per tillable acre							
Soil fertility	37.94	36.42	34.01	35.26		36.32	30.40
Pesticides	25.78	25.72	28.47	27.16		25.76	26.55
Seed and other crop	18.67	20.36	20.62	20.39		20.43	20.28
Crop total	82.38	82.50	83.09	82.80		82.52	77.23
Light vehicle and utilities	9.18	8.63	7.25	7.95		9.21	6.57
Machinery repairs, supplies	21.25	23.15	23.18	23.05		25.37	28.86
Machinery hire	9.82	9.80	6.25	7.95		11.57	11.54
Fuel and oil	11.52	13.64	14.39	13.90		16.88	15.03
Machinery depreciation	38.74	28.25	36.44	33.15		35.08	37.88
Power and equipment total	90.52	83.46	87.52	86.00		98.11	99.88
Drying and storage	5.12	6.93	4.35	5.47		4.12	5.19
Building repair	6.50	7.10	3.53	5.20		5.21	6.76
Building depreciation	16.25	12.70	11.86	12.48		13.99	13.94
Building total	27.86	26.73	19.73	23.16		23.32	25.89
Labor, unpaid	64.12	42.13	21.65	32.80		25.46	30.73
Labor, hired	9.57	18.27	25.81	21.67		24.11	35.90
Labor total	73.69	60.41	47.46	54.47		49.57	66.63
Value of feed fed	258.81	265.13	226.09	244.43		286.74	223.05
Capital purchases	46.35	36.53	30.98	34.23		30.29	34.99
Operator interest paid	30.29	45.83	47.25	45.63		58.63	81.66
Crop returns	314.19	312.92	326.05	319.83		334.62	332.10
Livestock return above feed	106.57	136.80	141.88	137.62		180.45	185.37
Value of farm production	424.40	454.93	474.74	463.40		519.96	532.10
Total nonfeed cost	469.36	447.95	426.36	438.01		461.57	477.07
Management returns	(43.35)	8.95	52.12	28.26		59.36	62.33
Farm investment							
Livestock inventory	138,694	224,131	467,982	284,780		441,244	410,596
Grain inventory	54,390	92,376	222,461	125,761		172,567	164,096
Remaining cost in machinery and auto buildings and fence	27,850	35,297	130,070	62,366		89,682	113,151
soil fertility	27,983	39,537	78,211	49,427		64,382	76,192
Value of land (current)	546,190	887,258	2,104,718	1,201,668		0	0
Total farm investment	795,353	1,278,600	3,003,442	1,724,038		1,571,264	1,631,465
Total investment per acre	2,697	2,395	2,433	2,432		2,799	2,163
Machinery invest. per till. acre	103	79	122	103		117	143
Percent tillable land in							
Corn and corn silage	64.6	69.2	69.4	69.0		70.5	70.3
Soybeans	14.6	13.1	19.1	16.3		17.7	18.0
Wheat	0.0	0.0	0.3	0.2		0.2	0.4
Other small grain	2.7	1.4	0.8	1.2		0.2	0.1
Diverted acres	2.6	4.0	4.2	4.0		3.7	4.0
All hay and pasture	15.7	10.7	6.1	8.6		7.1	7.2
Crop yields, bushels per acre							
Corn	143	136	148	143		145	133
Soybeans	47	45	49	47		49	47
Wheat	0	0	35	35		51	52

Note: Variations in totals due to rounding to the nearest dollar. Northern Illinois includes both northern and central Illinois.

Table 27. 1992 Average Return, Costs, and Financial Summary by Size, Type, and Soil Rating for Part-time Illinois Farms that Use Less than 10 Months of Labor

Area of state	Northern 56-85		Northern 86-100		Southern 36-85		Livestock All Farms
	Grain <260 29	Grain >260 54	Grain <260 64	Grain >260 68	Grain <260 24	Grain >260 32	
Range in size (total acres) Number of farms	179 149	468 425	172 150	422 392	170 143	446 372	195 120
Total acres in farm	149	78	94	93	57	52	52
Acres of tillable land	5.3	6.4	4.7	6.6	5.2	6.0	5.3
Soil rating on tillable land	0.2	0.6	0.1	0.3	0.0	0.2	0.0
Total months labor	11	19	6	4	10	29	117
Months of hired labor	5	47	14	18	0	32	144
Beef produced, hundredweight	0	0	0	0	0	0	0
Pork produced, hundredweight							
Dairy cows, number							
Dollar returns per farm	44,285	128,124	49,796	133,960	36,386	95,064	23,747
Crop returns	(23)	626	96	235	126	891	(1,161)
Livestock returns above feed	265	1,410	273	1,308	104	1,186	237
Custom work	540	946	642	1,117	738	326	521
Other farm receipts							
Value of farm production	45,066	131,106	50,806	136,621	37,354	97,466	23,344
Dollar costs per farm							
Crop expenses	10,730	30,419	11,534	30,636	8,907	22,530	6,283
Power and equipment	10,379	19,275	9,240	20,315	8,761	18,348	9,354
Building and fence	2,998	6,598	3,699	7,186	1,736	3,648	3,648
Labor	7,972	9,558	7,063	9,877	7,740	8,953	7,929
Livestock services and supplies	135	276	122	136	93	149	730
Taxes	2,589	7,129	3,577	8,148	1,801	3,445	975
Insurance and miscellaneous	2,266	4,128	2,163	4,085	1,820	2,628	2,026
Interest on nonland capital	3,282	6,661	3,123	7,435	2,340	5,048	4,679
Land charge or net rent	12,740	35,122	16,055	38,745	8,016	19,367	6,292
Total nonfeed cost	53,091	119,165	56,576	126,564	41,215	82,637	41,916
Capital account adjustment	152	741	1,008	542	213	1,275	373
Management returns	(7,872)	12,682	(4,761)	10,599	(3,647)	16,104	(18,198)
Farm production per \$1.00 of nonfeed costs	0.85	1.10	0.90	1.08	0.91	1.18	0.56
Farm production per man	101,310	244,058	129,331	249,681	86,758	195,544	52,997
Financial summary							
Cash operating income	39,694	109,645	45,051	119,008	33,620	83,738	28,978
Inventory change	3,968	18,954	4,410	12,005	4,079	12,873	254
Accts. receivable (net change)	2,079	5,361	2,391	6,234	49	2,827	471
Farm products used	94	233	33	141	108	208	220
Less purchased feed	298	1,372	746	356	483	1,187	3,768
Less purchased livestock	472	1,715	331	411	18	993	2,811
Adjusted gross farm income	45,066	131,106	50,806	136,621	37,354	97,466	23,344
Cash operating expense	24,290	57,950	26,626	61,601	19,532	43,891	19,199
Prepaid expense (-if increased)	565	2,012	257	486	114	99	0
Accts. payable (+ if increased)	41	110	171	(345)	53	(548)	0
Farm-produced inputs	51	203	18	136	79	132	24
Total operating expense	24,947	60,275	27,071	61,877	19,778	43,572	19,223
Income before depreciation	20,119	70,831	23,736	74,744	17,577	53,894	4,121
Less depreciation	4,477	8,413	3,354	9,085	3,362	5,931	3,793
Capital account adjustment	152	741	1,008	542	213	1,275	373
Net farm income *	15,794	63,160	21,389	66,201	14,427	49,238	701
(operator's share) *	5,405	26,089	10,782	26,648	8,829	23,539	236
Labor & mgt. income per operator	(227)	21,293	2,070	20,020	3,946	24,729	(10,269)
Rate earned on investment, %	2.33	5.86	3.38	5.50	3.03	7.65	(3.38)

Note: Variations in totals due to rounding to the nearest dollar. Northern Illinois includes both northern and central Illinois.
* Interest expense deducted from operator's share only. Shown in parentheses because it pertains to operator's net farm income only.

Table 27a. 1992 Operating Costs, Investments, and Land Use by Size, Type, and Soil Rating for Part-time Illinois Farms that Use Less than 10 Months of Labor

Area of state	Northern 56-85		Northern 86-100		Southern 36-85		Livestock All Farms	Livestock All Farms
	Grain <260	Grain >260	Grain <260	Grain >260	Grain <260	Grain >260		
Range in size (total acres)	29	54	64	68	24	32		
Number of farms								
Some costs and returns per tillable acre								
Soil fertility	28.40	29.85	32.32	37.98	29.22	27.76	28.10	
Pesticides	24.78	23.26	26.55	22.55	18.37	17.83	9.00	
Seed and other crop	18.69	18.38	18.04	17.57	14.75	14.94	15.39	
Crop total	71.87	71.49	76.90	78.10	62.34	60.54	52.48	
Light vehicle and utilities	11.08	4.49	8.04	4.26	9.95	4.77	18.67	
Machinery repairs, supplies	17.73	11.91	17.19	11.91	13.40	14.28	29.93	
Machinery hire	9.38	5.21	16.73	12.12	10.68	7.74	4.59	
Fuel and oil	8.32	6.99	7.05	6.28	8.75	8.62	10.23	
Machinery depreciation	23.01	16.70	12.60	17.23	18.54	13.90	14.72	
Power and equipment total	69.51	45.30	61.61	51.79	61.32	49.30	78.13	
Drying and storage	9.63	10.90	11.63	9.59	2.38	2.46	5.21	
Building repair	3.47	1.54	3.26	5.90	4.79	1.33	8.29	
Building depreciation	6.98	3.07	9.77	5.93	4.98	2.04	16.97	
Building total	20.08	15.51	24.66	18.32	12.15	5.83	30.47	
Labor, unpaid	51.20	20.43	46.49	24.02	54.02	23.43	66.23	
Labor, hired	2.19	2.03	0.60	1.16	0.15	0.63	0.00	
Labor total	53.39	22.46	47.09	25.18	54.17	24.06	66.23	
Value of feed fed	7.61	5.34	4.49	1.83	3.56	6.35	128.37	
Capital purchases	27.27	20.70	21.94	18.40	26.68	32.36	16.13	
Operator interest paid	17.35	20.01	17.75	16.93	14.53	20.17	10.95	
Crop returns	296.60	301.13	332.00	341.52	254.67	255.44	198.36	
Livestock return above feed	(0.16)	1.47	0.64	0.60	0.88	2.39	(9.70)	
Value of farm production	301.82	308.13	338.74	348.30	261.45	261.90	195.00	
Total nonfeed cost	355.57	280.07	377.21	322.66	288.47	222.05	350.13	
Management returns	(52.73)	29.81	(31.75)	27.02	(25.53)	43.27	(152.02)	
Farm investment								
Livestock inventory	2,104	3,100	1,227	945	1,369	4,534	23,921	
Grain inventory	24,853	62,523	28,047	74,750	15,369	41,825	14,159	
Remaining cost in machinery and auto buildings and fence	9,881	16,596	4,353	17,322	7,557	16,550	6,774	
soil fertility	9,321	10,186	10,355	15,763	5,899	5,646	19,209	
Value of land (current)	0	126	13	148	240	24	0	
Total farm investment	303,341	836,233	382,262	922,510	190,866	461,124	149,800	
Total investment per acre	349,499	928,766	426,257	1,031,440	221,300	529,703	213,863	
Machinery invest. per till. acre	1,952	1,986	2,472	2,443	1,299	1,188	1,099	
Percent tillable land in	66	39	29	44	53	44	57	
Corn and corn silage	52.4	51.3	49.5	50.0	29.7	33.8	39.7	
Soybeans	42.1	42.5	44.3	46.1	41.0	41.4	15.9	
Wheat	0.8	1.1	0.1	0.2	15.0	9.0	6.9	
Other small grain	0.6	0.3	0.1	0.2	0.0	0.0	0.0	
Diverted acres	2.8	3.0	2.5	2.2	3.5	12.1	1.4	
All hay and pasture	1.2	1.0	0.3	0.3	2.7	1.3	35.6	
Crop yields, bushels per acre								
Corn	138	147	163	167	145	149	134	
Soybeans	43	44	47	49	43	39	35	
Wheat	27	38	37	60	56	54	41	

Note: Variations in totals due to rounding to the nearest dollar. Northern Illinois includes both northern and central Illinois.

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Associations and Field Staff

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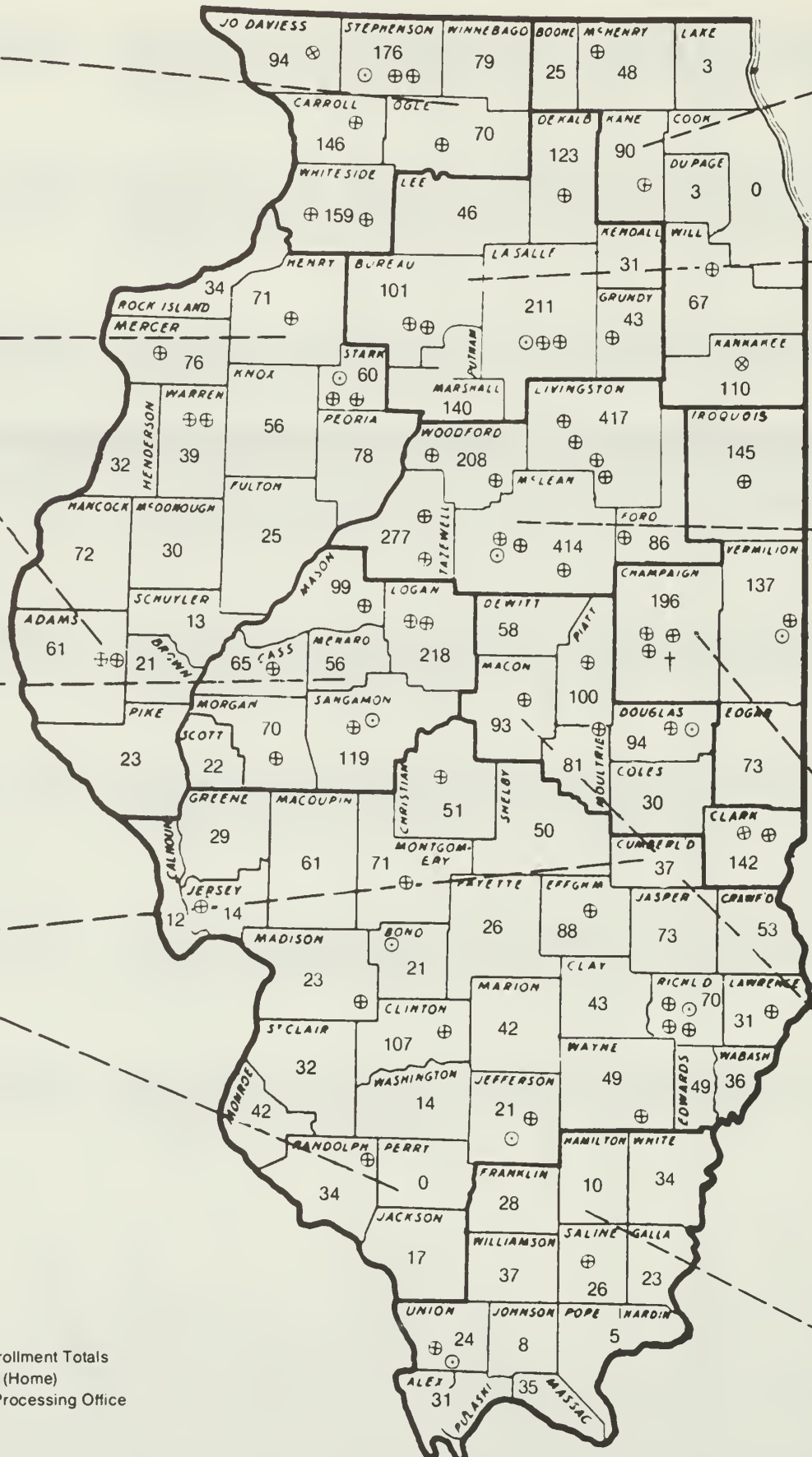
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- * Numbers are Enrollment Totals
- ⊕ Field Staff Office (Home)
- ⊙ District Record Processing Office
- † State Office



OFFICIAL ENROLLMENT

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