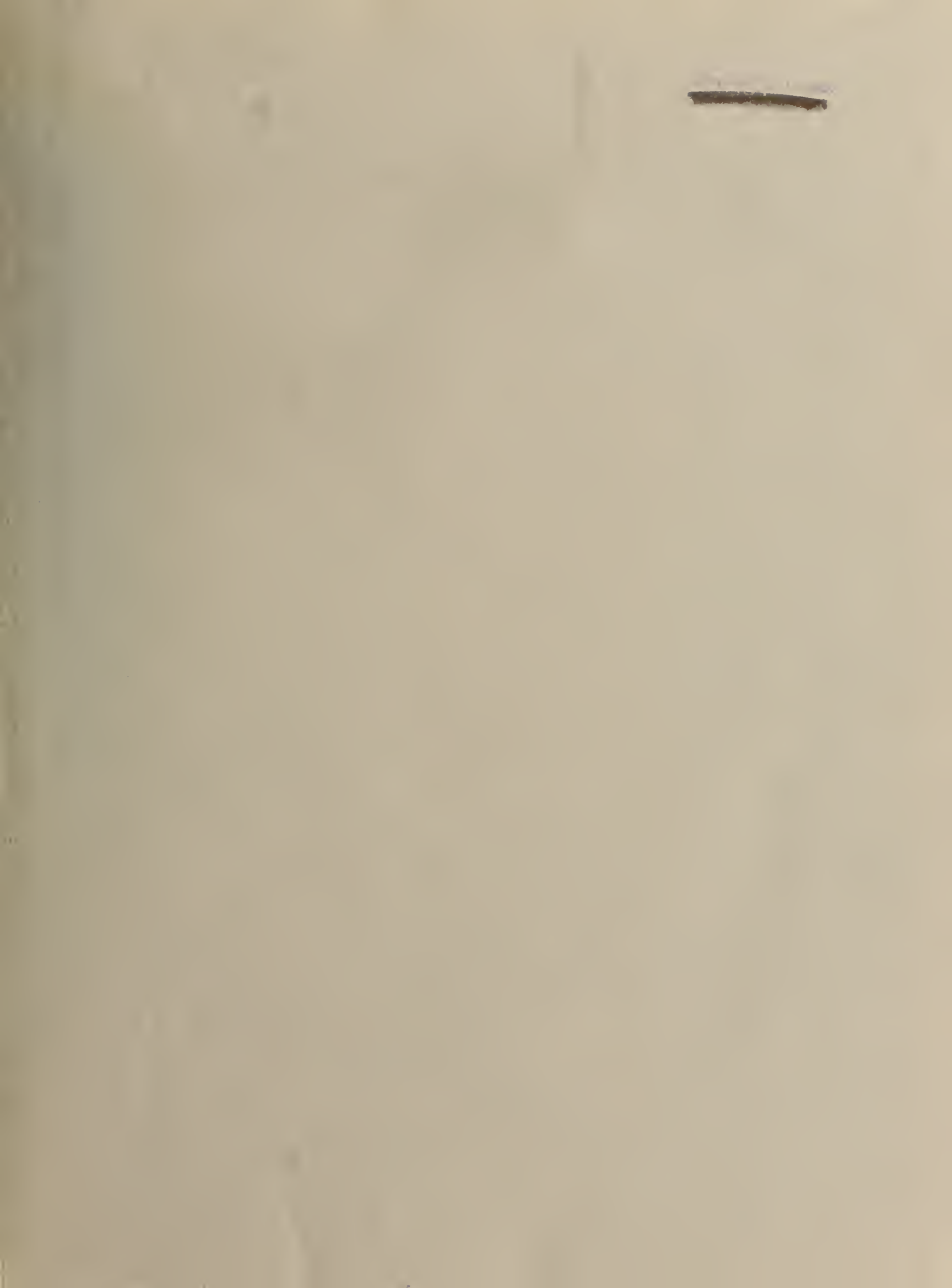



FARM FINANCIAL RECORD STUDIES 1939



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FARM FINANCIAL RECORDS

Prepared by the Department of Agricultural Economics
of the University of Illinois

		<u>Page</u>
1939 Farm Business Reports		
Farming-Type Area One - Chicago Dairy Area	AE-1376	1
Farming-Type Area Two - Northwestern Mixed Livestock Area	AE-1377	21
Farming-Type Area Three - Western Livestock and Grain Area	AE-1378	43
Farming-Type Area Four - East Central Cash Grain Area	AE-1379	65
Farming-Type Area Five - West Central General Farming Area	AE-1380	87
Farming-Type Area Six - St. Louis Dairy and Wheat Area	AE-1381	109
Farming-Type Area Seven - South Central Mixed Farming Area	AE-1382	131
Farming-Type Area Eight - Wabash Valley Grain and Livestock Area	AE-1383	151
Farming-Type Area Nine - Southern Fruit and Vegetable Area	AE-1384	171
Summary of Annual Farm Business Reports on 2,713 Illinois Farms	AE-1423	189
1939 Complete Costs and Farm Business Analysis on 29 Farms in Champaign and Piatt Counties, Illinois	AE-1433	217
Fifteenth Annual Report of the Farm Bureau Farm Management Service for the Year 1939	AE-1410	281
Summary of Farm Account Record Study on 90 Farms in Edwardsville Soil Conservation Area, Madison and St. Clair Counties, Illinois, 1939	AE-1421	311
Summary of Farm Account Record Study on 110 Farms in LeRoy Soil Conservation Area, McLean County, Illinois, 1939	AE-1426	349

FARM BUSINESS REPORT . . . 1939



FARMING-TYPE AREA ONE Chicago Dairy Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

Annual Farm Business Report

ON EIGHTY SEVEN FARMS IN FARMING-TYPE AREA 1, 1939

By P. E. Johnston, J. B. Cunningham, and E. M. Hughes^{1/}


Farm earnings of accounting farms in Farming-Type Area 1 were higher in 1939 than in 1938 or 1937. The net earnings per acre averaged \$10.64 in 1939, \$9.55 in 1938, \$8.69 in 1937, and \$14.35 in 1936. The items considered in calculating the net earnings included inventory changes, cash receipts, cash expenses, the value of the farm products used in the household (in 1938 and 1939 only), and unpaid family labor (Table 1).

Since the value of farm products used in the household was not included in the records prior to 1938, the earnings for 1938 and 1939 are not strictly comparable to those for other years. The value per acre of farm products used was \$1.43 in 1938 and \$1.41 in 1939.

The accounting farms were larger than average, crop yields were above average, and the farms as a whole were operated with efficiency which was greater than average. Therefore, the figures contained in this report represent conditions which are better than average for this area. This fact is borne out by survey records taken in various areas of the state.

High crop yields and more livestock, accompanied by increased industrial activity and improved demand for farm products, especially during the latter half of the year, were the principal factors producing higher earnings in 1939 (Figs. 1, 2, and 3).



 Farming-Type Area 1
Dairy and Truck

^{1/} R. J. Mutti supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm accounts project was conducted in cooperation with the farm bureaus in the following counties and was supervised by the farm advisers indicated:

J. H. Brock, McHenry County
H. S. Wright, DuPage County
A. C. Johnson, Kane County

D. M. Chalcraft, Boone County
H. C. Gilkerson, Lake County
C. A. Hughes, Cook County

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 1, 1936-1939

Items	Your farm	Average of all farms in area			
		1939	1938	1937	1936
Number of farms- - - - -	--	87	78	70	67
<u>Inventory Changes</u>					
Farm improvements- - - - -	\$	\$ -4	\$ 8	\$ 102	\$ 25
Livestock- - - - -		430	87	91	332
Feed and grain - - - - -		374	299	-238	664
Machinery and equipment ^{1/} - - - - -		79	198	216	216
Automobile (farm share) - - - - -		8	-6	--	--
Totals - - - - -	\$	\$ 887	\$ 586	\$ 171	\$1,237
<u>Cash Receipts</u>					
Farm improvements- - - - -	\$	\$ 2	\$ 22	\$ 2	\$ 2
Horses - - - - -		35	64	66	52
Productive livestock: Cattle - - - - -		1,085	1,042	1,005	938
Dairy sales- - - - -		2,130	2,483	3,088	2,793
Hogs - - - - -		492	582	595	753
Sheep- - - - -		86	126	81	140
Poultry- - - - -		91	79	90	143
Egg sales- - - - -		195	212	186	214
Total productive livestock - - - - -	()	(4,079)	(4,524)	(5,045)	(4,981)
Feed and grain - - - - -		414	366	627	583
Machinery and equipment ^{1/} - - - - -		153	167	186	173
Automobile (farm share)- - - - -		23	10	--	--
Labor off farm - - - - -		38	30	56	42
Miscellaneous- - - - -		9	6	5	6
AAA payments - - - - -		311	137	92	73
Totals - - - - -	\$	\$5,064	\$5,326	\$6,079	\$5,912
<u>Cash Expenses</u>					
Farm improvements- - - - -	\$	\$ 289	\$ 322	\$ 417	\$ 320
Horses - - - - -		40	45	87	106
Productive livestock: Cattle - - - - -		747	572	495	435
Hogs - - - - -		86	72	67	72
Sheep- - - - -		61	97	64	108
Poultry- - - - -		37	37	32	44
Total productive livestock - - - - -	()	(931)	(778)	(658)	(659)
Feed and grain - - - - -		517	476	587	504
Machinery and equipment ^{1/} - - - - -		721	883	961	904
Automobile (farm share) - - - - -		110	79	--	--
Hired labor- - - - -		490	503	468	433
Miscellaneous- - - - -		34	25	30	32
Crop expense - - - - -		178	202	307	238
Livestock expense- - - - -		80	80	87	126
Taxes- - - - -		244	252	253	279
Totals - - - - -	\$	\$3,634	\$3,645	\$3,855	\$3,601
<u>Summary</u>					
Cash balance - - - - -	\$	\$1,430	\$1,681	\$2,224	\$2,311
Farm products used in household ^{2/} - - - - -		241	267	--	--
Total inventory change - - - - -		887	586	171	1,237
Receipts less expenses - - - - -		2,558	2,534	2,395	3,548
Total unpaid labor - - - - -		740	758	796	774
Net earnings per farm- - - - -	\$	\$1,818	\$1,776	\$1,599	\$2,774
Net earnings per acre- - - - -	\$	\$10.64	\$ 9.55	\$ 8.69	\$14.35

^{1/} Includes farm share of automobile for 1936 and 1937.

^{2/} Not included as income for 1936 and 1937.

Inventory Changes, Cash Receipts, Cash Expenses, and Earnings

Inventory changes.--The year 1939 was the fourth consecutive year of increasing inventories, the increases averaging \$887 in 1939, \$586 in 1938, \$171 in 1937, and \$1,237 in 1936 (Table 1). The largest increases in 1939 were in live-stock and feed and grain. The increased value of feed and grain represented higher prices at the end of the year as well as larger quantities of grain on hand (Page 1 and Fig. 2). The average amounts of grain on hand in Area 1 at the two inventory periods follow:

	<u>Beginning of year (bushels)</u>	<u>End of year (bushels)</u>
Corn	1,540	1,795
Oats	710	581

Cash receipts.--Cash receipts were the smallest in the last four years, averaging \$5,064 in 1939 (Table 1). Livestock receipts, principally dairy sales and hogs were smaller this year than last. AAA payments and grain sales were larger in 1939 than in 1938. The larger AAA receipts were mainly due to a doubling-up in payments, many farmers receiving payments in 1939 for participation in both the 1938 and 1939 programs.

Cash expenses.--Cash expenses were smaller in 1939 than in either 1938 or 1937. Less money was spent for machinery and equipment, but more was spent for cattle and feeds, in 1939 than in 1938.

Earnings.--Cash receipts exceeded cash expenses in 1939 by \$1,430, or by a smaller margin than that for any other year during the past four years. Cash balance, the difference between these receipts and expenses, is the average amount of money available for family living expenses, interest, debt payments, and savings.

The amounts deducted for operator's and family labor remained rather uniform during the 4-year period, a difference of only \$56 occurring between the low year, 1939, and the high year, 1937. The uniformity in valuation was due to the fact that approximately the same amount of family labor was available each year and to the fact that the same rate (\$50 per month) was charged for the physical labor of the operator and other mature members of the family.

The net earnings per farm averaged \$1,818 in 1939 compared with \$1,776 for 1938. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding the value of farm products used in the household and the inventory increases to the cash balance and by subtracting the value of unpaid labor from the resulting total. Therefore, this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

TABLE 2.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 1, 1939

Items	Your farm	Average of all farms	Land-area tillable	
			85 percent or more	Less than 85 percent
Number of farms - - - - -	--	87	36	51
<u>Capital Investments</u>				
Land- - - - -	\$ _____	\$13,252	\$13,024	\$13,413
Farm improvements - - - - -	_____	5,873	5,493	6,142
Horses - - - - -	_____	391	410	377
Productive livestock: Cattle- - - - -	_____	2,601	2,512	2,663
Hogs- - - - -	_____	274	328	236
Sheep - - - - -	_____	24	27	23
Poultry - - - - -	_____	119	96	135
<u>Total productive livestock- - - - -</u>	()	(3,018)	(2,963)	(3,057)
Feed and grain - - - - -	_____	1,830	1,876	1,798
Machinery and equipment - - - - -	_____	1,929	1,857	1,979
Automobile (farm share) - - - - -	_____	129	124	133
Totals- - - - -	\$ _____	\$26,422	\$25,747	\$26,899
<u>Receipts and Net Increases</u>				
Horses - - - - -	\$ _____	\$ --	\$ --	\$ --
Productive livestock: Cattle- - - - -	_____	730	851	645
Dairy sales - - - - -	_____	2,130	1,737	2,407
Hogs- - - - -	_____	430	544	351
Sheep - - - - -	_____	42	75	17
Poultry - - - - -	_____	60	58	62
Egg sales - - - - -	_____	195	160	220
<u>Total productive livestock- - - - -</u>	()	(3,587)	(3,425)	(3,702)
Farm products used in household - - - - -	_____	241	226	252
Feed and grain - - - - -	_____	271	447	146
Labor off farm - - - - -	_____	38	32	42
Miscellaneous - - - - -	_____	9	10	8
AAA payments- - - - -	_____	311	317	307
Totals- - - - -	\$ _____	\$ 4,457	\$ 4,457	\$ 4,457
<u>Expenses and Net Decreases</u>				
Farm improvements - - - - -	\$ _____	\$ 291	\$ 244	\$ 324
Horses - - - - -	_____	14	5	20
Productive livestock- - - - -	_____	--	--	--
Feed and grain- - - - -	_____	--	--	--
Machinery and equipment - - - - -	_____	489	520	468
Automobile (farm share) - - - - -	_____	79	78	80
Hired labor - - - - -	_____	490	429	533
Miscellaneous - - - - -	_____	34	29	38
Crop expense- - - - -	_____	178	180	177
Livestock expense - - - - -	_____	80	67	88
Taxes - - - - -	_____	244	225	257
Totals- - - - -	\$ _____	\$ 1,899	\$ 1,777	\$ 1,985
Receipts less expenses- - - - -	\$ _____	\$ 2,558	\$ 2,680	\$ 2,472
Family labor- - - - -	_____	224	248	207
Returns for labor, capital, mgt.- - - - -	_____	2,334	2,432	2,265
Operator's labor- - - - -	_____	516	500	526
Returns for capital and mgt.- - - - -	_____	1,818	1,932	1,739
<u>Rate Earned on Investment - - - - -</u>	%	6.9%	7.5%	6.0%
Interest on investment- - - - -	\$ _____	\$ 1,321	\$ 1,288	\$ 1,345
Labor and Management Earnings - - - - -	_____	1,013	1,144	920
Non farm income - - - - -	\$ _____	\$ 75	\$ 70	\$ 78

Variation in farm earnings.--A wide variation was found in earnings on the farms in Area 1; for example, 30 farms earned less than 5 percent on the investment, with an average rate earned of 1.9 percent, but in contrast 24 farms earned 9 percent or more, with an average rate earned of 12.0 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had a loss of \$246 for labor and management earnings as contrasted with a gain of \$2,402 for the latter group. By studying the reasons for these variations, farm operators can improve their chances of financial success. The variation in earnings and in size of farm for all records in the area was as follows:

<u>Rate earned on investment (percent)</u>	<u>Number of farms</u>	<u>Average rate earned (percent)</u>	<u>Acres per farm</u>	<u>Capital invested per farm</u>	<u>Gross earnings per farm</u>	<u>Net earnings per farm</u>	<u>Labor and management earnings</u>
Less than 5	30	1.9	155	\$23,232	\$3,332	\$ 434	\$ -246
5 to 9	33	7.1	178	29,307	4,960	2,087	1,146
9 or more	24	12.0	181	26,444	6,012	3,179	2,402

Comparison of Farms According to Quality of Land

The 87 farms were divided into two groups according to the percent of land area tillable. Of this total number of farms 36 had 85 percent or more of land area tillable, and 51 had less than 85 percent tillable. The average percent tillable was 91.7 for the former group and 69.8 for the latter group.

This grouping of farms gives each farmer an opportunity to compare his farm with the average of other farms having a similar quality of land as well as with the average of all accounting farms (Tables 2 and 3).

The capital investment averaged \$25,747, or \$162 per acre, for the group of farms having the larger percent of land area tillable, as compared with a capital investment averaging \$26,899, or \$150 per acre, for the group of farms having the smaller percent of land area tillable.

The receipts and net increases were the same for the two groups of farms. The expenses and net decreases, however, were \$208 smaller on the farms of higher-quality land than on those of lower-quality land. The rate earned on investment was 7.5 percent and 6.0 percent, and the labor and management earnings were \$1,144 and \$920, respectively, for the two groups of farms.

The farms on higher-quality land were 21 acres smaller than those on lower-quality land; yet the former had 15 acres more land in crops. They also had a larger percent of tillable land in soybeans and a smaller percent in oats. The amount of livestock per farm was practically the same for the two groups of farms, as indicated by the value of feed fed to productive livestock and the capital invested in productive livestock (Tables 3 and 2).

TABLE 3.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 1, 1939

Items	Your farm	Average of all farms	Land-area tillable	
			85 percent or more	Less than 85 percent
Rate earned on investment- - - - -	_____ %	6.9%	7.5%	6.5%
Acres in farm- - - - -	_____	171	159	180
Acres in crops - - - - -	_____	116	125	110
Gross earnings per acre- - - - -	\$ _____	\$ 26.08	\$ 28.10	\$ 24.82
Total expenses per acre ^{2/} - - - - -	_____	15.44	15.92	15.14
Net earnings per acre- - - - -	_____	10.64	12.18	9.68
<u>Investments</u>				
Value of land per acre - - - - -	\$ _____	\$ 78	\$ 82	\$ 75
Value of improvements per acre - - - - -	_____	34	35	34
Total investment per acre- - - - -	_____	155	162	150
<u>Land Use</u>				
Percent of land-area tillable- - - - -	_____	78.2	91.7	69.8
Percent of tillable land in:				
Corn - - - - -	_____	32.8	32.2	33.2
Oats - - - - -	_____	17.1	13.6	20.0
Wheat- - - - -	_____	1.5	1.4	1.6
Soybeans - - - - -	_____	2.9	6.1	.3
Other crops- - - - -	_____	9.6	11.1	8.5
Legume hay and pasture - - - - -	_____	22.2	21.7	22.5
Non-legume hay and pasture - - - - -	_____	13.9	13.9	13.9
<u>Crop Yields</u>				
Corn - - - - -	_____	63.3	64.6	62.2
Oats - - - - -	_____	38.0	39.5	37.1
Barley - - - - -	_____	27.9	28.7	26.8
Soybeans - - - - -	_____	14.4	14.2	17.5
<u>Livestock Factors</u>				
Value of feed fed to prod. L. S. - - - - -	\$ _____	\$2,320	\$2,327	\$2,315
Feed fed per acre to prod. L. S. - - - - -	_____	13.58	14.67	12.89
Returns per acre from prod. L. S. - - - - -	_____	21.95	22.58	21.56
Returns per \$100 worth of feed fed - - - - -	_____	162	154	167
Returns per \$100 invested in cattle- - - - -	_____	105	97	111
Poultry returns per hen- - - - -	_____	2.74	2.65	2.81
Number of litters farrowed - - - - -	_____	9.2	11.0	7.8
Number of pigs weaned per litter - - - - -	_____	6.3	6.3	6.5
Returns per litter farrowed- - - - -	\$ _____	\$ 75	\$ 74	\$ 76
Average number of cows milked- - - - -	_____	18.9	15.2	21.5
Dairy returns per cow milked - - - - -	\$ _____	\$ 117	\$ 119	\$ 115
<u>Expense Factors</u>				
Machinery cost per crop acre ^{1/} - - - - -	\$ _____	\$ 4.89	\$ 4.78	\$ 4.99
Horse and machinery cost per crop A. - - - - -	_____	6.19	5.95	6.39
Labor cost per crop acre ^{2/} - - - - -	_____	10.26	9.16	11.14
Labor cost per \$100 gross earnings ^{2/} - - - - -	_____	27	26	27
Number of work horses- - - - -	_____	3.5	3.4	3.6
Value of feed fed to horses- - - - -	\$ _____	\$ 137	\$ 141	\$ 134
Improvement cost per acre- - - - -	_____	1.70	1.54	1.80
Taxes per acre - - - - -	_____	1.43	1.42	1.43

1/ Includes farm share of automobile.

2/ Includes operator's and family labor.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS,
FARMS WITH MORE THAN 85 PERCENT OF THE LAND AREA TILLABLE

Accounting Farms in Farming-Type Area 1, 1939

The numbers above the lines across the middle of the page are the averages for the 36 farms included in this group for the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings									Factors that affect expenses			
			Percent tillable land in legume hay and pasture	Crop yields			Feed fed per acre to prod. L. S.	Returns per \$100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked	Total expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Labor cost per \$100 gross earnings
				Corn, bu.	Oats, bu.	Barley, bu.									
15.0	259	38	37	85	60	39	25	204	5.00	124	169	6	3.50	4	11
13.5	239	36	34	81	56	37	23	194	4.50	114	159	8	4.00	5	14
12.0	219	34	31	77	52	35	21	184	4.00	104	149	10	4.50	6	17
10.5	199	32	28	73	48	33	19	174	3.50	94	139	12	5.00	7	20
9.0	179	30	25	69	44	31	17	164	3.00	84	129	14	5.50	8	23
7.5	159	28.10	21.7	64.6	39.5	28.7	14.67	154	2.65	74	119	15.92	5.95	9.16	26
6.0	139	26	19	61	36	27	13	144	2.00	64	109	18	6.50	10	29
4.5	119	24	16	57	32	25	11	134	1.50	54	99	20	7.00	11	32
3.0	99	22	13	53	28	23	9	124	1.00	44	89	22	7.50	12	35
1.5	79	20	10	49	24	21	7	114	.50	34	79	24	8.00	13	38
0	59	18	7	45	20	19	5	104	0	24	69	26	8.50	14	41

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 1, 1939

Items	Source of income		
	Dairy sales 40%+	General farms	
		L.S. 60%-	L.S. 60%+
Number of farms - - - - -	59	12	16
Percent income from prod. L.S.- - - - -	83.1	46.8	87.8
Percent income from crops - - - - -	3.7	36.0	--
<u>Investments</u>			
Total per farm- - - - -	\$26,678	\$21,803	\$28,944
Total per acre- - - - -	159	134	154
Land per acre - - - - -	76	80	82
Improvements per acre - - - - -	38	26	29
Machinery per acre ^{1/} - - - - -	12	8	13
<u>Earnings</u>			
Per farm			
Gross earnings- - - - -	\$ 4,596	\$ 3,631	\$ 4,733
Gross expenses ^{2/} - - - - -	2,710	2,243	2,840
Net earnings- - - - -	1,886	1,388	1,893
Per acre			
Gross earnings- - - - -	\$ 27.37	22.24	25.24
Gross expenses ^{2/} - - - - -	16.14	13.74	15.15
Net earnings- - - - -	11.23	8.50	10.09
Rate earned on investment - - - - -	7.1%	6.4%	6.5%
Labor and mgt. earnings - - - - -	\$ 1,070	\$ 839	\$ 930
<u>Size and Intensity</u>			
Acres per farm - - - - -	168	163	187
Percent land-area tillable- - - - -	77.3	80.8	79.4
Percent tillable land in grain- - - - -	57.9	64.2	69.0
Percent in hay and pasture- - - - -	40.4	27.6	27.4
Feed fed per acre to prod. L.S. - - - - -	\$ 14.01	\$ 7.68	\$ 16.01
Months of labor per 100 crop A. - - - - -	22.6	18.4	17.9
Total months of labor - - - - -	24.9	22.4	23.9
Average number of cows milked - - - - -	23.3	7.9	11.0
<u>Crop Yields Per Acre</u>			
Corn, bu. - - - - -	62.8	63.0	64.5
Oats, bu. - - - - -	39.3	33.2	37.2
<u>Livestock Returns</u>			
Per \$100 feed fed - - - - -	\$ 169	\$ 149	\$ 145
Hog returns per litter- - - - -	76	66	78
Dairy returns per cow - - - - -	122	79	89
<u>Expense Factors</u>			
Labor cost ^{2/}			
Per crop acre - - - - -	\$ 11.12	\$ 8.70	\$ 8.72
Per \$100 gross earnings - - - - -	27	29	25
Horse and machinery cost per crop acre ^{1/} - - - - -	6.54	5.36	5.68
Improvement cost per acre - - - - -	1.85	1.23	1.56
Land tax per acre - - - - -	1.24	1.33	1.17

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

Larger crop yields per acre on the farms on higher-quality land, which amounted to 2.4 bushels of corn, 2.4 bushels of oats, 1.9 bushels of barley, indicate the relative productive level of the land on two groups of farms.

The operating expenses per acre averaged \$15.92 on the farms with the most tillable land and \$15.14 on the farms with the least tillable land. The combined cost per crop acre for labor, machinery, and horses was \$2.42 smaller on the farms with the larger percent of tillable land.

The livestock-efficiency factors, such as poultry returns per hen, hog returns per litter of pigs farrowed, and dairy returns per cow milked, were not appreciably affected by the quality of land. These factors indicate that the two groups of farms were operated with about the same degree of efficiency. Therefore, it may be assumed that the differences in organization, land use, crop yields, and costs were principally due to the differences in the productivity of the land on the two groups of farms.

Source of Income

The 87 farms were divided into 3 groups according to source of income (Table 4). The items in this table, for the most part, were made to correspond with the items given in Table 3; therefore, a farmer may compare the data in the "Your farm" column in Table 3 with the "Source of income" column in Table 4, which corresponds to the classification for his own farm.

In a comparison of the groups of farms the fact that conditions affecting production and price relationships vary from year to year should be kept in mind. Therefore, the average differences in earnings in 1939 are not necessarily typical of the variations that may be expected over a long period of years.

The returns per \$100 feed that are necessary to pay for feed (including pasture) and other costs, according to 5-year averages of complete cost studies (1933-1937), follow: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117. There is little wonder, therefore, that the 3 groups of accounting farms with different classes and proportions of livestock varied widely in the returns per \$100 worth of feed fed.

Differences in expenses are significant for the 3 groups of farms. Labor input was highest on the dairy farms, where 24.9 months of labor were used. The labor cost per crop acre averaged \$11.12 on the dairy farms. This was about \$2.50 per crop acre higher than for the general farms. Likewise, both the horse and machinery and the improvement costs were higher on the dairy farms than on the general farms. In spite of the higher expenses the dairy farms showed the best earnings. The rate earned was 7.1% for the dairy farms and 6.4% and 6.5% for the general farms.

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 1, 1939

Items	Total acres in farm		
	Less than 131	131 to 190	191 or more
Number of farms - - - - -	27	34	26
Acres per farm - - - - -	102	160	257
<u>Investments</u>			
Total per farm - - - - -	\$17,221	\$24,837	\$38,049
Total per acre - - - - -	169	155	148
Land per acre - - - - -	81	76	77
Improvements per acre - - - - -	36	35	33
Machinery per acre ^{1/} - - - - -	15	13	10
<u>Earnings</u>			
Per farm			
Gross earnings - - - - -	\$ 3,074	\$ 4,157	\$ 6,324
Gross expenses ^{2/} - - - - -	2,093	2,461	3,476
Net earnings - - - - -	981	1,696	2,848
Per acre			
Gross earnings - - - - -	\$ 30.11	\$ 26.00	\$ 24.63
Gross expenses ^{2/} - - - - -	20.50	15.39	13.54
Net earnings - - - - -	9.61	10.61	11.09
Rate earned on investment - - - - -	5.7%	6.8%	7.5%
Labor and management earnings - - - - -	\$ 618	\$ 1,007	\$ 1,430
<u>Size and Intensity</u>			
Percent land-area tillable - - - - -	80.4	78.9	76.8
Percent tillable land in grain - - - - -	58.8	58.7	64.0
Percent in hay and pasture - - - - -	37.2	39.0	33.0
Feed fed per acre to prod. L. S. - - - - -	\$ 16.72	\$ 14.08	\$ 11.87
Percent of income from prod. L. S. - - - - -	84.2	84.1	75.0
Percent of income from grain - - - - -	--	.5	14.5
Months of labor per 100 crop acres - - - - -	28.7	22.4	16.6
Total months of labor - - - - -	20.8	23.7	29.0
Average number of cows milked - - - - -	13.6	18.9	24.6
<u>Crop Yields Per Acre</u>			
Corn, bu. - - - - -	61.8	60.1	66.1
Oats, bu. - - - - -	38.6	39.9	36.3
<u>Livestock Returns</u>			
Per \$100 feed fed - - - - -	\$ 161	\$ 163	\$ 161
Hog returns per litter - - - - -	65	80	73
Dairy returns per cow - - - - -	121	119	111
<u>Expense Factors</u>			
Labor cost per crop acre ^{2/} - - - - -	\$ 14.05	\$ 10.57	\$ 8.39
Labor cost per \$100 gross earnings - - - - -	33	27	23
Horse and machinery cost per crop A. ^{1/} - - - - -	7.39	6.31	5.58
Improvement cost per acre - - - - -	1.91	1.76	1.58
Land tax per acre - - - - -	1.60	1.20	1.13

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

Size of Farm As Related to Earnings

The farm records in Farming-Type Area 1, when sorted according to the total acres in the farm, indicate that the larger farms had a greater total investment in land, improvements, and equipment than did the smaller farms. The operators on the larger farms took in more money during the year than did the operators on the smaller farms; and after deductions were made for farm business expenditures and interest on the investment, the 26 largest farms had labor and management earnings which averaged \$1,430 as contrasted with \$618 for the 27 smallest farms. The earnings, as measured by the rate earned on the investment, were 7.5% for the former group and 5.7% for the latter group. In years when the average rate earned on investment for groups of farms exceeds the capitalization rate (5 percent) the average labor and management earnings are higher on the larger farms than on the smaller ones, but these earnings are lower when the rate earned averages less than the capitalization rate.

The smaller farms were operated more intensively than were the larger farms. This variation was indicated by the much higher gross earnings per acre, by the larger proportion of total land tillable, by the higher land values, and by the larger amount of feed fed per acre to productive livestock.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Farm Organization and Farm Earnings by Counties and Groups of Counties

Farming-type areas are formed by grouping together counties which are similar with respect to physical, economic, and biological characteristics. Although a classification of this kind is very useful for many purposes, no two counties within an area are exactly alike. A tabulation of farm account records by counties and groups of counties indicates some of these differences which are due to variations in quality of land, topography, amount of erosion, market outlets, weather conditions, and disease hazards. The effects of variations in these factors are indicated in the account records by differences in value of land per acre, taxes per acre, percent of land area tillable, size of farm, total acres in crops, percent of tillable land in important crops, crop yields, amount of feed fed to productive livestock, and the source of farm income (Tables 6 and 7).

In this report an average was calculated for each county from which 30 or more records were received. Averages were made in some instances with less than 30 records if it was necessary to eliminate some records because they were incomplete or not typical for the area. In any tabulation containing as few as 30 records, part of the variation from county to county is due to the fact that the averages do not represent a cross section of the county.

The tabulations by counties and by groups of counties may be used by extension specialists, farm advisers, and county program-building committees to represent the type of farm organization and the level of operating efficiency attained by a selected group of progressive farmers in the various parts of a farming-type area. Since the personnel of the accounting group changes slowly, comparisons may be made from county to county and from year to year even though these records are from farms with efficiency which is higher than average.

TABLE 6.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 1, 1939

Items	DuPage, Kane, Boone, Lake, and Cook	McHenry
Number of farms - - - - -	46	41
<u>Capital Investments</u>		
Land- - - - -	\$14,757	\$11,564
Farm improvements - - - - -	5,506	6,285
Horses- - - - -	374	410
Productive livestock: Cattle- - - - -	2,439	2,783
Hogs- - - - -	308	236
Sheep - - - - -	30	17
Poultry - - - - -	125	112
<u>Total productive livestock- - - - -</u>	(2,902)	(3,148)
Feed and grain- - - - -	2,021	1,616
Machinery and equipment - - - - -	1,933	1,924
Automobile (farm share) - - - - -	117	142
<u>Totals- - - - -</u>	\$27,610	\$25,089
<u>Receipts and Net Increases</u>		
Horses - - - - -	\$ --	\$ --
Productive livestock: Cattle- - - - -	832	615
Dairy sales - - - - -	1,777	2,526
Hogs- - - - -	496	358
Sheep - - - - -	69	11
Poultry - - - - -	53	68
Egg sales - - - - -	210	178
<u>Total productive livestock- - - - -</u>	(3,437)	(3,756)
Farm products used in household - - - - -	240	242
Feed and grain - - - - -	431	92
Labor off farm - - - - -	42	33
Miscellaneous - - - - -	10	8
AAA payments- - - - -	301	323
<u>Totals- - - - -</u>	\$ 4,461	\$ 4,454
<u>Expenses and Net Decreases</u>		
Farm improvements - - - - -	\$ 268	\$ 316
Horses- - - - -	16	12
Productive livestock- - - - -	--	--
Feed and grain- - - - -	--	--
Machinery and equipment - - - - -	503	474
Automobile (farm share) - - - - -	70	89
Hired labor - - - - -	509	469
Miscellaneous - - - - -	28	41
Crop expense- - - - -	184	173
Livestock expense - - - - -	77	82
Taxes - - - - -	249	238
<u>Totals- - - - -</u>	\$ 1,904	\$ 1,894
Receipts less expenses- - - - -	\$ 2,557	\$ 2,560
Family labor- - - - -	210	241
Returns for labor, capital, mgt.- - - - -	2,347	2,319
Operator's labor- - - - -	508	524
Returns for capital and mgt.- - - - -	1,839	1,795
<u>Rate Earned on Investment - - - - -</u>	6.7%	7.2%
Interest on investment- - - - -	\$ 1,380	\$ 1,255
Labor and Management Earnings - - - - -	967	1,064
<u>Non farm income - - - - -</u>	\$ 50	\$ 103

TABLE 7.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 1, 1939

Items	DuPage, Kane, Boone, Lake, and Cook	McHenry
Rate earned on investment- - - - -	6.7%	7.2%
Acres in farm- - - - -	166	176
Acres in crops - - - - -	119	113
Gross earnings per acre- - - - -	\$ 26.87	\$ 25.25
Total expenses per acre ^{2/} - - - - -	15.79	15.07
Net earnings per acre- - - - -	11.08	10.18
<u>Investments</u>		
Value of land per acre - - - - -	\$ 89	\$ 66
Value of improvements per acre - - - - -	33	36
Total investment per acre- - - - -	166	142
<u>Land Use</u>		
Percent of land-area tillable- - - - -	81.7	74.5
Percent of tillable land in:		
Corn - - - - -	32.7	33.0
Oats - - - - -	17.3	17.0
Wheat- - - - -	1.7	1.3
Soybeans - - - - -	2.9	2.9
Other crops- - - - -	11.1	7.8
Legume hay and pasture - - - - -	22.6	21.8
Non-legume hay and pasture - - - - -	11.7	16.2
<u>Crop Yields</u>		
Corn - - - - -	67.0	58.4
Oats - - - - -	40.0	35.5
Barley - - - - -	26.8	29.0
Soybeans - - - - -	20.3	7.6
<u>Livestock Factors</u>		
Value of feed fed to prod. L. S. - - - - -	\$2,417	\$2,211
Feed fed per acre to prod. L. S. - - - - -	14.56	12.53
Returns per acre from prod. L. S.- - - - -	21.69	22.22
Returns per \$100 worth of feed fed - - - - -	149	177
Returns per \$100 invested in cattle- - - - -	102	109
Poultry returns per hen- - - - -	2.74	2.75
Number of litters farrowed - - - - -	11.1	7.5
Number of pigs weaned per litter - - - - -	6.6	6.0
Returns per litter farrowed- - - - -	\$ 76	\$ 73
Average number of cows milked- - - - -	15.5	22.8
Dairy returns per cow milked - - - - -	\$ 119	\$ 114
<u>Expense Factors</u>		
Machinery cost per crop acre ^{1/} - - - - -	\$ 4.81	\$ 4.99
Horse and machinery cost per crop A. - - - - -	6.05	6.37
Labor cost per crop acre ^{2/} - - - - -	9.95	10.65
Labor cost per \$100 gross earnings ^{2/} - - - - -	27	27
Number of work horses- - - - -	3.4	3.7
Value of feed fed to horses- - - - -	\$ 131	\$ 143
Improvement cost per acre- - - - -	1.61	1.79
Taxes per acre - - - - -	1.50	1.35

1/ Includes farm share of automobile.

2/ Includes operator's and family labor.

Influence of Price Changes on Illinois Farm Incomes

All feed and grain, livestock, and other farm property on accounting farms must be valued at both the beginning and the end of the year. Prices at inventory time, therefore, have a marked influence on farm earnings. The influence is greatest where large stocks or supplies are on hand at inventory time; for example, a much larger supply of farm products was found on Illinois farms December 31, 1939, than a year earlier. In fact, grain and livestock inventories have been increasing on Illinois farms since the drouth of 1936 as a result of three years of exceptionally high crop yields and the influence of Agricultural Adjustment Programs which have caused farmers to grow more hay and pasture and to store corn on farms under seal. According to estimates made by the Bureau of Agricultural Economics, U.S.D.A., 356 million bushels of corn were on Illinois farms January 1, 1940, as compared with 325 million bushels January 1, 1939.

Livestock numbers on Illinois farms increased sharply in 1939 even though 62 million bushels of 1937 and 1938 corn were placed under seal at the end of the year and 83 million bushels of 1939 corn were sealed by March 31, 1940. The following data indicate the percentage increase in livestock numbers on 2520 accounting farms in Illinois from the beginning to the end of 1939; dairy cows, 2 percent; beef cows, 21 percent; feeder cattle, 17 percent; feeder lambs, 24 percent; brood sows, 4 percent; spring pigs, 38 percent; summer pigs, 23 percent; and fall pigs, 28 percent. Hog numbers have been increasing since 1935 and have now attained record levels; for example, 13.5 sows farrowed per farm on accounting farms in 1939 as contrasted with 9.9 sows farrowed per farm in 1938. The increase in beef cattle numbers is a part of the general up-swing taking place over the entire United States, and it may be expected to continue for several years.

These data indicate that supplies of both feed and livestock were greater at the time the 1939 closing inventory was taken than at any other inventory period in several years, and price changes, therefore, are important in interpreting farm earnings for the state and for farming-type areas in 1939.

Prices of important farm products.--Prices for all crops as well as for beef cattle and sheep were higher at the end of 1939 than they were at the beginning, whereas prices for horses, hogs, and poultry were lower. Most of these price increases occurred during the last four months of the year.

December 15, Illinois Farm Prices

	<u>1938</u>	<u>1939</u>	<u>Increase</u>	<u>Decrease</u>
Corn, bu.	\$.42	\$.47	\$.05	\$ --
Oats, bu.	.24	.35	.11	--
Wheat, bu.	.57	.88	.31	--
Soybeans, bu.	.65	.95	.30	--
Hay, tons	6.20	6.50	.30	--
Horses, hd.	88.00	85.00	--	3.00
Hogs, cwt.	7.00	5.10	--	1.90
Beef cattle, cwt.	7.70	8.30	.60	--
Sheep, cwt.	3.45	3.60	.15	--
Chickens, lb.	.13	.11	--	.02

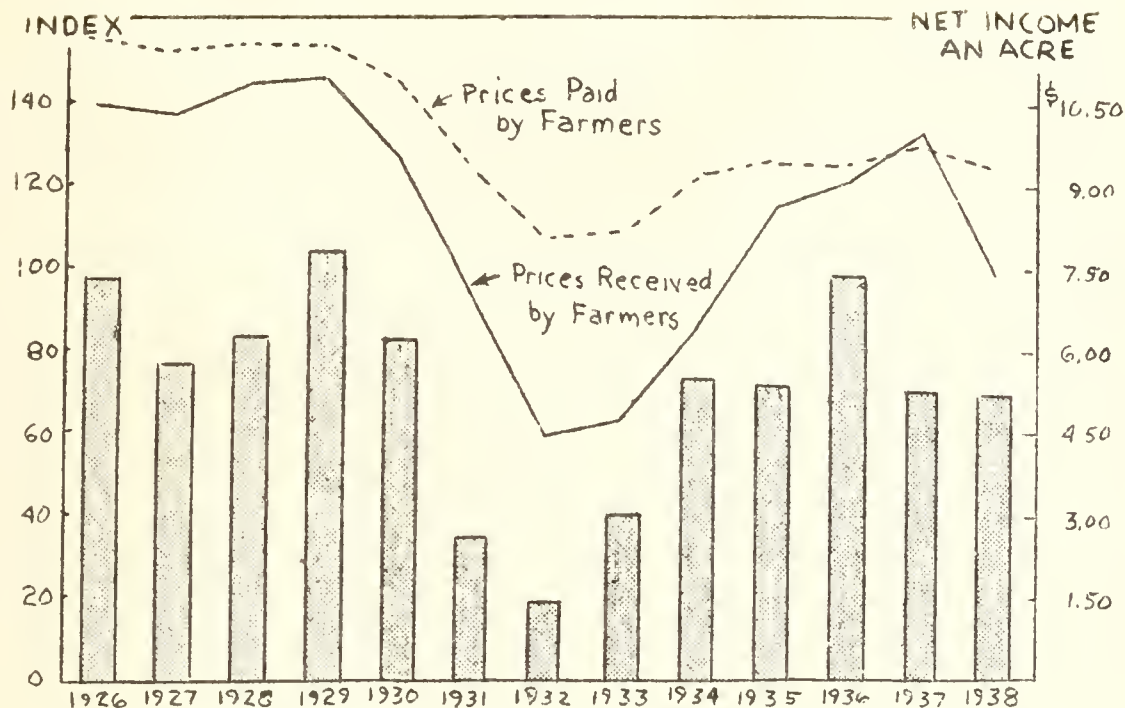


Fig. 1.--Average net cash income an acre (unpaid labor deducted) on Illinois accounting farms, prices paid by farmers in the United States, and prices received by Illinois farmers, 1926-1938.

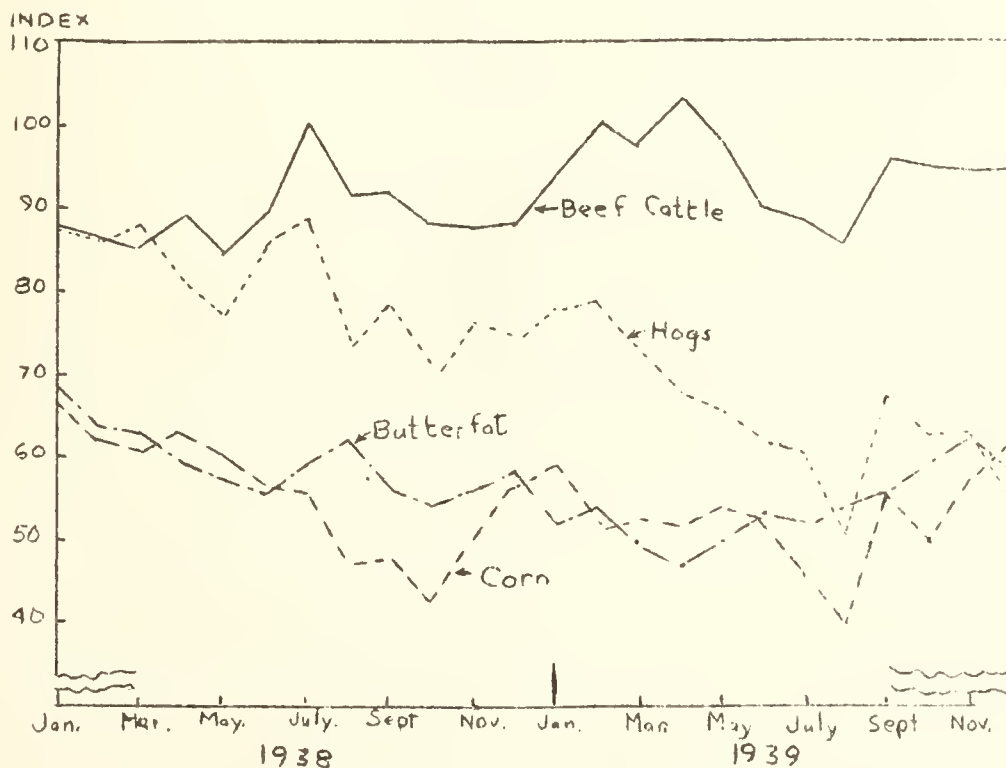


Fig. 2.--Monthly price indices of the average farm prices of corn, hogs, beef cattle, and butterfat, 1938 and 1939. (1924-1929 = 100)

Farm earnings are influenced by the average price received for farm products during the year as well as by the values at inventory time. Although nearly all commodities were higher in price at the end of the year than at the beginning, prices received for the following commodities averaged lower in 1939 than in 1938 by these amounts: corn, 2 cents per bushel; wheat and soybeans, 1 cent per bushel; hogs, \$1.50 per hundred; butterfat, 2 cents per pound; eggs, 3 cents per dozen; and chickens, 2 cents per pound. The prices for other commodities averaged higher in 1939 than in 1938 by the following amounts: oats, 4 cents per bushel; beef cattle, 50 cents per hundred; lambs, 42 cents per hundred; wool, 4 cents per pound; and apples, 12 cents per bushel.

Variation in earnings between the various type-of-farming areas is influenced by the relative prices of grains, livestock, and livestock products. In 1939 as in 1938 livestock had a price advantage over grain, but the advantage was not as marked as it was in 1938. The prices for meat animals dropped from 116 to 110 percent of the 1910-14 average, grains from 74 to 72 percent, chickens and eggs from 106 to 94 percent, and dairy products from 106 to 104 percent.

The corn-hog ratio also narrowed during the year to the disadvantage of the hog enterprise. The amount of corn equal in value to 100 pounds of hogs dropped from 19 bushels in February to 11 bushels in December (based on farm prices). Unfavorable feeding ratios will discourage expansion in hog numbers in 1940.

Crop Yields in Illinois, 1939

Crop yields in Illinois in 1939, as in 1938 and 1937, were unusually high. The weighted average yield of corn, oats, wheat, and soybeans was 133 percent of the 10-year average, 1929-1938. Corn contributed more than did any other crop to the high average yields. The yields of the various crops expressed in percentages of the 1929-1938 averages were: corn, 150; soybeans, 129; wheat, 121; and oats, 97.

Crop yields in all counties except Massac were above the 10-year average (1929-1938 = 100), but wide variations in yields occurred between individual counties and groups of counties. Four counties along the Ohio River had crop-yield indices under 105. In contrast to these counties, 31 were over 136. Many of the counties with the highest yields were in two groups, those located in southwestern and east north central Illinois. Crop-yield indices were adversely affected in southeastern Illinois by the wheat crop and in northern Illinois by low oat yields. Fifty-five counties, which were well-distributed over the state, had crop-yield indices from 121 to 135.

FARM BUSINESS REPORT . . . 1939



FARMING-TYPE AREA TWO Northwestern Mixed Livestock Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

Annual Farm Business Report

ON FOUR HUNDRED FIFTY-FOUR FARMS IN FARMING-TYPE AREA 2, 1939

By P. E. Johnston, J. B. Cunningham, and E. M. Hughes^{1/}

Farm earnings of accounting farms in Farming-Type Area 2 were higher in 1939 than in 1938. The net earnings per acre averaged \$12.65 in 1939, \$9.62 in 1938, \$8.46 in 1937, and \$16.43 in 1936. The items considered in calculating the net earnings included inventory changes, cash receipts, cash expenses, the value of the farm products used in the household (in 1938 and 1939 only), and unpaid family labor (Table 1).



▨▨▨▨ Farming-Type Area 2
Mixed Livestock

Since the value of farm products used in the household was not included in the records prior to 1938, the earnings for 1938 and 1939 are not strictly comparable to those for other years. The value per acre of farm products used was \$1.28 in 1938 and \$1.20 in 1939.

The accounting farms were larger than average, crop yields were above average, and the farms as a whole were operated with efficiency which was greater than average. Therefore, the figures contained in this report represent conditions which are better than average for this area. This fact is borne out by survey records taken in various areas of the state.

High crop yields and more livestock, accompanied by increased industrial activity and improved demand for farm products, especially during the latter half of the year, were the principal factors producing higher earnings in 1939 (Figs. 1, 2, and 3).

^{1/} R. J. Mutti supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm accounts project was conducted in cooperation with the farm bureaus in the following counties and was supervised by the farm advisers indicated:

R. P. Johnson, DeKalb County
V. J. Banter, Stephenson County
C. E. Yale, Lee County
D. E. Warren, Ogle County
R. C. Smith, Rock Island County

H. E. Kearnaghan, Jo Daviess County
H. R. Brunnemeyer, Winnebago County
F. H. Shuman, Whiteside County
M. P. Roske, Carroll County

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 2, 1936-1939

Items	Your farm	Average of all farms in area			
		1939	1938	1937	1936
Number of farms- - - - -	--	454	382	285	227
Inventory Changes					
Farm improvements- - - - -	\$ _____	\$ 104	\$ 100	\$ 125	\$ 37
Livestock- - - - -	_____	483	130	3	163
Feed and grain - - - - -	_____	521	112	-230	916
Machinery and equipment ^{1/} - - - - -	_____	86	112	330	266
Automobile (farm share)- - - - -	_____	-3	-6	--	--
Totals - - - - -	\$ _____	\$1,191	\$ 448	\$ 228	\$1,382
Cash Receipts					
Farm improvements- - - - -	\$ _____	\$ 32	\$ 6	\$ 27	\$ 3
Horses - - - - -	_____	44	37	53	69
Productive livestock: Cattle - - - - -	_____	2,656	1,912	1,574	1,725
Dairy sales- - - - -	_____	669	784	1,000	964
Hogs - - - - -	_____	1,392	1,629	1,678	1,865
Sheep- - - - -	_____	205	136	118	79
Poultry- - - - -	_____	87	74	99	96
Egg sales- - - - -	_____	151	170	189	169
Total productive livestock - - - - -	()	(5,160)	(4,705)	(4,658)	(4,898)
Feed and grain - - - - -	_____	842	556	574	684
Machinery and equipment ^{1/} - - - - -	_____	188	192	232	210
Automobile (farm share)- - - - -	_____	32	23	--	--
Labor off farm - - - - -	_____	38	43	75	90
Miscellaneous- - - - -	_____	11	6	9	2
AAA payments - - - - -	_____	576	164	137	127
Totals - - - - -	\$ _____	\$6,923	\$5,732	\$5,765	\$6,083
Cash Expenses					
Farm improvements- - - - -	\$ _____	\$ 426	\$ 357	\$ 378	\$ 259
Horses - - - - -	_____	28	32	41	60
Productive livestock: Cattle - - - - -	_____	1,740	941	635	659
Hogs - - - - -	_____	119	116	95	144
Sheep- - - - -	_____	137	77	57	27
Poultry- - - - -	_____	32	26	29	32
Total productive livestock - - - - -	()	(2,028)	(1,160)	(816)	(862)
Feed and grain - - - - -	_____	695	514	569	697
Machinery and equipment ^{1/} - - - - -	_____	778	746	969	843
Automobile (farm share) - - - - -	_____	130	112	--	--
Hired labor- - - - -	_____	362	312	251	246
Miscellaneous- - - - -	_____	33	31	25	27
Crop expense - - - - -	_____	175	174	257	188
Livestock expense- - - - -	_____	66	61	50	73
Taxes- - - - -	_____	266	237	212	217
Totals - - - - -	\$ _____	\$4,987	\$3,736	\$3,568	\$3,472
Summary					
Cash balance - - - - -	\$ _____	\$1,936	\$1,996	\$2,197	\$2,611
Farm products used in household ^{2/} - - - - -	_____	250	265	--	--
Total inventory change - - - - -	_____	1,191	448	228	1,382
Receipts less expenses - - - - -	_____	3,377	2,709	2,425	3,993
Total unpaid labor - - - - -	_____	732	724	777	806
Net earnings per farm- - - - -	\$ _____	\$2,645	\$1,985	\$1,648	\$3,187
Net earnings per acre- - - - -	\$ _____	\$12.65	\$ 9.62	\$ 8.46	\$16.43

^{1/} Includes farm share of automobile for 1936 and 1937.

^{2/} Not included as income for 1936 and 1937.

Inventory Changes, Cash Receipts, Cash Expenses, and Earnings

Inventory changes.--The year 1939 was the fourth consecutive year increasing inventories, the increases averaging \$1,191 in 1939, \$448 in 1938, \$228 in 1937, and \$1,382 in 1936 (Table 1). The largest increases in 1939 were in feed and grain and in livestock. The increased value of feed and grain represented higher prices at the end of the year as well as larger quantities of grain on hand (Page 1 and Fig. 2). The average amounts of grain on hand in Area 2 at the two inventory periods follow:

	Beginning of year (bushels)	End of year (bushels)
Corn	2,958	3,407
Oats	1,034	828
Wheat	21	27
Soybeans	47	55

Cash receipts.--Cash receipts reached the highest level in four years, averaging \$6,923 in 1939 (Table 1). Cattle and grain sales and AAA payments were larger in 1939 than in 1938, but hog and dairy sales were smaller. The larger AAA receipts were mainly due to a doubling-up in payments, many farmers receiving payments in 1939 for participation in both the 1938 and 1939 programs.

Cash expenses.--Cash expenses were greater in 1939 than in any of the last four years. For every major item of expense, a greater amount was paid out in 1939 than in 1938.

Earnings.--Cash receipts exceeded cash expenses in 1939 by \$1,936, or by a smaller margin than that for any other year during the past four. Cash balance, the difference between these receipts and expenses, is the average amount of money available for family living expenses, interest, debt payments and savings.

The amounts deducted for operator's and family labor remained rather uniform during the 4-year period, a difference of only \$82 occurring between the low year, 1938, and the high year, 1936. The uniformity in valuation was due to the fact that approximately the same amount of family labor was available each year and to the fact that the same rate (\$50 per month) was charged for the physical labor of the operator and other mature members of the family.

The net earnings per farm averaged \$2,645 in 1939 as contrasted with \$1,985 in 1938. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding the value of farm products used in the household and the inventory increases to the cash balance and by subtracting the value of unpaid labor from the resulting total. Therefore, this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

TABLE 2.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 2, 1939

Items	Your farm	Average of all farms	Land area tillable	
			85 percent or more	Less than 85 percent
Number of farms - - - - -	--	454	279	175
<u>Capital Investments</u>				
Land- - - - -	\$ _____	\$19,274	\$21,691	\$15,421
Farm improvements - - - - -	_____	5,673	6,119	4,964
Horses - - - - -	_____	380	366	401
Productive livestock: Cattle- - - - -	_____	2,295	2,452	2,045
Hogs- - - - -	_____	825	887	727
Sheep - - - - -	_____	121	140	90
Poultry - - - - -	_____	107	108	105
<u>Total productive livestock- - - - -</u>	(_____)	(3,348)	(3,587)	(2,967)
Feed and grain - - - - -	_____	2,295	2,666	1,702
Machinery and equipment - - - - -	_____	2,033	2,240	1,701
Automobile (farm share) - - - - -	_____	186	193	176
Totals- - - - -	\$ _____	\$33,189	\$36,862	\$27,332
<u>Receipts and Net Increases</u>				
Horses - - - - -	\$ _____	\$ --	\$ --	\$ --
Productive livestock: Cattle- - - - -	_____	1,485	1,747	1,069
Dairy sales - - - - -	_____	669	582	809
Hogs- - - - -	_____	1,202	1,251	1,123
Sheep - - - - -	_____	85	90	75
Poultry - - - - -	_____	56	39	84
Egg sales - - - - -	_____	151	156	142
<u>Total productive livestock- - - - -</u>	(_____)	(3,648)	(3,865)	(3,302)
Farm products used in household - - - - -	_____	250	243	262
Feed and grain - - - - -	_____	668	872	341
Labor off farm - - - - -	_____	38	46	26
Miscellaneous - - - - -	_____	11	12	11
AAA payments- - - - -	_____	576	664	436
Totals- - - - -	\$ _____	\$ 5,191	\$ 5,702	\$ 4,378
<u>Expenses and Net Decreases</u>				
Farm improvements - - - - -	\$ _____	\$ 290	\$ 317	\$ 247
Horses - - - - -	_____	17	16	20
Productive livestock- - - - -	_____	--	--	--
Feed and grain- - - - -	_____	--	--	--
Machinery and equipment - - - - -	_____	504	559	416
Automobile (farm share) - - - - -	_____	101	109	90
Hired labor - - - - -	_____	362	398	304
Miscellaneous - - - - -	_____	33	35	30
Crop expense- - - - -	_____	175	193	147
Livestock expense - - - - -	_____	66	70	60
Taxes - - - - -	_____	266	279	245
Totals- - - - -	\$ _____	\$ 1,814	\$ 1,976	\$ 1,559
Receipts less expenses- - - - -	\$ _____	\$ 3,377	\$ 3,726	\$ 2,819
Family labor- - - - -	_____	178	166	197
Returns for labor, capital, mgt.- - - - -	_____	3,199	3,560	2,022
Operator's labor- - - - -	_____	554	551	559
Returns for capital and mgt.- - - - -	_____	2,645	3,009	2,063
<u>Rate Earned on Investment - - - - -</u>	_____ %	8.0%	8.2%	7.5%
Interest on investment- - - - -	\$ _____	\$ 1,660	\$ 1,843	\$ 1,366
Labor and Management Earnings - - - - -	_____	1,539	1,717	1,256
Nonfarm income - - - - -	\$ _____	\$ 73	\$ 62	\$ 89

Variation in farm earnings.--A wide variation was found in earnings on the farms in Area 2; for example, 30 farms earned less than 3 percent on the investment, with an average rate earned of 1.1 percent, but in contrast 43 farms earned 12 percent or more, with an average rate earned of 13.6 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had a loss of \$469 for labor and management earnings as contrasted with a gain of \$2,978 for the latter group. By studying the reasons for these variations, farm operators can improve their chances of financial success. The variation in earnings and in size of farm for all records in the areas was as follows:

Rate earned on investment (percent)	Number of farms	Average rate earned (percent)	Acres per farm	Capital invested per farm	Gross earnings per farm	Net earnings per farm	Labor and management earnings
Less than 3	30	1.1	210	\$25,903	\$3,002	\$ 294	\$ -469
3 to 6	96	4.7	197	32,010	4,440	1,501	451
6 to 9	154	7.5	213	34,673	5,509	2,601	1,422
9 to 12	131	10.3	215	35,599	6,460	3,678	2,462
12 or more	43	13.6	204	28,248	6,280	3,846	2,978

Comparison of Farms According to Quality of Land

The 454 farms were divided into two groups according to the percent of land area tillable. Of this total number of farms, 279 had 85 percent or more of land area tillable, and 175 had less than 85 percent tillable. The average percent tillable was 92.7 for the former group and 69.3 for the latter group.

This grouping of farms gives each farmer an opportunity to compare his farm with the average of other farms having a similar quality of land as well as with the average of all accounting farms (Tables 2 and 3).

The capital investment averaged \$36,862, or \$177 per acre, for the group of farms having the larger percent of land area tillable, as compared with a capital investment averaging \$27,332, or \$129 per acre, for the group of farms having the smaller percent of land area tillable.

The receipts and net increases were \$1,324 larger and expenses and net decreases \$417 larger on farms of higher-quality land than on those of lower-quality land. Dairy sales were \$227 smaller for the farms with the larger percent of land area tillable; whereas, the grain receipts were \$531 larger and cattle receipts \$678 larger. The rate earned on investment was 8.2 percent and 7.5 percent, and the labor and management earnings were \$1,717 and \$1,256, respectively, for the two groups of farms.

The farms on higher-quality land averaged 3 acres smaller than did those on lower-quality land; yet the former had 34 acres more land in crops. They also had a larger percent of tillable land in corn and soybeans but a smaller percent in oats, wheat, and hay and pasture. The amount of livestock per farm was larger on the farms with the most tillable land, as is indicated by the value of feed fed to productive livestock and the capital invested in productive livestock (Tables 2 and 3).

TABLE 3.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 2, 1939

Items	Your farm	Average of all farms	Land area tillable	
			85 percent or more	Less than 85 percent
Rate earned on investment- - - - -	_____ %	8.0%	8.2%	7.5%
Acres in farm- - - - -	_____	209	208	211
Acres in crops - - - - -	_____	142	155	121
Gross earnings per acre- - - - -	\$ _____	\$ 24.83	\$ 27.43	\$ 20.74
Total expenses per acre ^{2/} - - - - -	_____	12.18	12.96	10.97
Net earnings per acre - - - - -	_____	12.65	14.47	9.77
<u>Investments</u>				
Value of land per acre - - - - -	\$ _____	\$ 92	\$ 104	\$ 73
Value of improvements per acre - - -	_____	27	29	24
Total investment per acre- - - - -	_____	159	177	129
<u>Land Use</u>				
Percent of land area tillable- - - -	_____	83.6	92.7	69.3
Percent of tillable land in:				
Corn - - - - -	_____	34.3	35.1	32.5
Oats - - - - -	_____	19.8	19.6	20.1
Wheat- - - - -	_____	1.0	.9	1.3
Soybeans - - - - -	_____	3.2	3.9	1.9
Other crops- - - - -	_____	8.0	8.1	7.7
Legume hay and pasture - - - - -	_____	20.1	19.3	21.9
Nonlegume hay and pasture- - - - -	_____	13.6	13.1	14.6
<u>Crop Yields</u>				
Corn - - - - -	_____	71.8	72.8	69.4
Oats - - - - -	_____	39.5	40.6	37.1
Barley - - - - -	_____	28.4	28.7	27.5
Soybeans - - - - -	_____	25.9	26.1	24.7
<u>Livestock Factors</u>				
Value of feed fed to prod. L. S. - -	\$ _____	\$2,633	\$2,874	\$2,248
Feed fed per acre to prod. L. S. - -	_____	12.59	13.82	10.65
Returns per acre from prod. L. S.- -	_____	18.27	19.42	16.49
Returns per \$100 worth of feed fed -	_____	145	140	155
Returns per \$100 invested in cattle-	_____	87	86	89
Poultry returns per hen- - - - -	_____	2.26	2.21	2.32
Number of litters farrowed - - - - -	_____	18.3	18.9	17.3
Number of pigs weaned per litter - -	_____	6.0	5.9	6.1
Returns per litter farrowed- - - - -	\$ _____	\$ 72	\$ 73	\$ 71
Average number of cows milked- - - -	_____	9.2	8.0	11.2
Dairy returns per cow milked - - - -	\$ _____	\$ 81	\$ 82	\$ 79
<u>Expense Factors</u>				
Machinery cost per crop acre ^{1/} - - -	\$ _____	\$ 4.26	\$ 4.31	\$ 4.19
Horse and machinery cost per crop A.	_____	5.17	5.12	5.29
Labor cost per crop acre ^{2/} - - - - -	_____	7.44	6.90	8.55
Labor cost per \$100 gross earnings ^{2/}	_____	20	19	24
Number of work horses- - - - -	_____	3.2	3.0	3.4
Value of feed fed to horses- - - - -	\$ _____	\$ 112	\$ 110	\$ 114
Improvement cost per acre- - - - -	_____	1.39	1.52	1.17
Taxes per acre - - - - -	_____	1.27	1.34	1.16

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS,
FARMS WITH LESS THAN 85 PERCENT OF THE LAND AREA TILLABLE

Accounting Farms in Farming-Type Area 2, 1939

The numbers above the lines across the middle of the page are the averages for the 175 farms included in this group for the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings									Factors that affect expenses			
			Percent tillable land in legume hay and pasture	Crop yields			Feed fed per acre to prod. L. S.	Returns per \$100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked	Total expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Labor cost per \$100 gross earnings
				Corn, bu.	Oats, bu.	Barley, bu.									
18	411	36	32	94	62	53	21	255	3.82	121	154	6	--	4	14
16	371	33	30	89	57	48	19	235	3.52	111	139	7	1	5	16
14	331	30	28	84	52	43	17	215	3.22	101	124	8	2	6	18
12	291	27	26	79	47	38	15	195	2.92	91	109	9	3	7	20
10	251	24	24	74	42	33	13	175	2.62	81	94	10	4	8	22
7.5	211	20.74	21.9	69.4	37.1	27.5	10.65	155	2.32	71	79	10.97	5.29	8.55	24
6	171	18	20	64	32	23	9	135	2.02	61	64	12	6	10	26
4	131	15	18	59	27	18	7	115	1.72	51	49	13	7	11	28
2	91	12	16	54	22	13	5	95	1.42	41	34	14	8	12	30
0	51	9	14	49	17	8	3	75	1.12	31	19	15	9	13	32
-2	11	6	12	44	12	3	1	55	.82	21	4	16	10	14	34

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 2, 1939

Items	Source of income					
	Grain 40%+	Dairy sales 40%+	Hogs 40%+	Cattle 40%+	General farms	
					L.S. 60%-	L.S. 60%+
Number of farms - - - - -	58	27	50	79	72	168
Percent income from prod. L.S.- -	33.2	79.0	83.9	86.3	49.4	77.4
Percent income from crops - - - -	49.6	5.5	--	--	30.8	4.9
<u>Investments</u>						
Total per farm- - - - -	\$36,706	\$25,253	\$25,004	\$49,748	\$34,004	\$27,549
Total per acre- - - - -	161	164	152	181	163	142
Land per acre - - - - -	106	82	85	102	100	79
Improvements per acre - - - - -	21	39	27	30	28	26
Machinery per acre ^{1/} - - - - -	11	13	11	12	10	10
<u>Earnings</u>						
Per farm						
Gross earnings- - - - -	\$ 5,938	\$ 4,188	\$ 4,200	\$ 7,573	\$ 5,163	\$ 4,429
Gross expenses ^{2/} - - - - -	2,535	2,267	2,437	3,621	2,498	2,292
Net earnings- - - - -	3,403	1,921	1,763	3,952	2,665	2,137
Per acre						
Gross earnings- - - - -	\$ 26.02	\$ 27.19	\$ 25.58	\$ 27.55	\$ 24.74	\$ 22.84
Gross expenses ^{2/} - - - - -	11.11	14.72	14.84	13.17	11.97	11.82
Net earnings- - - - -	14.91	12.47	10.74	14.38	12.77	11.02
Rate earned on investment - - -	9.3%	7.6%	7.1%	7.9%	7.8%	7.8%
Labor and mgt. earnings - - - -	\$ 2,110	\$ 1,226	\$ 1,020	\$ 2,024	\$ 1,536	\$ 1,320
<u>Size and Intensity</u>						
Acres per farm - - - - -	228	154	164	275	209	194
Percent land area tillable- - -	89.5	87.2	81.7	84.1	86.8	79.3
Percent tillable land in grain-	69.3	54.3	57.4	66.7	63.9	57.0
Percent in hay and pasture- - -	23.7	42.4	38.7	29.6	32.8	39.2
Feed fed per acre to prod. L.S.	\$ 6.25	\$ 13.32	\$ 15.69	\$ 17.86	\$ 9.06	\$ 12.42
Months of labor per 100 crop A.	10.7	21.0	17.8	13.4	14.0	17.4
Total months of labor - - - - -	19.0	21.7	18.8	25.9	20.6	20.9
<u>Crop Yields Per Acre</u>						
Corn, bu. - - - - -	70.7	71.7	71.7	75.6	70.0	70.3
Oats, bu. - - - - -	39.0	37.0	38.4	43.2	39.5	37.6
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 149	\$ 169	\$ 144	\$ 137	\$ 143	\$ 150
Hog returns per litter- - - - -	62	58	86	68	70	73
Dairy returns per cow - - - - -	69	108	65	76	78	80
<u>Expense Factors</u>						
Labor cost ^{2/}						
Per crop acre - - - - -	\$ 5.35	\$ 9.90	\$ 8.91	\$ 6.86	\$ 6.86	\$ 8.51
Per \$100 gross earnings - - -	16	24	22	18	20	23
Horse and machinery cost						
per crop acre ^{1/} - - - - -	4.39	5.69	5.55	5.59	4.92	5.24
Improvement cost per acre - - -	1.15	1.64	1.53	1.59	1.41	1.27
Land tax per acre - - - - -	1.21	1.12	1.07	1.14	1.21	1.07

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

Larger crop yields per acre on the farms on higher-quality land, which amounted to 3.4 bushels of corn, 3.5 bushels of oats, 1.2 bushels of barley, and 1.4 bushels of soybeans, indicate the relative productive level of the two groups of farms.

The operating expenses per acre averaged \$12.96 on the farms with the most tillable land and \$10.97 on the farms with the least tillable land. The combined cost per crop acre for labor, machinery, and horses was \$1.82 smaller on the farms with the larger percent of tillable land, but the combined cost per acre for improvements and taxes was \$.53 larger.

The livestock-efficiency factors, such as poultry returns per hen, hog returns per litter of pigs farrowed, and dairy returns per cow milked, were not appreciably affected by the quality of land. These factors indicate that the two groups of farms were operated with about the same degree of efficiency. Therefore, it may be assumed that the differences in organization, land use, crop yields, and costs were principally due to the differences in the productivity of the land on the two groups of farms.

Source of Income

The 454 farms were divided into six groups according to source of income (Table 4). The items in this table, for the most part, were made to correspond with the items given in Table 3; therefore, a farmer may compare the data in the "Your farm" column in Table 3 with the "Source of income" column in Table 4, which corresponds to the classification for his own farm.

In a comparison of the groups of farms the fact that conditions affecting production and price relationships vary from year to year should be kept in mind. Therefore, the average differences in earnings in 1939 are not necessarily typical of the variations that may be expected over a long period of years. The following items, for example, indicate that generally the grain farms were located on the better land: high value of land per acre, large percent of land area tillable, and large percent of land in grain.

The returns per \$100 feed that are necessary to pay for feed (including pasture) and other costs, according to 5-year averages of complete cost studies (1933-1937) are as follows: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117. There is little wonder, therefore, that the six groups of accounting farms with different classes and proportions of livestock varied widely in their returns per \$100 worth of feed fed. The amount of feed fed per acre to productive livestock averaged \$17.86 on the cattle farms but only \$6.25 on the grain farms.

Differences in expenses are significant for the six groups of farms. Labor input was highest on the cattle farms, where 25.9 months of labor were used, and lowest on the hog farms, where 18.8 months of labor were used; horse and machinery cost per crop acre averaged \$5.69 on the dairy farms, \$5.59 on the cattle farms, \$5.55 on the hog farms, and only \$4.39 on the grain farms; improvement costs per acre ranged from \$1.64 on the dairy farms to \$1.15 on the grain farms; and land taxes ranged from \$1.21 on the grain farms to \$1.07 on the hog farms.

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 2, 1939

Items	Total acres in farm					
	41 to 120	121 to 200	201 to 280	281 to 360	361 to 440	441 or more
Number of farms - - - - -	75	199	97	50	20	13
Acres per farm- - - - -	102	167	239	316	398	554
<u>Investments</u>						
Total per farm - - - - -	\$16,683	\$26,633	\$37,580	\$50,005	\$63,210	\$85,135
Total per acre - - - - -	164	160	158	158	159	154
Land per acre - - - - -	88	92	90	95	92	99
Improvements per acre - - - - -	32	28	28	25	27	20
Machinery per acre ^{1/} - - - - -	12	11	11	10	9	9
<u>Earnings</u>						
Per Farm						
Gross earnings- - - - -	\$2,846	\$4,314	\$5,815	\$7,445	\$8,956	\$13,026
Gross expenses ^{2/} - - - - -	1,599	2,136	2,781	3,577	4,435	5,630
Net earnings - - - - -	1,247	2,178	3,034	3,868	4,521	7,346
Per acre						
Gross earnings- - - - -	\$28.04	\$25.85	\$24.38	\$23.54	\$22.55	\$23.51
Gross expenses ^{2/} - - - - -	15.75	12.80	11.66	11.31	11.16	10.25
Net earnings - - - - -	12.29	13.05	12.72	12.23	11.37	13.26
Rate earned on investment - - - - -	7.5%	8.2%	8.1%	7.7%	7.2%	8.6%
Labor and management earnings - - - - -	\$ 967	\$1,406	\$1,724	\$1,866	\$1,895	\$3,690
<u>Size and Intensity</u>						
Percent land area tillable- - - - -	83.4	85.7	83.0	82.0	77.2	86.5
Percent tillable land in grain- - - - -	57.9	61.0	62.8	63.5	63.5	64.9
Percent in hay and pasture- - - - -	40.3	35.7	32.8	31.1	31.4	28.4
Feed fed per acre to prod. L. S.- - - - -	\$14.77	\$12.62	\$12.09	\$12.16	\$13.83	\$11.32
Percent of income from prod. L. S.- - - - -	78.4	69.0	69.4	68.9	76.7	65.5
Percent of income from grain- - - - -	2.4	12.7	14.5	15.3	8.1	21.0
Months of labor per 100 crop acres- - - - -	24.1	16.4	14.0	12.7	12.9	9.9
Total months of labor - - - - -	16.2	18.8	22.7	27.0	33.3	38.2
<u>Crop Yields Per Acre</u>						
Corn, bu. - - - - -	72.5	71.6	70.2	72.1	75.1	72.3
Oats, bu. - - - - -	38.8	39.0	39.7	40.9	39.7	38.5
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 159	\$ 149	\$ 146	\$ 139	\$ 129	\$ 139
Hog returns per litter- - - - -	73	72	71	74	79	66
Dairy returns per cow - - - - -	82	78	83	81	88	76
<u>Expense Factors</u>						
Labor cost per crop acre ^{2/} - - - - -	\$11.68	\$ 7.96	\$ 6.85	\$ 6.56	\$ 6.78	\$ 5.19
Labor cost per \$100 gross earnings- - - - -	28	21	19	19	20	15
Horse and machinery cost per crop A. ^{1/} - - - - -	6.31	5.22	4.83	5.36	4.82	4.94
Improvement cost per acre - - - - -	1.49	1.43	1.48	1.20	1.34	1.27
Land tax per acre - - - - -	1.17	1.17	1.09	1.01	1.17	1.07

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

Size of Farm as Related to Earnings

The farm records in Farming-Type Area 2, when sorted according to the total acres in the farm, indicate that the larger farms had a greater total investment in land, improvements, and equipment than did the smaller farms. The operators on the larger farms took in more money during the year than did the operators on the smaller farms; and after deductions were made for farm business expenditures and interest on the investment, the 13 largest farms had labor and management earnings which averaged \$3,690 as contrasted with \$967 for the 75 smallest farms. The earnings, as measured by the rate earned on the investment, however, did not vary greatly among the different size groups. In years when the average rate earned on investment for groups of farms exceeds the capitalization rate (5 percent), the average labor and management earnings are higher on the larger farms than on the smaller ones, but these earnings are lower when the rate earned averages less than the capitalization rate.

The smaller farms were operated more intensively than were the larger farms. This variation was indicated by higher gross earnings per acre and by larger amounts of feed fed per acre to productive livestock.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Farm Organization and Farm Earnings by Counties and Groups of Counties

Farming-type areas are formed by grouping together counties which are similar with respect to physical, economic, and biological characteristics. Although a classification of this kind is very useful for many purposes, no two counties within an area are exactly alike. A tabulation of farm account records by counties and groups of counties indicates some of these differences which are due to variations in quality of land, topography, amount of erosion, market outlets, weather conditions, and disease hazards. The effects of variations in these factors are indicated in the account records by differences in value of land per acre, taxes per acre, percent of land area tillable, size of farm, total acres in crops, percent of tillable land in important crops, crop yields, amount of feed fed to productive livestock, and the source of farm income (Tables 6 and 7).

In this report an average was calculated for each county from which 30 or more records were received. Averages were made in some instances with less than 30 records if it was necessary to eliminate some records because they were incomplete or not typical for the area. In any tabulation containing as few as 30 records, part of the variation from county to county is due to the fact that the averages do not represent a cross section of the county.

The tabulations by counties and by groups of counties may be used by extension specialists, farm advisers, and county program-building committees to represent the type of farm organization and the level of operating efficiency attained by a selected group of progressive farmers in the various parts of a farming-type area. Since the personnel of the accounting group changes slowly, comparisons may be made from county to county and from year to year even though these records are from farms with efficiency which is higher than average.

TABLE 6.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 2, 1939

Items	DeKalb	Stephenson	Lee	Ogle
Number of farms - - - - -	138	63	53	47
<u>Capital Investments</u>				
Land- - - - -	\$25,255	\$10,635	\$28,963	\$16,963
Farm improvements - - - - -	6,603	5,376	5,669	5,290
Horses- - - - -	407	312	308	404
Productive livestock: Cattle- - - - -	2,773	1,942	2,162	2,157
Hogs- - - - -	850	698	756	914
Sheep - - - - -	191	19	210	111
Poultry - - - - -	100	134	92	97
<u>Total productive livestock</u> - - - - -	(3,914)	(2,793)	(3,220)	(3,279)
Feed and grain- - - - -	2,829	1,560	2,876	2,385
Machinery and equipment - - - - -	2,390	1,605	2,352	2,004
Automobile (farm share) - - - - -	181	152	217	215
<u>Totals- - - - -</u>	<u>\$41,579</u>	<u>\$22,433</u>	<u>\$43,605</u>	<u>\$30,540</u>
<u>Receipts and Net Increases</u>				
Horses - - - - -	\$ --	\$ --	\$ --	\$ --
Productive livestock: Cattle- - - - -	2,090	776	1,730	1,421
Dairy sales - - - - -	581	1,015	471	464
Hogs- - - - -	1,209	1,083	1,081	1,276
Sheep - - - - -	121	17	171	59
Poultry - - - - -	70	31	44	49
Egg sales - - - - -	139	232	115	121
<u>Total productive livestock</u> - - - - -	(4,210)	(3,154)	(3,612)	(3,390)
Farm products used in household - - - - -	235	252	249	250
Feed and grain - - - - -	1,011	--	1,956	648
Labor off farm - - - - -	41	18	74	40
Miscellaneous - - - - -	13	14	12	13
AAA payments- - - - -	693	301	949	479
<u>Totals- - - - -</u>	<u>\$ 6,203</u>	<u>\$ 3,739</u>	<u>\$ 6,852</u>	<u>\$ 4,820</u>
<u>Expenses and Net Decreases</u>				
Farm improvements - - - - -	\$ 342	\$ 218	\$ 333	\$ 300
Horses- - - - -	12	15	8	25
Productive livestock- - - - -	--	--	--	--
Feed and grain- - - - -	--	116	--	--
Machinery and equipment - - - - -	628	349	619	484
Automobile (farm share) - - - - -	120	74	116	103
Hired labor - - - - -	426	197	443	375
Miscellaneous - - - - -	37	25	51	23
Crop expense- - - - -	218	122	238	153
Livestock expense - - - - -	75	59	48	62
Taxes - - - - -	302	198	316	279
<u>Totals- - - - -</u>	<u>\$ 2,160</u>	<u>\$ 1,373</u>	<u>\$ 2,172</u>	<u>\$ 1,804</u>
Receipts less expenses- - - - -	\$ 4,043	\$ 2,366	\$ 4,680	\$ 3,016
Family labor- - - - -	159	170	150	212
Returns for labor, capital, mgt.- - - - -	3,884	2,196	4,530	2,804
Operator's labor- - - - -	568	564	559	546
Returns for capital and mgt.- - - - -	3,316	1,632	3,971	2,258
<u>Rate Earned on Investment</u> - - - - -	8.0%	7.3%	9.1%	7.4%
Interest on investment- - - - -	\$ 2,079	\$ 1,122	\$ 2,180	\$ 1,526
Labor and Management Earnings - - - - -	1,805	1,074	2,350	1,278
Nonfarm income - - - - -	\$ 23	\$ 94	\$ 48	\$ 148

TABLE 6.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 2, 1939 (Cont.)

Items	Rock Island	Jo Daviess	Winnebago	Whiteside & Carroll
Number of farms - - - - -	41	32	30	50
<u>Capital Investments</u>				
Land- - - - -	\$15,286	\$13,000	\$14,024	\$15,991
Farm improvements - - - - -	4,326	4,530	6,607	5,126
Horses- - - - -	347	423	419	414
Productive livestock: Cattle- - - - -	1,600	2,211	2,371	2,276
Hogs- - - - -	961	638	921	855
Sheep - - - - -	83	75	106	38
Poultry - - - - -	120	98	98	117
<u>Total productive livestock- - - - -</u>	(2,764)	(3,022)	(3,496)	(3,286)
Feed and grain- - - - -	1,958	1,402	2,111	2,004
Machinery and equipment - - - - -	1,928	1,532	2,031	1,682
Automobile (farm share) - - - - -	168	177	172	215
<u>Totals- - - - -</u>	\$26,777	\$24,086	\$28,860	\$28,718
<u>Receipts and Net Increases</u>				
Horses - - - - -	\$ --	--	--	--
Productive livestock: Cattle- - - - -	1,091	988	900	1,507
Dairy sales - - - - -	462	804	1,297	585
Hogs- - - - -	1,319	1,181	1,142	1,342
Sheep - - - - -	36	50	87	59
Poultry - - - - -	107	27	56	51
Egg sales - - - - -	165	145	124	155
<u>Total productive livestock- - - - -</u>	(3,180)	(3,195)	(3,606)	(3,699)
Farm products used in household - - - - -	310	260	251	234
Feed and grain - - - - -	837	--	199	--
Labor off farm - - - - -	51	13	32	27
Miscellaneous - - - - -	6	6	16	8
AAA payments- - - - -	539	306	442	577
<u>Totals- - - - -</u>	\$ 4,923	\$ 3,780	\$ 4,546	\$ 4,545
<u>Expenses and Net Decreases</u>				
Farm improvements - - - - -	\$ 222	\$ 221	\$ 308	\$ 274
Horses- - - - -	11	25	18	37
Productive livestock- - - - -	--	--	--	--
Feed and grain- - - - -	--	37	--	47
Machinery and equipment - - - - -	413	376	466	434
Automobile (farm share) - - - - -	90	79	106	91
Hired labor - - - - -	316	398	325	328
Miscellaneous - - - - -	33	24	30	30
Crop expense- - - - -	130	110	192	145
Livestock expense - - - - -	55	52	94	76
Taxes - - - - -	283	188	259	228
<u>Totals- - - - -</u>	\$ 1,553	\$ 1,510	\$ 1,798	\$ 1,690
Receipts less expenses- - - - -	\$ 3,370	\$ 2,270	\$ 2,748	\$ 2,855
Family labor- - - - -	217	142	254	182
Returns for labor, capital, mgt.- - - - -	3,153	2,128	2,494	2,673
Operator's labor- - - - -	539	538	570	518
Returns for capital and mgt.- - - - -	2,614	1,590	1,924	2,155
<u>Rate Earned on Investment - - - - -</u>	9.8%	6.6%	6.7%	7.5%
Interest on investment- - - - -	\$ 1,338	\$ 1,205	\$ 1,443	\$ 1,436
Labor and Management Earnings - - - - -	1,815	923	1,051	1,237
<u>Nonfarm income - - - - -</u>	\$ 32	\$ 98	\$ 22	\$ 185

TABLE 7.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 2, 1939

Items	DeKalb	Stephenson	Lee	Ogle
Rate earned on investment- - - - -	8.0%	7.3%	9.1%	7.4%
Acres in farm- - - - -	214	159	256	210
Acres in crops - - - - -	167	102	190	138
Gross earnings per acre- - - - -	\$ 28.95	\$ 23.47	\$ 26.78	\$ 22.91
Total expenses per acre ^{2/} - - - - -	13.47	13.23	11.26	12.18
Net earnings per acre- - - - -	15.48	10.24	15.52	10.73
<u>Investments</u>				
Value of land per acre - - - - -	\$ 118	\$ 67	\$ 113	\$ 81
Value of improvements per acre - -	31	34	22	25
Total investment per acre- - - - -	194	141	170	145
<u>Land Use</u>				
Percent of land area tillable- - -	91.0	84.6	88.2	80.3
Percent of tillable land in:				
Corn - - - - -	37.4	28.9	36.3	33.3
Oats - - - - -	19.8	19.1	20.7	24.6
Wheat- - - - -	1.2	.2	1.0	.7
Soybeans - - - - -	4.6	.2	7.1	3.0
Other crops- - - - -	9.3	6.8	8.6	5.4
Legume hay and pasture - - - - -	17.2	27.6	16.4	20.5
Nonlegume hay and pasture- - - -	10.5	17.2	9.9	12.5
<u>Crop Yields</u>				
Corn - - - - -	74.5	68.9	70.8	69.1
Oats - - - - -	44.4	34.0	40.2	38.8
Barley - - - - -	29.6	30.2	23.8	25.3
Soybeans - - - - -	25.4	23.3	27.8	25.3
<u>Livestock Factors</u>				
Value of feed fed to prod. L. S. -	\$ 3,110	\$ 2,334	\$ 2,443	\$ 2,535
Feed fed per acre to prod. L. S. -	14.51	14.65	9.55	12.05
Returns per acre from prod. L. S.-	20.44	20.83	14.77	16.94
Returns per \$100 worth of feed fed	141	142	155	141
Returns per \$100 invested in cattle	85	93	89	81
Poultry returns per hen- - - - -	2.15	2.31	2.42	2.37
Number of litters farrowed - - - -	19.3	15.9	18.2	17.7
Number of pigs weaned per litter -	5.8	6.4	5.8	6.3
Returns per litter farrowed- - - -	\$ 71	\$ 73	\$ 75	\$ 77
Average number of cows milked- - -	7.1	13.9	6.8	7.3
Dairy returns per cow milked - - -	\$ 93	\$ 77	\$ 79	\$ 73
<u>Expense Factors</u>				
Machinery cost per crop acre ^{1/} - -	\$ 4.48	\$ 4.15	\$ 3.87	\$ 4.24
Horse and machinery cost per crop A.	5.21	5.35	4.43	5.26
Labor cost per crop acre ^{2/} - - - -	6.65	8.95	5.88	7.90
Labor cost per \$100 gross earnings ^{2/}	18	24	16	23
Number of work horses- - - - -	3.1	3.1	2.7	3.3
Value of feed fed to horses- - - -	\$ 110	\$ 108	\$ 98	\$ 116
Improvement cost per acre- - - - -	1.60	1.37	1.30	1.43
Taxes per acre - - - - -	1.41	1.24	1.23	1.33

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

TABLE 7.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 2, 1939 (Cont.)

Items	Rock Island	Jo Daviess	Winnebago	Whiteside & Carroll
Rate earned on investment- - - - -	9.8%	6.6%	6.7%	7.5%
Acres in farm- - - - -	192	235	224	195
Acres in crops - - - - -	115	106	141	120
Gross earnings per acre- - - - -	\$ 25.64	\$ 16.08	\$ 20.29	\$ 23.31
Total expenses per acre ^{2/} - - - - -	12.03	9.32	11.70	12.26
Net earnings per acre - - - - -	13.61	6.76	8.59	11.05
<u>Investments</u>				
Value of land per acre - - - - -	\$ 80	\$ 55	\$ 63	\$ 82
Value of improvements per acre - - -	23	19	29	26
Total investment per acre- - - - -	139	102	129	147
<u>Land Use</u>				
Percent of land area tillable - - -	75.4	62.0	78.0	84.3
Percent of tillable land in:				
Corn - - - - -	38.8	26.2	31.0	32.0
Oats - - - - -	14.6	16.3	20.8	19.5
Wheat- - - - -	1.0	.7	.7	1.9
Soybeans - - - - -	1.4	--	1.6	.7
Other crops- - - - -	9.5	6.9	8.6	4.6
Legume hay and pasture - - - - -	22.7	20.4	25.5	21.3
Nonlegume hay and pasture- - - - -	12.0	29.5	11.8	20.0
<u>Crop Yields</u>				
Corn - - - - -	72.8	68.6	64.0	73.4
Oats - - - - -	33.6	36.8	29.8	39.1
Barley - - - - -	21.0	33.8	24.1	28.0
Soybeans - - - - -	25.2	--	17.8	22.5
<u>Livestock Factors</u>				
Value of feed fed to prod. L. S. - - -	\$2,048	\$2,117	\$2,597	\$2,816
Feed fed per acre to prod. L. S. - - -	10.67	9.00	11.59	14.44
Returns per acre from prod. L. S.- - -	17.71	14.30	16.84	19.81
Returns per \$100 worth of feed fed - -	166	159	145	137
Returns per \$100 invested in cattle- -	99	84	88	87
Poultry returns per hen- - - - -	2.64	1.90	2.38	2.05
Number of litters farrowed - - - - -	18.6	17.4	16.7	20.9
Number of pigs weaned per litter - - -	5.8	6.1	6.0	6.1
Returns per litter farrowed- - - - -	\$ 68	\$ 71	\$ 73	\$ 72
Average number of cows milked- - - -	7.4	12.6	15.5	8.9
Dairy returns per cow milked - - - - -	\$ 75	\$ 69	\$ 88	\$ 73
<u>Expense Factors</u>				
Machinery cost per crop acre ^{1/} - - -	\$ 4.37	\$ 4.28	\$ 4.06	\$ 4.37
Horse and machinery cost per crop A. -	5.37	5.67	5.20	5.61
Labor cost per crop acre ^{2/} - - - - -	9.14	10.03	7.94	8.33
Labor cost per \$100 gross earnings ^{2/}	21	28	25	22
Number of work horses- - - - -	3.3	3.4	3.6	3.4
Value of feed fed to horses- - - - -	\$ 104	\$ 122	\$ 142	\$ 112
Improvement cost per acre- - - - -	1.16	.94	1.37	1.41
Taxes per acre - - - - -	1.47	.80	1.16	1.17

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

Influence of Price Changes on Illinois Farm Incomes

All feed and grain, livestock, and other farm property on accounting farms must be valued at both the beginning and the end of the year. Prices at inventory time, therefore, have a marked influence on farm earnings. The influence is greatest where large stocks or supplies are on hand at inventory time; for example, a much larger supply of farm products was found on Illinois farms December 31, 1939, than a year earlier. In fact, grain and livestock inventories have been increasing on Illinois farms since the drouth of 1936 as a result of three years of exceptionally high crop yields and the influence of Agricultural Adjustment Programs which have caused farmers to grow more hay and pasture and to store corn on farms under seal. According to estimates made by the Bureau of Agricultural Economics, U.S.D.A., 356 million bushels of corn were on Illinois farms January 1, 1940, as compared with 325 million bushels January 1, 1939.

Livestock numbers on Illinois farms increased sharply in 1939 oven though 62 million bushels of 1937 and 1938 corn were placed under seal at the end of the year and 83 million bushels of 1939 corn were sealed by March 31, 1940. The following data indicate the percentage increase in livestock numbers on 2520 accounting farms in Illinois from the beginning to the end of 1939; dairy cows, 2 percent; beef cows, 21 percent; feeder cattle, 17 percent; feeder lambs, 24 percent; brood sows, 4 percent; spring pigs, 38 percent; summer pigs, 23 percent; and fall pigs, 28 percent. Hog numbers have been increasing since 1935 and have now attained record levels; for example, 13.5 sows farrowed per farm on accounting farms in 1939 as contrasted with 9.9 sows farrowed per farm in 1938. The increase in beef cattle numbers is a part of the general up-swing taking place over the entire United States, and it may be expected to continue for several years.

These data indicate that supplies of both feed and livestock were greater at the time the 1939 closing inventory was taken than at any other inventory period in several years, and price changes, therefore, are important in interpreting farm earnings for the state and for farming-type areas in 1939.

Prices of important farm products.--Prices for all crops as well as for beef cattle and sheep were higher at the end of 1939 than they were at the beginning, whereas prices for horses, hogs, and poultry were lower. Most of these price increases occurred during the last four months of the year.

December 15, Illinois Farm Prices

	<u>1938</u>	<u>1939</u>	<u>Increase</u>	<u>Decrease</u>
Corn, bu.	\$.42	\$.47	\$.05	\$ --
Oats, bu.	.24	.35	.11	--
Wheat, bu.	.57	.88	.31	--
Soybeans, bu.	.65	.95	.30	--
Hay, tons	6.20	6.50	.30	--
Horses, hd.	88.00	85.00	--	3.00
Hogs, cwt.	7.00	5.10	--	1.90
Beef cattle, cwt.	7.70	8.30	.60	--
Sheep, cwt.	3.45	3.60	.15	--
Chicken*, lb.	.13	.11	--	.02

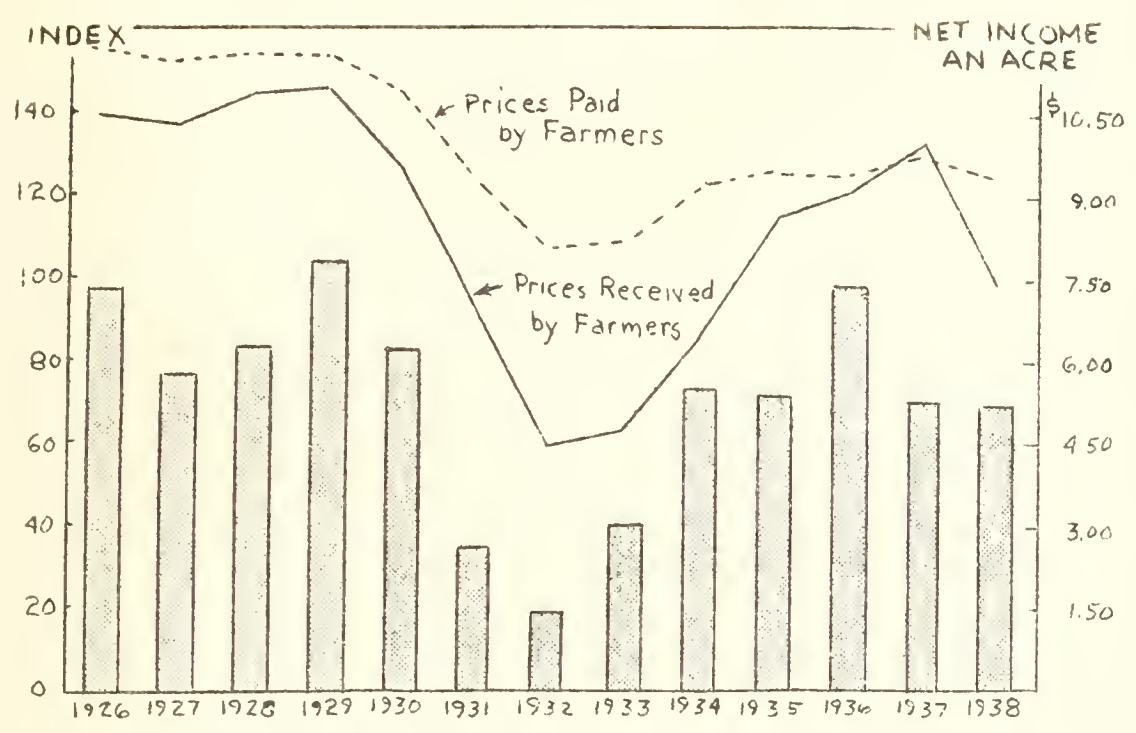


Fig. 1.--Average net cash income an acre (unpaid labor deducted) on Illinois accounting farms, prices paid by farmers in the United States, and prices received by Illinois farmers, 1926-1938.

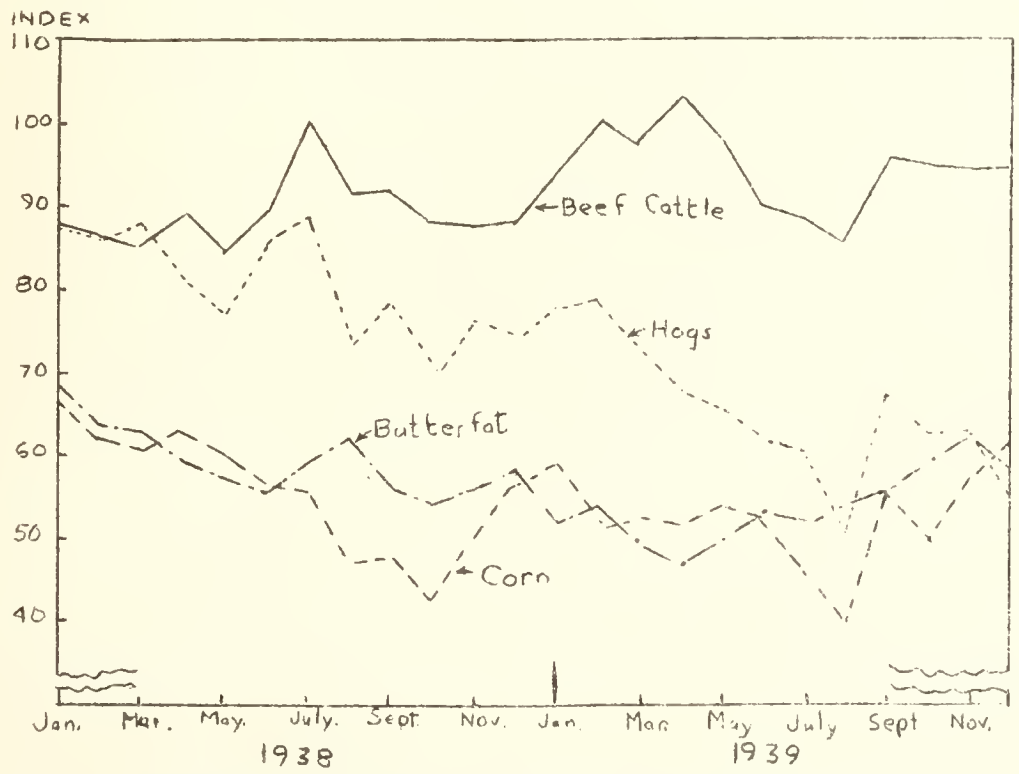


Fig. 2.--Monthly price indices of the average farm prices of corn, hogs, beef cattle, and butterfat, 1938 and 1939. (1924-1929 = 100)

Farm earnings are influenced by the average price received for farm products during the year as well as by the values at inventory time. Although nearly all commodities were higher in price at the end of the year than at the beginning, prices received for the following commodities averaged lower in 1939 than in 1938 by these amounts: corn, 2 cents per bushel; wheat and soybeans, 1 cent per bushel; hogs, \$1.50 per hundred; butterfat, 2 cents per pound; eggs, 3 cents per dozen; and chickens, 2 cents per pound. The prices for other commodities averaged higher in 1939 than in 1938 by the following amounts: oats, 4 cents per bushel; beef cattle, 50 cents per hundred; lambs, 42 cents per hundred; wool, 4 cents per pound; and apples, 12 cents per bushel.

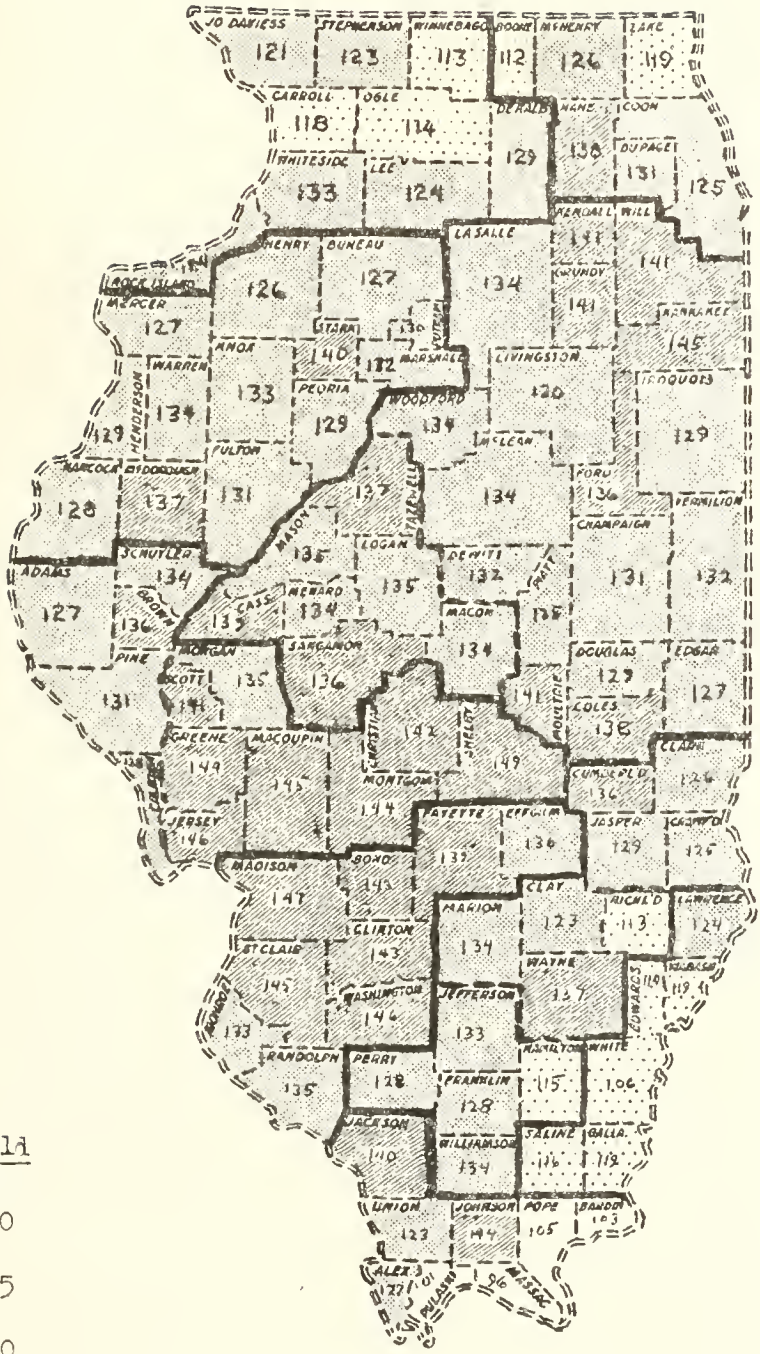
Variation in earnings between the various type-of-farming areas is influenced by the relative prices of grains, livestock, and livestock products. In 1939 as in 1938 livestock had a price advantage over grain, but the advantage was not as marked as it was in 1938. The prices for meat animals dropped from 116 to 110 percent of the 1910-14 average, grains from 74 to 72 percent, chickens and eggs from 106 to 94 percent, and dairy products from 106 to 104 percent.

The corn-hog ratio also narrowed during the year to the disadvantage of the hog enterprise. The amount of corn equal in value to 100 pounds of hogs dropped from 19 bushels in February to 11 bushels in December (based on farm prices). Unfavorable feeding ratios will discourage expansion in hog numbers in 1940.

Crop Yields in Illinois, 1939

Crop yields in Illinois in 1939, as in 1938 and 1937, were unusually high. The weighted average yield of corn, oats, wheat, and soybeans was 133 percent of the 10-year average, 1929-1938. Corn contributed more than did any other crop to the high average yields. The yields of the various crops expressed in percentages of the 1929-1938 averages were: corn, 150; soybeans, 129; wheat, 121; and oats, 97.

Crop yields in all counties except Massac were above the 10-year average (1929-1938 = 100), but wide variations in yields occurred between individual counties and groups of counties. Four counties along the Ohio River had crop-yield indices under 105. In contrast to these counties, 31 were over 136. Many of the counties with the highest yields were in two groups, those located in southwestern and east north central Illinois. Crop-yield indices were adversely affected in southeastern Illinois by the wheat crop and in northern Illinois by low oat yields. Fifty-five counties, which were well-distributed over the state, had crop-yield indices from 121 to 135.







Crop-Yield Index	
	136 - 150
	121 - 135
	106 - 120
	91 - 105

Fig. 3.--Crop yields for 1939, compared with 10-year average yields (1929-1938) for the same county. The indices are based on county yields of corn, oats, wheat, and soybeans. (Data from Illinois Cooperative Crop Reporting Service.)

UNIVERSITY OF ZAMBIA

FARM BUSINESS REPORT . . . 1939



FARMING-TYPE AREA THREE Western Livestock and Grain Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

Annual Farm Business Report

ON FIVE HUNDRED ELEVEN FARMS IN FARMING-TYPE AREA 3, 1939

By P. E. Johnston, J. B. Cunningham, and E. N. Searls^{1/}

Farm earnings of accounting farms in Farming-Type Area 3 were higher in 1939 than in 1938. The net earnings per acre averaged \$14.06 in 1939, \$10.36 in 1938, \$10.83 in 1937, and \$13.14 in 1936. The items considered in calculating the net earnings included inventory changes, cash receipts, cash expenses, the value of the farm products used in the household (in 1938 and 1939 only), and unpaid family labor (Table 1).

Since the value of farm products used in the household was not included in the records prior to 1938, the earnings for 1938 and 1939 are not strictly comparable to those for other years. The value per acre of farm products used was \$1.13 in 1938 and \$1.04 in 1939.

The accounting farms were larger than average, crop yields were above average, and the farms as a whole were operated with efficiency which was greater than average. Therefore, the figures contained in this report represent conditions which are better than average for this area. This fact is borne out by survey records taken in various areas of the state.

High crop yields and slightly more livestock, accompanied by increased industrial activity and improved demand for farm products, especially during the latter half of the year, were the principal factors producing higher earnings in 1939 (Figs. 1, 2, and 3).



▨ Farming-Type Area 3
Mixed Livestock

^{1/} R. J. Mutti supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm accounts project was conducted in cooperation with the farm bureaus in the following counties and was supervised by the farm advisers indicated:

H. K. Danforth, Henry County
Paul V. Dean, Bureau County
R. G. Benbow, McDonough County
A. R. Kemp, Knox County
J. W. Whisenand, Peoria County
J. E. Watt, Fulton County

E. D. Peterson, Mercer County
A. J. Rehling, Henderson County
L. L. Norton, Hancock County
E. H. Walworth, Warren County
L. J. Hager, Marshall-Putnam County
Wayne A. Gilbert, Stark County

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 3, 1936-1939

Items	Your farm	Average of all farms in area			
		1939	1938	1937	1936
Number of farms- - - - -	--	511	500	342	277
<u>Inventory Changes</u>					
Farm improvements- - - - -	\$ _____	\$ 187	\$ 127	\$ 92	\$ 44
Livestock- - - - -	_____	249	274	153	-6
Feed and grain - - - - -	_____	960	22	520	557
Machinery and equipment ^{1/} - - - - -	_____	122	160	302	308
Automobile (farm share)- - - - -	_____	22	-2	--	--
Totals - - - - -	\$ _____	\$1,540	\$ 581	\$1,067	\$ 903
<u>Cash Receipts</u>					
Farm improvements- - - - -	\$ _____	\$ 10	15	7	3
Horses - - - - -	_____	55	54	70	96
Productive livestock: Cattle - - - - -	_____	2,433	1,817	1,366	1,584
Dairy sales- - - - -	_____	313	342	355	297
Hogs - - - - -	_____	2,144	2,561	2,097	2,377
Sheep- - - - -	_____	257	283	202	192
Foultry- - - - -	_____	84	96	95	96
Egg sales - - - - -	_____	109	116	123	126
Total productive livestock - - - - -	_____	(5,340)	(5,215)	(4,238)	(4,672)
Feed and grain - - - - -	_____	1,378	1,240	1,403	1,270
Machinery and equipment ^{1/} - - - - -	_____	253	266	343	245
Automobile (farm share)- - - - -	_____	55	35	--	--
Labor off farm - - - - -	_____	44	58	91	103
Miscellaneous- - - - -	_____	17	10	7	4
AAA payments - - - - -	_____	782	193	172	225
Totals - - - - -	\$ _____	\$7,934	\$7,086	\$6,331	\$6,618
<u>Cash Expenses</u>					
Farm improvements- - - - -	\$ _____	\$ 479	\$ 389	\$ 314	\$ 257
Horses - - - - -	_____	36	36	49	69
Productive livestock: Cattle - - - - -	_____	1,369	955	600	496
Hogs - - - - -	_____	146	142	119	203
Sheep- - - - -	_____	174	179	133	59
Poultry- - - - -	_____	24	24	20	26
Total productive livestock - - - - -	_____	(1,713)	(1,300)	(872)	(784)
Feed and grain - - - - -	_____	1,036	755	864	917
Machinery and equipment ^{1/} - - - - -	_____	990	994	1,103	954
Automobile (farm share)- - - - -	_____	179	139	--	--
Hired labor- - - - -	_____	510	474	335	291
Miscellaneous- - - - -	_____	41	40	26	27
Crop expense - - - - -	_____	170	184	304	217
Livestock expense- - - - -	_____	77	77	52	49
Taxes- - - - -	_____	321	298	257	258
Totals - - - - -	\$ _____	\$5,552	\$4,686	\$4,176	\$3,823
<u>Summary</u>					
Cash balance - - - - -	\$ _____	\$2,382	\$2,400	\$2,155	\$2,795
Farm products used in household ^{2/} - - - - -	_____	260	278	--	--
Total inventory change - - - - -	_____	1,540	581	1,067	903
Receipts less expenses - - - - -	_____	4,182	3,259	3,222	3,698
Total unpaid labor - - - - -	_____	681	699	769	756
Net earnings per farm- - - - -	\$ _____	\$3,501	\$2,560	\$2,453	\$2,942
Net earnings per acre- - - - -	\$ _____	\$14.06	\$10.36	\$10.83	\$13.14

^{1/} Includes farm share of automobile for 1936 and 1937.

^{2/} Not included as income for 1936 and 1937.

Inventory Changes, Cash Receipts, Cash Expenses, and Earnings

Inventory changes.--The year 1939 was the fourth consecutive year of increasing inventories, the increases averaging \$1,540 in 1939, \$581 in 1938, \$1,067 in 1937, and \$903 in 1936 (Table 1). The largest increases in 1939 were in feed and grain and in livestock. The increased value of feed and grain represented higher prices at the end of the year as well as larger quantities of grain on hand (Page 1 and Fig. 2). The average amounts of grain on hand in Area 3 at the two inventory periods follow:

	<u>Beginning of year</u> (bushels)	<u>End of year</u> (bushels)
Corn	4,298	5,257
Oats	834	716
Wheat	82	106
Soybeans	121	149

Cash receipts.--Cash receipts reached the highest level in four years, averaging, \$7,934 in 1939 (Table 1). Receipts from AAA, as well as from total productive livestock and feed and grain, were larger in 1939 than in 1938. The larger AAA receipts were mainly due to a doubling-up in payments, many farmers receiving payments in 1939 for participation in both the 1938 and 1939 programs.

Cash expenses.--Cash expenses were larger in 1939 than in any of the last four years. The largest increases in expenditures were for cattle and feed and grain.

Earnings.--Cash receipts exceeded cash expenses in 1939 by \$2,382 or by a slightly smaller margin than in 1938. Cash balance, the difference between these receipts and expenses, is the average amount of money available for family living expenses, interest, debt payments, and savings.

The amounts deducted for operator's and family labor remained rather uniform during the 4-year period, a difference of only \$88 occurring between the low year, 1939, and the high year, 1937. The uniformity in valuation was due to the fact that approximately the same amount of family labor was available each year and to the fact that the same rate (\$50 per month) was charged for the physical labor of the operator and other mature members of the family.

The net earnings per farm averaged \$3,501 in 1939 as contrasted with \$2,560 in 1938. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding the value of farm products used in the household and the inventory increases to the cash balance and by subtracting the value of unpaid labor from the resulting total. Therefore, this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

TABLE 2.--INVESTMENTS, RECEIPTS, EXPENSES, AMT EARNINGS
Accounting Farms in Farming-Type Area 3, 1939

Items	Your farm	Average of all farms	Land area tillable	
			85 percent or more	Less than 85 percent
Number of farms - - - - -	--	511	275	236
<u>Capital Investments</u>				
Land- - - - -	\$ _____	\$23,904	\$25,560	\$21,974
Farm improvements - - - - -	_____	4,943	4,875	5,023
Horses- - - - -	_____	367	316	426
Productive livestock: Cattle- - - - -	_____	2,000	1,837	2,191
Hogs- - - - -	_____	1,120	1,076	1,171
Sheep - - - - -	_____	132	108	160
Poultry - - - - -	_____	89	86	92
<u>Total productive livestock- - - - -</u>	()	(3,341)	(3,107)	(3,614)
Feed and grain - - - - -	_____	2,859	2,965	2,735
Machinery and equipment - - - - -	_____	2,167	2,198	2,131
Automobile (farm share) - - - - -	_____	188	181	198
<u>Totals- - - - -</u>	\$ _____	\$37,767	\$39,202	\$36,101
<u>Receipts and Net Increases</u>				
Horses - - - - -	\$ _____	\$ --	\$ --	\$ --
Productive livestock: Cattle- - - - -	_____	1,437	1,334	1,558
Dairy sales - - - - -	_____	313	316	309
Hogs- - - - -	_____	1,898	1,815	1,993
Sheep - - - - -	_____	95	93	96
Poultry - - - - -	_____	57	60	55
Egg sales - - - - -	_____	109	107	113
<u>Total productive livestock- - - - -</u>	()	(3,909)	(3,725)	(4,124)
Farm products used in household - - - - -	_____	260	251	270
Feed and grain - - - - -	_____	1,302	1,666	879
Labor off farm - - - - -	_____	44	41	47
Miscellaneous - - - - -	_____	17	14	21
AAA payments - - - - -	_____	782	818	740
<u>Totals- - - - -</u>	\$ _____	\$ 6,314	\$ 6,515	\$ 6,081
<u>Expenses and Net Decreases</u>				
Farm improvements - - - - -	\$ _____	\$ 282	\$ 286	\$ 277
Horses - - - - -	_____	14	16	12
Productive livestock- - - - -	_____	--	--	--
Feed and grain- - - - -	_____	--	--	--
Machinery and equipment - - - - -	_____	615	625	603
Automobile (farm share) - - - - -	_____	102	100	107
Hired labor - - - - -	_____	510	466	561
Miscellaneous - - - - -	_____	41	40	41
Crop expense- - - - -	_____	170	171	170
Livestock expense - - - - -	_____	77	72	83
Taxes - - - - -	_____	321	323	318
<u>Totals- - - - -</u>	\$ _____	\$ 2,132	\$ 2,097	\$ 2,172
<u>Receipts less expenses- - - - -</u>	\$ _____	\$ 4,182	\$ 4,416	\$ 3,909
Family labor- - - - -	_____	162	156	170
Returns for labor, capital, mgt.- - - - -	_____	4,020	4,260	3,739
Operator's labor- - - - -	_____	519	529	506
Returns for capital and mgt.- - - - -	_____	3,501	3,731	3,233
<u>Rate Earned on Investment - - - - -</u>	%	9.3%	9.5%	9.0%
Interest on investment- - - - -	_____	\$ 1,889	\$ 1,960	\$ 1,805
Labor and Management Earnings - - - - -	_____	2,131	2,300	1,934
<u>Nonfarm income - - - - -</u>	\$ _____	\$ 46	\$ 53	\$ 38

Variation in farm earnings.--A wide variation was found in earnings on the farms in Area 3; for example, 62 farms earned less than 5 percent on the investment, with an average rate earned of 3.5 percent, but in contrast 40 farms earned 14 percent or more, with an average rate earned of 15.6 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had only \$45 left for labor and management earnings as contrasted with \$4,376 for the latter group. By studying the reasons for these variations, farm operators can improve their chances of financial success. The variation in earnings and in size of farm for all records in the area was as follows:

Rate earned on investment (percent)	Number of farms	Average rate earned (percent)	Acres per farm	Capital in- vested per farm	Gross earnings per farm	Net earnings per farm	Labor and management earnings
Less than 5	62	3.5	207	\$30,127	\$3,867	\$1,045	\$ 45
5 to 8	113	6.7	234	36,747	5,520	2,449	1,132
8 to 11	196	9.4	263	40,927	7,066	3,862	2,343
11 to 14	100	12.2	251	38,040	7,620	4,637	3,240
14 or more	40	15.6	286	36,356	8,915	5,670	4,376

Comparison of Farms According to Quality of Land

The 511 farms were divided into two groups according to the percent of land area tillable. Of this total number of farms 275 had 85 percent or more of land area tillable, and 236 had less than 85 percent tillable. The average percent tillable was 93.0 for the former group and 68.3 for the latter group.

This grouping of farms gives each farmer an opportunity to compare his farm with the average of other farms having a similar quality of land as well as with the average of all accounting farms (Tables 2 and 3).

The capital investment averaged \$39,202, or \$174 per acre, for the group of farms having the larger percent of land area tillable, as compared with a capital investment averaging \$36,101, or \$130 per acre, for the group of farms having the smaller percent of land area tillable.

The receipts and net increases were \$434 larger, but the expenses and net decreases were \$73 smaller on farms of higher-quality land than on those of lower-quality land. Total productive livestock receipts and net increases were \$399 smaller for the farms with the larger percent of land area tillable; whereas, the grain receipts were \$787 larger. The rate earned on investment was 9.5 percent and 9.0 percent, and the labor and management earnings were \$2,300 and \$1,934, respectively, for the two groups of farms.

The farms on higher-quality land were 52 acres smaller than were those on lower-quality land; yet the former had 10 acres more land in crops. They also had a larger percent of tillable land in corn, oats, and soybeans but a smaller percent in wheat. The amount of livestock per farm was larger on the farms with the most untillable land, as indicated by the value of feed fed to productive livestock and the capital invested in productive livestock (Table 3).

TABLE 3.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 3, 1939

Items	Your farm	Average of all farms	Land area tillable	
			85 percent or more	Less than 85 percent
Rate earned on investment- - - - -	_____ %	9.3%	9.5%	9.0%
Acres in farm- - - - -	_____	249	225	277
Acres in crops - - - - -	_____	163	167	157
Gross earnings per acre- - - - -	\$ _____	\$ 25.35	\$ 28.94	\$ 21.95
Total expenses per acre ^{2/} - - - - -	_____	11.29	12.36	10.28
Net earnings per acre - - - - -	_____	14.06	16.58	11.67
<u>Investments</u>				
Value of land per acre - - - - -	\$ _____	\$ 96	\$ 114	\$ 79
Value of improvements per acre - - -	_____	20	22	18
Total investment per acre- - - - -	_____	152	174	130
<u>Land Use</u>				
Percent of land area tillable- - - -	_____	80.3	93.0	68.3
Percent of tillable land in:				
Corn - - - - -	_____	36.7	37.2	36.2
Oats - - - - -	_____	15.5	16.1	14.6
Wheat- - - - -	_____	4.0	3.1	5.2
Soybeans - - - - -	_____	6.8	7.1	6.4
Other crops- - - - -	_____	7.3	6.5	8.3
Legume hay and pasture - - - - -	_____	18.8	18.7	18.9
Nonlegume hay and pasture- - - - -	_____	10.9	11.3	17.4
<u>Crop Yields</u>				
Corn - - - - -	_____	70.4	72.2	68.0
Oats - - - - -	_____	37.8	39.4	35.5
Wheat- - - - -	_____	22.9	25.0	21.6
Soybeans - - - - -	_____	29.0	30.1	27.3
<u>Livestock Factors</u>				
Value of feed fed to prod. L. S. - -	\$ _____	\$2,620	\$2,539	\$2,715
Feed fed per acre to prod. L. S. - -	_____	10.52	11.28	9.80
Returns per acre from prod. L. S.- -	_____	16.47	17.40	15.59
Returns per \$100 worth of feed fed -	_____	157	154	159
Returns per \$100 invested in cattle-	_____	85	88	82
Poultry returns per hen- - - - -	_____	2.43	2.44	2.43
Number of litters farrowed - - - - -	_____	26.9	26.3	27.6
Number of pigs weaned per litter - -	_____	6.1	6.0	6.2
Returns per litter farrowed- - - - -	\$ _____	\$ 75	\$ 74	\$ 77
Average number of cows milked- - -	_____	5.4	5.3	5.5
Dairy returns per cow milked - - - -	\$ _____	\$ 73	\$ 75	\$ 71
<u>Expense Factors</u>				
Machinery cost per crop acre ^{1/} - - -	\$ _____	\$ 4.41	\$ 4.34	4.52
Horse and machinery cost per crop A.	_____	5.21	5.05	5.44
Labor cost per crop acre ^{2/} - - - -	_____	7.06	6.64	7.57
Labor cost per \$100 gross earnings ^{2/}	_____	18	17	20
Number of work horses- - - - -	_____	3.3	3.0	3.6
Value of feed fed to horses- - - - -	\$ _____	\$ 116	\$ 103	\$ 133
Improvement cost per acre- - - - -	_____	1.13	1.27	1.00
Taxes per acre - - - - -	_____	1.29	1.43	1.15

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS,
FARMS WITH LESS THAN 85 PERCENT OF THE LAND AREA TILLABLE

Accounting Farms in Farming-Type Area 3, 1939

The numbers above the lines across the middle of the page are the averages for the 236 farms included in this group for the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings									Factors that affect expenses			
			Percent tillable land in legume hay and pasture	Crop yields			Feed fed per acre to prod. L. S.	Returns per \$100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked	Total expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Labor cost per \$100 gross earnings
				Corn, bu.	Oats, bu.	Soybeans, bu.									
19	477	37	34	98	60	37	20	209	3.93	127	121	--	--	3	10
17	437	34	31	92	55	35	18	199	3.63	117	111	2	1	4	12
15	397	31	28	86	50	33	16	189	3.33	107	101	4	2	5	14
13	357	28	25	80	45	31	14	179	3.03	97	91	6	3	6	16
11	317	25	22	74	40	29	12	169	2.73	87	81	8	4	7	18
9.0	277	21.25	18.9	68.0	35.5	27.3	9.80	159	2.43	77	71	10.28	5.44	7.57	20
7	237	19	16	62	30	25	8	149	2.13	67	61	12	6	9	22
5	197	16	13	56	25	23	6	139	1.83	57	51	14	7	10	24
3	157	13	10	50	20	21	4	129	1.53	47	41	16	8	11	26
1	117	10	7	44	15	19	2	119	1.23	37	31	18	9	12	28
-1	77	7	4	38	10	17	--	109	.93	27	21	20	10	13	30

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 3, 1939

Items	Source of income					
	Grain 40% +	Dairy sales 40% +	Hogs 40% +	Cattle 40% +	General farms	
					L.S. 60%-	L.S. 60% +
Number of farms - - - - -	119	6	115	55	135	81
Percent income from prod. L.S.- -	29.8	86.9	83.2	84.8	49.5	72.8
Percent income from crops - - - -	53.3	--	--	--	30.5	10.1
<u>Investments</u>						
Total per farm- - - - -	\$39,585	\$25,058	\$33,991	\$56,817	\$33,775	\$34,124
Total per acre- - - - -	156	204	147	173	143	140
Land per acre - - - - -	108	101	89	101	93	88
Improvements per acre - - - - -	17	51	21	24	19	19
Machinery per acre ^{1/} - - - - -	9	17	9	10	9	9
<u>Earnings</u>						
Per farm						
Gross earnings- - - - -	\$ 6,571	\$ 4,967	\$ 5,871	\$10,055	\$ 5,646	\$ 5,602
Gross expenses ^{2/} - - - - -	2,738	3,179	2,706	4,587	2,541	2,661
Net earnings- - - - -	3,833	1,788	3,165	5,468	3,105	2,941
Per acre						
Gross earnings- - - - -	\$ 25.73	\$ 40.38	\$ 25.30	\$ 30.53	\$ 23.95	\$ 22.94
Gross expenses ^{2/} - - - - -	10.80	25.84	11.66	13.93	10.78	10.90
Net earnings- - - - -	15.13	14.54	13.64	16.60	13.17	12.04
Rate earned on investment - - -	7.7%	7.1%	9.3%	9.6%	9.2%	8.6%
Labor and mgt. earnings - - - -	\$ 2,358	\$ 1,134	\$ 1,969	\$ 3,149	\$ 1,952	\$ 1,707
<u>Size and Intensity</u>						
Acres per farm - - - - -	253	123	232	329	236	244
Percent land area tillable- - -	87.8	81.3	77.0	77.5	81.6	73.9
Percent tillable land in grain-	69.0	45.2	61.4	62.7	63.8	63.1
Percent in hay and pasture- - -	23.4	46.8	33.3	33.1	29.7	31.3
Feed fed per acre to prod. L.S. \$	\$ 5.24	\$ 15.90	\$ 14.21	\$ 18.10	\$ 7.67	\$ 11.04
Months of labor per 100 crop A.	10.6	40.3	15.9	14.9	13.1	15.9
Total months of labor - - - - -	20.1	27.5	22.2	30.6	20.4	23.2
<u>Crop Yields Per Acre</u>						
Corn, bu. - - - - -	71.3	79.5	70.7	76.6	67.4	66.7
Oats, bu. - - - - -	39.4	34.3	38.4	40.6	35.2	36.3
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 160	\$ 230	\$ 154	\$ 147	\$ 165	\$ 159
Hog returns per litter- - - - -	65	58	84	77	70	70
Dairy returns per cow - - - - -	66	153	67	65	73	70
<u>Expense Factors</u>						
Labor cost ^{2/}						
Per crop acre - - - - -	\$ 5.46	\$ 21.30	\$ 8.23	\$ 7.95	\$ 6.67	\$ 7.85
Per \$100 gross earnings - - -	16	29	20	16	18	20
Horse and machinery cost						
per crop acre ^{1/} - - - - -	4.65	11.82	5.61	6.07	4.86	5.35
Improvement cost per acre - - -	1.09	2.11	1.15	1.37	1.03	1.07
Land tax per acre - - - - -	1.18	1.45	1.09	1.15	1.14	1.11

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

Larger crop yields per acre on the farms on higher-quality land, which amounted to 4.2 bushels of corn, 3.9 bushels of oats, 3.4 bushels of wheat, and 2.8 bushels of soybeans, indicate the relative productive level of the two groups of farms.

The operating expenses per acre averaged \$12.36 on the farms with the most tillable land and \$10.28 on the farms with the least tillable land. The combined cost per crop acre for labor, machinery, and horses was \$1.32 smaller on the farms with the larger percent of tillable land, but the combined cost per acre for improvements and taxes was \$.55 larger.

The livestock-efficiency factors, such as poultry returns per hen, hog returns per litter of pigs farrowed, and dairy returns per cow milked, were not appreciably affected by the quality of land. These factors indicate that the two groups of farms were operated with about the same degree of efficiency. Therefore, it may be assumed that the differences in organization, land use, crop yields, and costs were principally due to the differences in the productivity of the land on the two groups of farms.

Source of Income

The 511 farms were divided into six groups according to source of income (Table 4). The items in this table, for the most part, were made to correspond with the items given in Table 3; therefore, a farmer may compare the data in the "Your farm" column in Table 3 with the "Source of income" column in Table 4, which corresponds to the classification for his own farm.

In a comparison of the groups of farms the fact that conditions affecting production and price relationships vary from year to year should be kept in mind. Therefore, the average differences in earnings in 1939 are not necessarily typical of the variations that may be expected over a long period of years. The following items, for example, indicate that generally the grain farms were located on the better land: high value of land per acre, large percent of land area tillable, large percent of land in grain, high yield of corn per acre, and land tax per acre.

The returns per \$100 feed that are necessary to pay for feed (including pasture) and other costs, according to 5-year averages of complete cost studies (1933-1937), are as follows: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117. There is little wonder, therefore, that the six groups of accounting farms with different classes and proportions of livestock varied widely in their returns per \$100 worth of feed fed. The amount of feed fed per acre to productive livestock averaged \$18.10 on the cattle farms but only \$5.24 on the grain farms.

Differences in expenses are significant for the six groups of farms. Labor input per crop acre was highest on the cattle farms, where 30.6 months of labor were used, and lowest on the grain farms, where 20.1 months of labor were used; horse and machinery cost per crop acre averaged \$11.82 on the dairy farms, \$6.07 on the cattle farms, \$5.61 on the hog farms, and only \$4.65 on the grain farms; improvement costs per acre ranged from \$1.03 on the general farms with the least livestock to \$2.11 on the dairy farms; and land taxes ranged from \$1.09 on the hog farms to \$1.18 on the grain farms.

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 3, 1939

Items	Total acres in farm					
	Less than 121	121 to 200	201 to 280	281 to 360	361 to 440	441 or more
Number of farms - - - - -	56	172	124	88	38	33
Acres per farm - - - - -	100	166	242	321	396	599
<u>Investments</u>						
Total per farm- - - - -	\$15,353	\$26,248	\$37,781	\$49,140	\$58,744	\$81,349
Total per acre- - - - -	154	158	156	153	148	136
Land per acre - - - - -	93	98	102	96	94	86
Improvements per acre - - - - -	23	22	19	19	19	19
Machinery per acre ^{1/} - - - - -	10	11	9	9	9	8
<u>Earnings</u>						
Per farm						
Gross earnings- - - - -	\$ 2,658	\$ 4,459	\$ 6,260	\$ 8,055	\$ 9,872	\$13,649
Gross expenses ^{2/} - - - - -	1,427	2,117	2,706	3,455	4,219	5,864
Net earnings - - - - -	1,231	2,342	3,554	4,600	5,653	7,785
Per acre						
Gross earnings- - - - -	\$ 26.69	\$ 26.80	\$ 25.87	\$ 25.08	\$ 24.95	\$ 22.78
Gross expenses ^{2/} - - - - -	14.33	12.72	11.18	10.76	10.66	9.79
Net earnings - - - - -	12.36	14.08	14.69	14.32	14.29	12.99
Rate earned on investment - - -	8.0%	8.9%	9.4%	9.4%	9.6%	9.6%
Labor and management earnings -	\$ 944	\$ 1,550	\$ 2,175	\$ 2,693	\$ 3,242	\$ 4,230
<u>Size and Intensity</u>						
Percent land area tillable- - -	85.8	84.4	82.8	80.9	76.2	71.4
Percent tillable land in grain-	60.5	62.9	66.0	63.0	64.4	61.0
Percent in hay and pasture- - -	36.2	32.6	28.3	29.6	29.5	24.7
Feed fed per acre to prod. L.S.	\$ 11.29	\$ 11.21	\$ 10.00	\$ 10.71	\$ 10.58	\$ 9.78
Percent of income from prod.L.S.	60.7	63.4	58.3	64.9	62.9	60.6
Percent of income from grain- -	17.7	18.1	23.8	18.2	20.3	24.5
Months of labor per 100 crop A.	21.1	16.5	13.2	12.4	12.6	11.0
Total months of labor - - - - -	13.8	18.2	21.9	26.0	31.0	40.5
<u>Crop Yields Per Acre</u>						
Corn, bu. - - - - -	70.2	70.4	70.4	69.2	72.5	70.4
Oats, bu. - - - - -	36.5	38.6	37.7	38.1	37.2	36.3
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 157	161	159	158	153	145
Hog returns per litter- - - - -	66	76	76	77	75	74
Dairy returns per cow - - - - -	65	76	66	69	81	89
<u>Expense Factors</u>						
Labor cost per crop acre ^{2/} - - -	\$ 10.35	\$ 8.24	\$ 6.66	\$ 6.51	\$ 6.63	\$ 6.05
Labor cost per \$100 gross earnings- - - - -	25	20	18	17	17	16
Horse and machinery cost per crop acre ^{1/} - - - - -	5.84	5.69	4.97	5.11	5.33	4.81
Improvement cost per acre - - -	1.41	1.20	1.17	.99	1.14	1.07
Land tax per acre - - - - -	1.28	1.20	1.12	1.14	1.12	1.04

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

Size of Farm as Related to Earnings

The farm records in Farming-Type Area 3, when sorted according to the total acres in the farm, indicate that the larger farms had a greater total investment in land, improvements, and equipment than did the smaller farms. The operators on the larger farms took in more money during the year than did the operators on the smaller farms; and after deductions were made for farm business expenditures and interest on the investment, the 33 largest farms had labor and management earnings which averaged \$4,230 as contrasted with \$944 for the 56 smallest farms. The earnings, as measured by the rate earned on the investment, were slightly larger for the largest farms than for the smallest farms. In years when the average rate earned on investment for groups of farms exceeds the capitalization rate (5 percent) the average labor and management earnings are higher on the larger farms than on the smaller ones, but these earnings are lower when the rate earned averages less than the capitalization rate.

The smaller farms were operated more intensively than were the larger farms. This variation was indicated by the larger amount of feed fed per acre to productive livestock and by the larger number of months of labor per 100 crop acres.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Farm Organization and Farm Earnings by Counties and Groups of Counties

Farming-type areas are formed by grouping together counties which are similar with respect to physical, economic, and biological characteristics. Although a classification of this kind is very useful for many purposes, no two counties within an area are exactly alike. A tabulation of farm account records by counties and groups of counties indicates some of these differences which are due to variations in quality of land, topography, amount of erosion, market outlets, weather conditions, and disease hazards. The effects of variations in these factors are indicated in the account records by differences in value of land per acre, taxes per acre, percent of land area tillable, size of farm, total acres in crops, percent of tillable land in important crops, crop yields, amount of feed fed to productive livestock, and the source of farm income (Tables 6 and 7).

In this report an average was calculated for each county from which 30 or more records were received. Averages were made in some instances with less than 30 records if it was necessary to eliminate some records because they were incomplete or not typical for the area. In any tabulation containing as few as 30 records, part of the variation from county to county is due to the fact that the averages do not represent a cross section of the county.

The tabulations by counties and by groups of counties may be used by extension specialists, farm advisers, and county program-building committees to represent the type of farm organization and the level of operating efficiency attained by a selected group of progressive farmers in the various parts of a farming-type area. Since the personnel of the accounting group changes slowly, comparisons may be made from county to county and from year to year even though these records are from farms with efficiency which is higher than average.

TABLE 6.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 3, 1939

Items	Henry	Bureau	McDonough	Knox
Number of farms - - - - -	78	57	51	48
<u>Capital Investments</u>				
Land- - - - -	\$23,970	\$24,030	\$26,384	\$24,245
Farm improvements - - - - -	5,552	5,536	4,710	5,122
Horses- - - - -	359	314	381	299
Productive livestock: Cattle- - -	2,530	1,949	1,674	1,565
Hogs- - - -	1,198	1,038	1,446	839
Sheep - - -	142	228	74	137
Poultry - -	92	94	89	75
<u>Total productive livestock- - -</u>	<u>(3,962)</u>	<u>(3,309)</u>	<u>(3,283)</u>	<u>(2,616)</u>
Feed and grain- - - - -	2,963	2,528	3,092	2,951
Machinery and equipment - - - -	2,297	2,157	2,327	2,139
Automobile (farm share) - - - -	201	174	152	192
Totals- - - - -	\$39,304	\$38,048	\$40,329	\$37,564
<u>Receipts and Net Increases</u>				
Horses - - - - -	\$ --	\$ --	\$ 10	--
Productive livestock: Cattle- - -	1,851	1,364	1,584	923
Dairy sales	344	358	198	448
Hogs- - - -	1,937	1,595	2,690	1,367
Sheep - - -	90	144	40	75
Poultry - -	47	97	72	32
Egg sales -	133	123	107	83
<u>Total productive livestock- - -</u>	<u>(4,402)</u>	<u>(3,681)</u>	<u>(4,691)</u>	<u>(2,928)</u>
Farm products used in household -	256	269	290	241
Feed and grain - - - - -	815	1,220	1,352	2,188
Labor off farm - - - - -	30	45	44	49
Miscellaneous - - - - -	21	14	12	24
AAA payments - - - - -	866	817	831	612
Totals- - - - -	\$ 6,390	\$ 6,046	\$ 7,230	\$ 6,042
<u>Expenses and Net Decreases</u>				
Farm improvements - - - - -	\$ 288	\$ 300	\$ 286	\$ 258
Horses- - - - -	20	12	--	18
Productive livestock- - - - -	--	--	--	--
Feed and grain- - - - -	--	--	--	--
Machinery and equipment - - - -	615	594	597	648
Automobile (farm share) - - - -	99	108	103	99
Hired labor - - - - -	492	427	578	503
Miscellaneous - - - - -	36	36	46	41
Crop expense- - - - -	187	168	190	199
Livestock expense - - - - -	67	75	102	82
Taxes - - - - -	347	248	316	323
Totals- - - - -	\$ 2,151	\$ 1,968	\$ 2,218	\$ 2,171
Receipts less expenses- - - - -	\$ 4,239	\$ 4,078	\$ 5,012	\$ 3,871
Family labor- - - - -	227	179	140	121
Returns for labor, capital, mgt.	4,012	3,899	4,872	3,750
Operator's labor- - - - -	514	508	525	516
Returns for capital and mgt.- -	3,498	3,391	4,347	3,234
<u>Rate Earned on Investment - - - -</u>	<u>8.9%</u>	<u>8.9%</u>	<u>10.8%</u>	<u>8.6%</u>
Interest on investment- - - - -	\$ 1,965	\$ 1,902	\$ 2,017	\$ 1,878
Labor and Management Earnings - -	2,047	1,997	2,855	1,872
Nonfarm income - - - - -	\$ 29	\$ 16	\$ 64	\$ 33

TABLE 6.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 3, 1939 (Cont.)

Peoria	Fulton	Mercer	Henderson	Hancock	Warren	Marshall- Putnam	Stark
45	40	37	33	30	30	34	28
\$22,490	\$18,621	\$24,282	\$20,028	\$18,163	\$27,615	\$32,414	\$24,084
4,530	4,262	4,874	4,214	3,992	5,358	6,101	3,917
370	299	485	516	345	483	388	223
1,388	1,575	2,710	2,783	1,406	2,291	1,084	2,777
954	852	1,349	1,358	703	1,261	1,279	1,128
26	122	53	68	53	216	168	321
110	73	98	72	82	79	108	82
(2,478)	(2,622)	(4,210)	(4,281)	(2,244)	(3,847)	(4,332)	(2,615)
2,518	2,135	3,106	3,048	1,983	3,542	3,787	2,775
2,133	1,905	1,987	2,395	1,615	2,296	2,284	2,297
204	187	213	186	143	194	222	192
\$34,723	\$30,031	\$39,157	\$34,668	\$28,485	\$43,335	\$49,528	\$36,103
\$ --	\$ --	\$ --	\$ 12	\$ --	\$ --	\$ --	\$ --
884	904	1,902	2,329	873	1,736	2,016	614
428	240	329	143	350	234	317	250
1,623	1,766	1,928	2,330	1,328	2,233	2,379	1,612
76	117	51	59	44	95	148	221
50	60	53	57	51	49	56	58
159	80	128	90	75	83	117	89
(3,220)	(3,167)	(4,391)	(5,008)	(2,721)	(4,430)	(5,033)	(2,844)
253	241	255	279	252	253	273	248
1,553	963	895	678	1,160	1,596	1,519	2,150
69	40	44	46	29	38	45	53
10	8	5	30	15	26	32	9
725	609	783	879	415	1,002	1,098	672
\$ 5,830	\$ 5,028	\$ 6,373	\$ 6,932	\$ 4,592	\$ 7,345	\$ 8,000	\$ 5,976
\$ 258	\$ 276	\$ 286	\$ 294	\$ 184	\$ 341	\$ 365	\$ 221
37	7	20	--	17	21	8	30
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--
514	601	604	747	408	722	757	609
96	93	122	94	85	113	131	97
460	389	609	643	451	578	620	443
43	35	50	46	23	41	53	40
124	130	167	217	102	188	183	163
60	56	91	118	54	96	73	54
298	325	395	321	255	323	391	315
\$ 1,890	\$ 1,912	\$ 2,344	\$ 2,480	\$ 1,579	\$ 2,423	\$ 2,581	\$ 1,972
\$ 3,940	\$ 3,116	\$ 4,029	\$ 4,452	\$ 3,013	\$ 4,922	\$ 5,419	\$ 4,004
133	126	167	182	168	164	145	138
3,807	2,990	3,862	4,270	2,845	4,758	5,274	3,866
482	517	549	560	475	514	536	549
3,325	2,473	3,313	3,710	2,370	4,244	4,738	3,317
9.6%	8.2%	8.5%	10.7%	8.3%	9.8%	9.6%	9.2%
\$ 1,736	\$ 1,501	\$ 1,958	\$ 1,734	\$ 1,424	\$ 2,167	\$ 2,476	\$ 1,805
2,071	1,489	1,904	2,536	1,421	2,591	2,798	2,061
\$ 40	\$ 34	\$ 37	\$ 58	\$ 160	\$ 82	\$ 35	\$ 23

TABLE 7.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 3, 1939

Items	Henry	Bureau	McDonough	Knox
Rate earned on investment- - - - -	8.9%	8.9%	10.8%	8.6%
Acres in farm- - - - -	236	217	262	244
Acres in crops - - - - -	154	154	175	166
Gross earnings per acre- - - - -	\$ 27.10	\$ 27.91	\$ 27.64	\$ 24.76
Total expenses per acre ^{2/} - - - - -	12.27	12.26	11.02	11.51
Net earnings per acre- - - - -	14.83	15.65	16.62	13.25
<u>Investments</u>				
Value of land per acre - - - - -	\$ 102	\$ 111	\$ 101	\$ 99
Value of improvements per acre - - - - -	24	26	18	21
Total investment per acre- - - - -	167	176	154	154
<u>Land Use</u>				
Percent of land area tillable- - - - -	84.6	84.5	81.7	83.2
Percent of tillable land in:				
Corn - - - - -	38.3	39.0	34.9	35.8
Oats - - - - -	17.9	21.9	13.4	11.4
Wheat- - - - -	1.0	1.2	8.4	2.6
Soybeans - - - - -	3.1	3.5	9.6	11.8
Other crops- - - - -	4.8	6.9	6.2	7.6
Legume hay and pasture - - - - -	22.1	17.5	18.0	15.8
Nonlegume hay and pasture- - - - -	12.8	10.0	9.5	15.0
<u>Crop Yields</u>				
Corn - - - - -	73.6	73.1	69.9	71.9
Oats - - - - -	38.9	38.6	44.4	35.8
Wheat- - - - -	24.1	19.5	27.2	24.3
Soybeans - - - - -	29.3	26.9	31.2	30.7
<u>Livestock Factors</u>				
Value of feed fed to prod. L. S. - - -	\$3,131	\$2,506	\$3,033	\$1,920
Feed fed per acre to prod. L. S. - - -	13.28	11.57	11.59	7.87
Returns per acre from prod. L. S.- - -	19.49	17.90	18.78	12.74
Returns per \$100 worth of feed fed - -	147	155	162	162
Returns per \$100 invested in cattle- -	85	84	97	82
Poultry returns per hen - - - - -	2.44	2.72	2.69	2.25
Number of litters farrowed - - - - -	30.2	22.0	32.0	22.9
Number of pigs weaned per litter - - -	6.0	6.2	6.2	6.0
Returns per litter farrowed- - - - -	\$ 71	\$ 82	\$ 83	\$ 67
Average number of cows milked- - - -	5.5	6.4	4.1	6.5
Dairy returns per cow milked - - - - -	\$ 78	\$ 68	\$ 71	\$ 81
<u>Expense Factors</u>				
Machinery cost per crop acre ^{1/} - - - -	\$ 4.63	\$ 4.55	\$ 4.01	\$ 4.51
Horses and machinery cost per crop acre ^{1/} - - - - -	5.48	5.30	4.62	5.29
Labor cost per crop acre ^{2/} - - - - -	7.80	6.92	6.86	6.59
Labor cost per \$100 gross earnings ^{2/} -	19	18	17	18
Number of work horses- - - - -	3.1	3.4	3.3	3.0
Value of feed fed to horses- - - - -	\$ 112	\$ 104	\$ 118	\$ 110
Improvement cost per acre- - - - -	1.22	1.39	1.09	1.06
Taxes per acre - - - - -	1.47	1.14	1.21	1.32

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

TABLE 7.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 3, 1939 (Cont.)

Peoria	Fulton	Mercer	Henderson	Hancock	Warren	Marshall- Putnam	Stark
9.6%	8.2%	8.5%	10.7%	8.3%	9.8%	9.6%	9.2%
224 150	255 153	270 152	276 168	236 137	278 187	305 207	228 164
\$ 26.09 11.21 14.88	\$ 19.74 10.03 9.71	\$ 23.61 11.34 12.27	\$ 25.10 11.67 13.43	\$ 19.47 9.42 10.05	\$ 26.45 11.17 15.28	\$ 26.21 10.69 15.52	\$ 26.22 11.67 14.55
\$ 101 20 155	\$ 73 17 118	\$ 90 18 145	\$ 73 15 126	\$ 77 17 121	\$ 99 19 156	\$ 106 20 162	\$ 106 17 158
81.0	73.8	70.4	74.2	77.3	84.2	77.7	87.4
35.4 16.9 2.8 8.9 8.2 20.3 7.5	32.1 12.0 10.7 7.6 7.8 18.8 11.0	41.0 11.9 .8 3.2 9.7 19.3 14.1	37.8 13.9 5.8 7.4 7.8 16.7 10.6	27.1 11.5 8.8 10.8 9.5 17.9 14.4	40.3 14.0 3.1 6.4 6.4 19.3 10.5	37.3 17.9 5.9 5.7 8.9 18.0 6.3	39.6 19.4 .8 6.3 7.7 18.8 7.4
69.8 36.5 25.0 28.7	63.5 38.7 19.5 28.1	72.2 33.3 25.6 29.2	68.8 31.8 23.8 26.3	59.6 36.8 19.8 26.1	71.3 36.9 25.8 28.1	68.2 37.1 20.1 31.6	71.3 37.9 24.4 27.1
\$2,018 9.03 15.21 168 95 2.39 23.4 6.0	\$2,196 8.62 13.17 153 76 2.58 28.6 5.8	\$2,981 11.04 16.95 154 83 2.33 26.2 6.0	\$3,343 12.10 18.91 156 85 2.49 28.9 6.5	\$1,767 7.49 12.30 164 81 2.32 19.9 6.2	\$3,044 10.96 16.63 152 86 2.24 31.0 6.4	\$3,244 10.63 17.14 161 81 2.17 33.0 5.9	\$1,831 8.03 13.33 166 74 2.29 24.0 5.5
\$ 79 5.2 96	\$ 70 5.2 61	\$ 69 5.4 76	\$ 74 3.8 62	\$ 75 7.1 61	\$ 76 5.1 59	\$ 82 5.2 76	\$ 70 5.3 63
\$ 4.06 5.18 6.85 18 3.5 131 1.15 1.33	4.53 5.16 6.48 20 2.6 90 1.08 1.28	4.79 5.70 8.44 20 4.1 119 1.06 1.46	\$ 5.01 5.84 7.97 19 3.7 151 1.06 1.16	\$ 3.60 4.57 7.77 23 3.5 117 .78 1.08	\$ 4.47 5.43 6.53 17 3.9 157 1.23 1.16	\$ 4.29 4.96 6.07 16 3.0 130 1.20 1.28	\$ 4.30 4.92 6.67 18 2.3 72 .97 1.38

Influence of Price Changes on Illinois Farm Incomes

All feed and grain, livestock, and other farm property on accounting farms must be valued at both the beginning and the end of the year. Prices at inventory time, therefore, have a marked influence on farm earnings. The influence is greatest where large stocks or supplies are on hand at inventory time; for example, a much larger supply of farm products was found on Illinois farms December 31, 1939, than a year earlier. In fact, grain and livestock inventories have been increasing on Illinois farms since the drouth of 1936 as a result of three years of exceptionally high crop yields and the influence of Agricultural Adjustment Programs which have caused farmers to grow more hay and pasture and to store corn on farms under seal. According to estimates made by the Bureau of Agricultural Economics, U.S.D.A., 356 million bushels of corn were on Illinois farms January 1, 1940, as compared with 325 million bushels January 1, 1939.

Livestock numbers on Illinois farms increased sharply in 1939 even though 62 million bushels of 1937 and 1938 corn were placed under seal at the end of the year and 83 million bushels of 1939 corn were sealed by March 31, 1940. The following data indicate the percentage increase in livestock numbers on 2520 accounting farms in Illinois from the beginning to the end of 1939: dairy cows, 2 percent; beef cows, 21 percent; feeder cattle, 17 percent; feeder lambs, 24 percent; brood sows, 4 percent; spring pigs, 38 percent; summer pigs, 23 percent; and fall pigs, 28 percent. Hog numbers have been increasing since 1935 and have now attained record levels; for example, 13.5 sows farrowed per farm on accounting farms in 1939 as contrasted with 9.9 sows farrowed per farm in 1938. The increase in beef cattle numbers is a part of the general up-swing taking place over the entire United States, and it may be expected to continue for several years.

These data indicate that supplies of both feed and livestock were great at the time the 1939 closing inventory was taken than at any other inventory period in several years, and price changes, therefore, are important in interpreting farm earnings for the state and for farming-type areas in 1939.

Prices of important farm products.--Prices for all crops as well as for beef cattle and sheep were higher at the end of 1939 than they were at the beginning, whereas prices for horses, hogs, and poultry were lower. Most of these price increases occurred during the last four months of the year.

December 15, Illinois Farm Prices

	<u>1938</u>	<u>1939</u>	<u>Increase</u>	<u>Decrease</u>
Corn, bu.	\$.42	\$.47	\$.05	\$ --
Oats, bu.	.24	.35	.11	--
Wheat, bu.	.57	.88	.31	--
Soybeans, bu.	.65	.95	.30	--
Hay, tons	6.20	6.50	.30	--
Horses, hd.	88.00	85.00	--	3.00
Hogs, cwt.	7.00	5.10	--	1.90
Beef cattle, cwt.	7.70	8.30	.60	--
Sheep, cwt.	3.45	3.60	.15	--
Chickens, lb.	.13	.11	--	.02

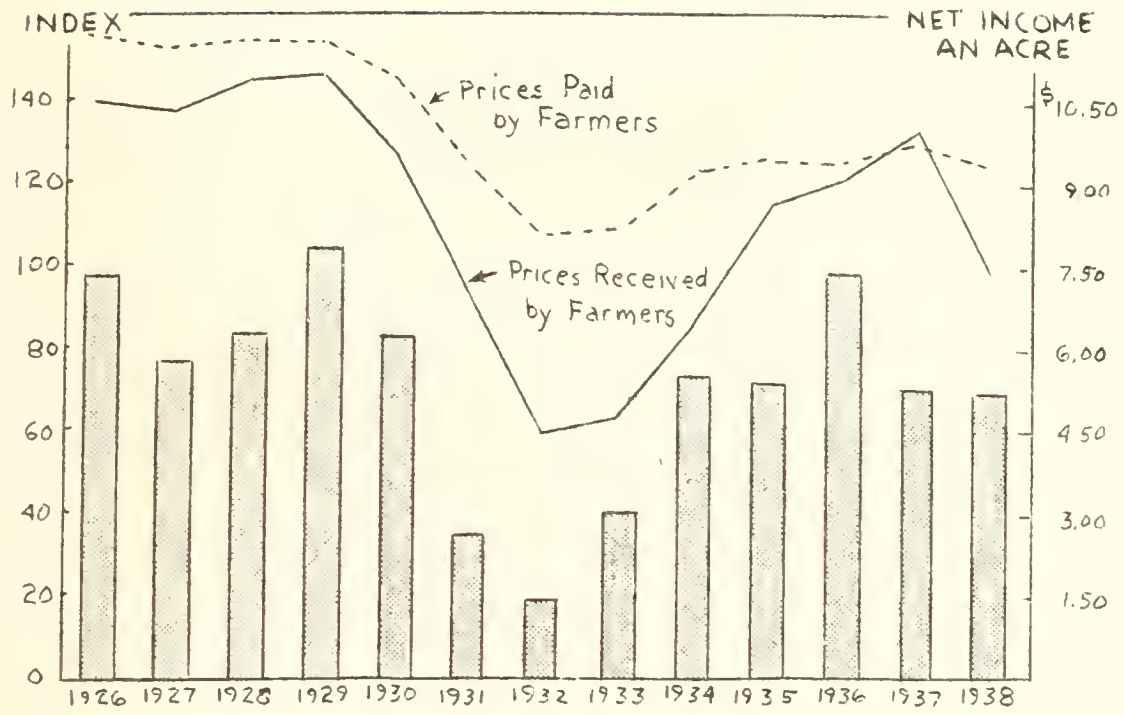


Fig. 1.--Average net cash income an acre (unpaid labor deducted) on Illinois accounting farms, prices paid by farmers in the United States, and prices received by Illinois farmers, 1926-1938.

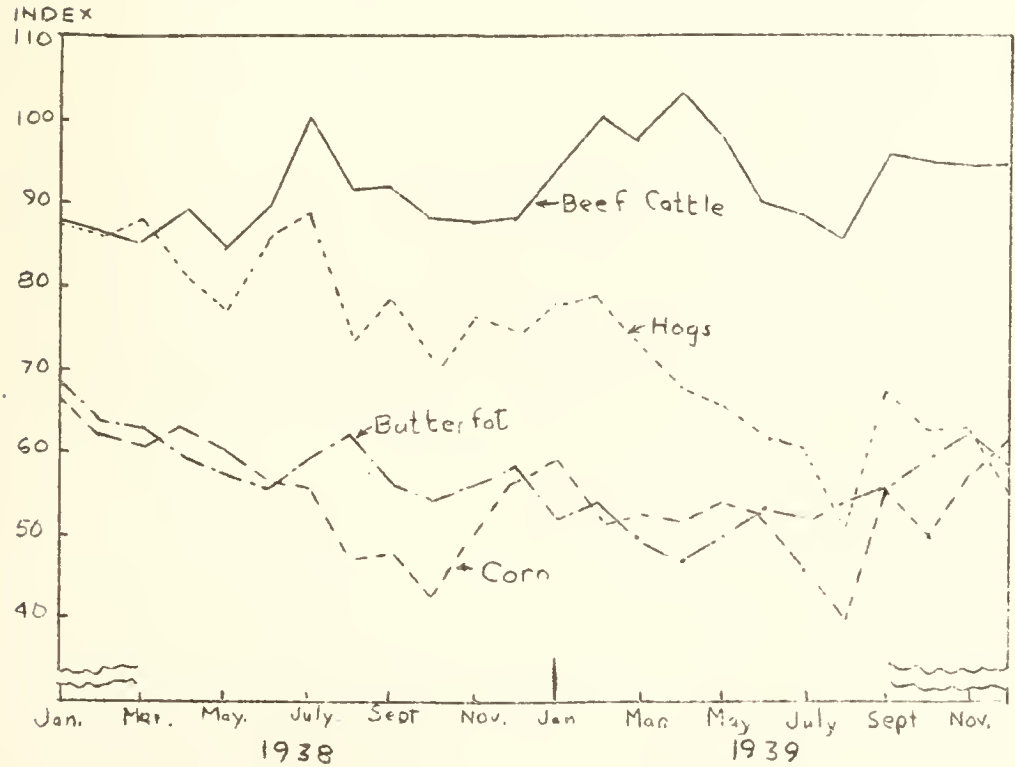


Fig. 2.--Monthly price indices of the average farm prices of corn, hogs, beef cattle, and butterfat, 1938 and 1939. (1924-1929 = 100)

Farm earnings are influenced by the average price received for farm products during the year as well as by the values at inventory time. Although nearly all commodities were higher in price at the end of the year than at the beginning, prices received for the following commodities averaged lower in 1939 than in 1938 by these amounts: corn, 2 cents per bushel; wheat and soybeans, 1 cent per bushel; hogs, \$1.50 per hundred; butterfat, 2 cents per pound; eggs, 3 cents per dozen; and chickens, 2 cents per pound. The prices for other commodities averaged higher in 1939 than in 1938 by the following amounts: oats, 4 cents per bushel; beef cattle, 50 cents per hundred; lambs, 42 cents per hundred; wool, 4 cents per pound; and apples, 12 cents per bushel.

Variation in earnings between the various type-of-farming areas is influenced by the relative prices of grains, livestock, and livestock products. In 1939 as in 1938 livestock had a price advantage over grain, but the advantage was not as marked as it was in 1938. The prices for meat animals dropped from 116 to 110 percent of the 1910-14 average, grains from 74 to 72 percent, chickens and eggs from 106 to 94 percent, and dairy products from 106 to 104 percent.

The corn-hog ratio also narrowed during the year to the disadvantage of the hog enterprise. The amount of corn equal in value to 100 pounds of hogs dropped from 19 bushels in February to 11 bushels in December (based on farm prices). Unfavorable feeding ratios will discourage expansion in hog numbers in 1940.

Crop Yields in Illinois, 1939

Crop yields in Illinois in 1939, as in 1938 and 1937, were unusually high. The weighted average yield of corn, oats, wheat, and soybeans was 133 percent of the 10-year average, 1929-1938. Corn contributed more than did any other crop to the high average yields. The yields of the various crops expressed in percentages of the 1929-1938 averages were: corn, 150; soybeans, 129; wheat, 121; and oats, 97.

Crop yields in all counties except Massac were above the 10-year average (1929-1938 = 100), but wide variations in yields occurred between individual counties and groups of counties. Four counties along the Ohio River had crop-yield indices under 105. In contrast to these counties, 31 were over 136. Many of the counties with the highest yields were in two groups, those located in southwestern and east north central Illinois. Crop-yield indices were adversely affected in southeastern Illinois by the wheat crop and in northern Illinois by low oat yields. Fifty-five counties, which were well-distributed over the state, had crop-yield indices from 121 to 135.

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FARM BUSINESS REPORT . . . 1939



FARMING-TYPE AREA FOUR East Central Cash Grain Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

Annual Farm Business Report

ON FIVE HUNDRED FIFTY-NINE FARMS IN FARMING-TYPE AREA 4, 1939

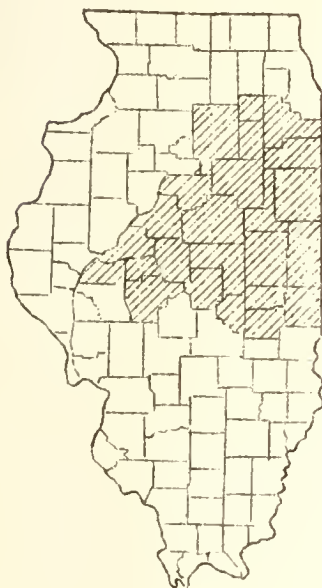
By P. E. Johnston, J. B. Cunningham, and E. M. Hughes^{1/}

Farm earnings of accounting farms in Farming-Type Area 4 were higher in 1939 than in 1938. The net earnings per acre averaged \$12.60 in 1939, \$9.67 in 1938, \$10.30 in 1937, and \$13.15 in 1936. The items considered in calculating the net earnings included inventory changes, cash receipts, cash expenses, the value of the farm products used in the household (in 1938 and 1939 only), and unpaid family labor (Table 1).

Since the value of farm products used in the household was not included in the records prior to 1938, the earnings for 1938 and 1939 are not strictly comparable to those for other years. The value per acre of farm products used was \$1.01 in 1938 and \$.88 in 1939.

The accounting farms were larger than average, crop yields were above average, and the farms as a whole were operated with efficiency which was greater than average. Therefore, the figures contained in this report represent conditions which are better than average for this area. This fact is borne out by survey records taken in various areas of the state.

High crop yields and larger AAA payments, accompanied by increased industrial activity and improved demand for farm products, especially during the latter half of the year, were the principal factors producing higher earnings in 1939 (Figs. 1, 2, and 3).



Farming-Type Area 4
Cash grain

^{1/} R. J. Mutti supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm accounts project was conducted in cooperation with the farm bureaus in the following counties and was supervised by the farm advisers indicated:

H. D. Triplett, Ford County
J. E. Harris, Champaign County
I. E. Parett, Vermilion County
H. D. VanMatre, Iroquois County
G. T. Swaim, Kankakee County
L. W. Chalcraft, Menard County
J. R. Gilkey, Macon County
Edwin Bay, Sangamon County
L. W. Braham, Will County

R. V. Watson, Mason County
E. O. Johnston, Piatt County
Paul M. Krows, Moultrie County
G. H. Husted, Cass County
H. N. Myers, DeWitt County
N. H. Anderson, Logan County
L. E. McKinzie, Edgar County
W. S. Myers, Coles County
J. Q. Scott, Douglas County

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 4, 1936-1939

Items	Your farm	Average of all farms in area			
		1939	1938	1937	1936
Number of farms- - - - -	--	559	767	494	421
<u>Inventory Changes</u>					
Farm improvements- - - - -	\$	\$ 155	\$ 116	\$ 84	\$ 13
Livestock- - - - -		159	107	119	65
Feed and grain - - - - -		994	134	489	441
Machinery and equipment ^{1/} - - - - -		99	162	337	334
Automobile (farm share)- - - - -		10	--	--	--
Totals - - - - -	\$	\$1,417	\$ 519	\$1,029	\$ 853
<u>Cash Receipts</u>					
Farm improvements- - - - -	\$	\$ 13	\$ 12	\$ 3	\$ 3
Horses - - - - -		62	80	107	93
Productive livestock: Cattle - - -		1,382	1,312	986	1,051
Dairy sales-		367	491	492	411
Hogs - - - -		945	1,283	1,094	1,098
Sheep- - - -		118	180	64	83
Poultry- - -		102	118	125	118
Egg sales- -		130	172	163	141
Total productive livestock - - - -	()	(3,044)	(3,556)	(2,924)	(2,902)
Feed and grain - - - - -		2,466	2,355	2,456	3,047
Machinery and equipment ^{1/} - - - - -		280	313	341	290
Automobile (farm share)- - - - -		38	36	--	--
Labor off farm - - - - -		50	67	88	110
Miscellaneous- - - - -		11	7	6	7
AAA payments - - - - -		679	250	201	255
Totals - - - - -	\$	\$6,643	\$6,676	\$6,126	\$6,707
<u>Cash Expenses</u>					
Farm improvements- - - - -	\$	\$ 421	\$ 401	\$ 306	\$ 221
Horses - - - - -		33	34	54	64
Productive livestock: Cattle - - -		782	702	496	394
Hogs - - - -		115	107	82	107
Sheep- - - -		64	108	20	33
Poultry- - -		30	33	29	34
Total productive livestock - - - -	()	(991)	(950)	(627)	(568)
Feed and grain - - - - -		535	434	479	429
Machinery and equipment ^{1/} - - - - -		1,042	1,138	1,212	1,093
Automobile (farm share)- - - - -		164	155	--	--
Hired labor- - - - -		432	458	376	326
Miscellaneous- - - - -		29	36	28	31
Crop expense - - - - -		153	184	331	267
Livestock expense- - - - -		56	54	39	41
Taxes- - - - -		373	360	319	319
Totals - - - - -	\$	\$4,229	\$4,204	\$3,771	\$3,359
<u>Summary</u>					
Cash balance - - - - -	\$	\$2,414	\$2,472	\$2,355	\$3,348
Farm products used in household ^{2/} -		235	265	--	--
Total inventory change - - - - -		1,417	519	1,029	853
Receipts less expenses - - - - -		4,066	3,256	3,384	4,201
Total unpaid labor - - - - -		695	712	757	780
Net earnings per farm- - - - -	\$	\$3,371	\$2,544	\$2,627	\$3,421
Net earnings per acre- - - - -	\$	\$12.60	\$ 9.67	\$10.30	\$13.15

^{1/} Includes farm share of automobile for 1936 and 1937.

^{2/} Not included as income for 1936 and 1937.

Inventory Changes, Cash Receipts, Cash Expenses, and Earnings

Inventory changes.--The year 1939 was the fourth consecutive year of increasing inventories, the increases averaging \$1,417 in 1939, \$519 in 1938, \$1,029 in 1937, and \$853 in 1936 (Table 1). The largest increases in 1939 were in feed and grain. The increased value of feed and grain represented higher prices at the end of the year as well as larger quantities of grain on hand (Page 1 and Fig. 2). The average amounts of grain on hand in Area 4 at the two inventory periods follow:

	<u>Beginning of year</u> (bushels)	<u>End of year</u> (bushels)
Corn	4,281	5,241
Oats	740	582
Wheat	69	187
Soybeans	221	255

Cash receipts.--Cash receipts averaged \$6,643 in 1939 (Table 1). Feed and grain and AAA receipts were larger in 1939 than in 1938, but total productive livestock sales were smaller. The larger AAA receipts were mainly due to a doubling-up in payments, many farmers receiving payments in 1939 for participation in both the 1938 and 1939 programs.

Cash expenses.--Cash expenses were larger in 1939 than in any of the last four years. Less money was spent for machinery in 1939 than in any other year of the last four years, although more was spent for productive livestock and feed and grain.

Earnings.--Cash receipts exceeded cash expenses in 1939 by \$2,414. Cash balance, the difference between receipts and expenses, is the average amount of money available for family living expenses, interest, debt payments, and savings.

The amounts deducted for operator's and family labor remained rather uniform during the 4-year period, a difference of only \$85 occurring between the low year, 1939, and the high year, 1936. The uniformity in valuation was due to the fact that approximately the same amount of family labor was available each year and to the fact that the same rate (\$50 per month) was charged for the physical labor of the operator and other mature members of the family.

The net earnings per farm averaged \$3371 in 1939 as contrasted with \$2,544 in 1938. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding the value of farm products used in the household and the inventory increases to the cash balance and by subtracting the value of unpaid labor from the resulting total. Therefore, this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

Variation in farm earnings.--A wide variation was found in earnings on the farms in Area 4; for example, 39 farms earned less than 4 percent on the investment, with an average rate earned of 2.4 percent, but in contrast 33 farms earned 13 percent or more, with an average rate earned of 14.8 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had a loss of \$208 for labor and management earnings as contrasted with a gain of \$4,021 for the latter group. By studying the reasons for these variations, farm operators can improve their chances of financial success. The variation in earnings and in size of farm for all records in the areas was as follows:

Rate earned on investment (percent)	Number of farms	Average rate earned (percent)	Acres per farm	Capital invested per farm	Gross earnings per farm	Net earnings per farm	Labor and management earnings
Less than 4	39	2.4	194	\$28,410	\$3,325	\$ 693	\$ -208
4 to 7	157	5.6	250	40,523	5,216	2,289	787
7 to 10	213	8.4	275	43,522	6,599	3,640	1,999
10 to 13	117	11.3	295	41,588	7,499	4,686	3,142
13 or more	33	14.8	294	35,773	8,124	5,278	4,021

Comparison of Farms According to Quality of Land

The 559 farms were divided into two groups according to the percent of land area tillable. Of this total number of farms, 326 had 93 percent or more of land area tillable, and 233 had less than 93 percent tillable. The average percent tillable was 96.1 for the former group and 83.6 for the latter group.

This grouping of farms gives each farmer an opportunity to compare his farm with the average of other farms having a similar quality of land as well as with the average of all accounting farms (Tables 2 and 3).

The capital investment averaged \$43,435, or \$166 per acre, for the group of farms having the larger percent of land area tillable, as compared with a capital investment averaging \$37,025, or \$134 per acre, for the group of farms having the smaller percent of land area tillable.

The receipts and net increases were \$789 larger and expenses and net decreases \$36 larger on farms of higher-quality land than on those of lower-quality land; the livestock receipts were \$356 smaller, whereas the grain receipts were \$1,068 larger. The rate earned on investment was 8.5 percent and 7.9 percent, and the labor and management earnings were \$2,046 and \$1,607, respectively, for the two groups of farms.

The farms on higher-quality land were 13 acres smaller than were those on lower-quality land; yet the former had 15 acres more land in crops. They also had a larger percent of tillable land in corn, oats, and soybeans but a smaller percent in wheat. The amount of livestock per farm, however, was larger on the farms with the lower-quality land, as indicated by the value of feed fed to productive livestock and the capital invested in productive livestock (Tables 2 and 3)

TABLE 3.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 4, 1959

Items	Your farm	Average of all farms	Land area tillable	
			95 percent or more	less than 95 percent
Rate earned on investment - - - - -	%	6.5%	6.5%	7.9%
Acrea in farm - - - - -		268	262	275
Acrea in crops - - - - -		199	205	190
Crop earnings per acre - - - - -	\$	\$ 23.02	\$ 24.75	\$ 20.70
Total expenses per acre ¹ - - - - -		10.42	10.73	10.01
Net earnings per acre - - - - -		12.60	14.02	10.69
Investments				
Value of land per acre - - - - -	\$	\$ 108	\$ 120	\$ 92
Value of improvements per acre - - - - -		15	16	15
Total investment per acre - - - - -		152	166	154
Land Use				
Percent of land area tillable - - - - -		90.7	96.1	83.6
Percent of tillable land in:				
Corn - - - - -		32.9	33.3	32.4
Oats - - - - -		11.3	12.0	10.3
Wheat - - - - -		0.3	1.2	9.9
Soybeans - - - - -		15.1	16.3	11.7
Other crops - - - - -		3.5	1.2	9.6
Legume hay and pasture - - - - -		17.1	13.2	14.5
Nonlegume hay and pasture - - - - -		9.2	9.6	6.6
Crop Yields				
Corn - - - - -		62.4	63.6	60.5
Oats - - - - -		32.0	33.0	32.6
Wheat - - - - -		23.9	24.9	23.0
Soybeans - - - - -		21.9	23.1	25.2
Redcock Factors				
Value of feed fed to prod. 1. S. - - - - -	\$	\$1,511	\$1,410	\$1,729
Feed fed per acre to prod. 1. S. - - - - -		5.77	5.38	6.28
Returns per acre from prod. 1. S. - - - - -		9.12	6.73	9.63
Returns per \$100 worth of feed fed - - - - -		158	162	153
Returns per \$100 invested in cattle - - - - -		90	90	97
Poultry returns per hen - - - - -		2.55	2.57	2.50
Number of litters farrowed - - - - -		13.3	12.8	14.0
Number of pigs weaned per litter - - - - -		6.2	5.9	6.4
Returns per litter farrowed - - - - -	\$	\$ 73	\$ 71	\$ 77
Average number of cows milked - - - - -		5.3	5.2	5.5
Dairy returns per cow milked - - - - -	\$	\$ 84	\$ 82	\$ 85
Expense Factors				
Machinery cost per crop acre ¹ - - - - -	\$	\$ 3.21	\$ 3.88	\$ 3.95
Horse and machinery cost per crop A. - - - - -		4.51	4.50	4.61
Labor cost per crop acre ² - - - - -		5.40	5.27	5.75
Labor cost per \$100 gross earnings ² - - - - -		18	17	19
Number of work horses - - - - -		3.4	3.4	3.4
Value of feed fed to horses - - - - -	\$	\$ 106	\$ 104	\$ 110
Improvement cost per acre - - - - -		.75	.95	.94
Taxes per acre - - - - -		1.39	1.43	1.26

¹ Includes farm share of automobile.

² Includes operator's and family labor.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS,
FARMS WITH MORE THAN 25 PERCENT OF THE LAND AREA TILLABLE

Accounting Farms in Farming-Type Area 1, 1939

The numbers above the lines across the middle of the page are the averages for the 326 farms included in this group for the factors listed at the top of the page. By drawing a line across each column at the number representing the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings										Factors that affect expenses		
			Crop production			Food fed per acre to prod. b. b.	Returns per \$100 food fed	Poultry returns per hen	Hog returns per 100 lb. farrowed	Dairy returns per cow milked	Total expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Labor cost per \$100 gross earnings	
			Percent tillable land in forage hay and pasture	Corn, bu.	Oats, bu.										Soybeans, bu.
15	462	35	24	81	53	33	10	213	4.77	131	133	6	2.00	1.30	-
16	422	33	22	80	49	37	9	203	3.77	111	133	7	2.50	2.25	9
14	382	31	20	76	49	33	8	132	3.47	101	113	8	3.00	3.00	11
12	342	29	15	72	41	33	7	162	3.17	91	103	4	3.50	3.75	13
10	302	27	16	68	37	31	6	172	3.67	61	92	10	4.00	4.50	15
8.5	262	24.75	13.8	63.6	33.0	29.1	5.36	162	2.57	71	62	10.73	4.50	5.27	17
6	222	23	12	60	29	27	4	152	2.27	61	72	12	5.00	6.00	19
4	182	21	10	56	25	25	3	142	1.97	51	62	13	5.50	6.75	21
2	142	19	8	52	21	23	2	132	1.67	41	52	14	6.00	7.50	23
0	102	17	6	48	17	21	1	122	1.37	31	42	15	6.50	8.25	25
-2	62	15	-	44	13	19	-	112	1.07	21	32	16	7.00	9.00	27

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 4, 1939

Items	Source of income					
	Grain 40% +	Dairy sales 40% +	Hogs 40% +	Cattle 40% +	General farms	
					L.S. 60% -	L.S. 60% +
Number of farms - - - - -	370	12	24	32	83	38
Percent income from prod. L.S.- -	23.6	73.0	75.7	84.8	46.9	67.9
Percent income from crops - - - -	60.8	15.2	9.4	1.8	34.2	15.7
<u>Investments</u>						
Total per farm- - - - -	\$42,487	\$30,864	\$35,017	\$52,070	\$33,309	\$37,491
Total per acre- - - - -	154	159	153	159	145	143
Land per acre - - - - -	113	95	102	101	98	93
Improvements per acre - - - - -	15	25	17	16	16	17
Machinery per acre ^{1/} - - - - -	8.92	9.78	10.16	8.78	8.76	8.33
<u>Earnings</u>						
Per farm						
Gross earnings- - - - -	\$6,326	\$5,573	\$5,183	\$7,632	\$5,292	\$5,997
Gross expenses ^{2/} - - - - -	2,777	2,817	2,662	3,296	2,555	3,065
Net earnings- - - - -	3,549	2,756	2,521	4,336	2,737	2,932
Per acre						
Gross earnings- - - - -	\$22.87	\$28.64	\$22.70	\$23.27	\$23.01	\$22.92
Gross expenses ^{2/} - - - - -	10.05	14.48	11.66	10.05	11.11	11.71
Net earnings- - - - -	12.84	14.16	11.04	13.22	11.90	11.21
Rate earned on investment - - -	8.4%	8.9%	7.2%	8.3%	8.2%	7.8%
Labor and mgt. earnings - - - -	\$1,958	\$1,786	\$1,301	\$2,212	\$1,599	\$1,604
<u>Size and Intensity</u>						
Acres per farm - - - - -	276	195	228	328	230	262
Percent land area tillable- - -	92.3	85.0	85.7	85.3	90.0	86.4
Percent tillable land in grain- -	71.5	57.0	62.2	60.2	64.9	63.4
Percent in hay and pasture- - -	20.1	41.1	25.6	34.2	28.5	31.8
Feed fed per acre to prod. L.S. \$	3.65	\$11.69	\$11.47	\$14.27	\$ 7.27	\$11.15
Months of labor per 100 crop A.	9.9	19.7	13.9	13.2	12.8	14.1
Total months of labor - - - - -	21.1	24.4	21.1	27.5	21.2	24.8
<u>Crop Yields Per Acre</u>						
Corn, bu. - - - - -	62.4	62.3	66.2	65.6	59.2	63.6
Soybeans, bu.- - - - -	28.3	26.3	27.3	27.4	26.1	26.7
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 165	\$ 187	\$ 157	\$ 142	\$ 160	\$ 147
Hog returns per litter- - - - -	67	61	105	83	72	73
Dairy returns per cow - - - - -	75	146	62	61	90	88
<u>Expense Factors</u>						
Labor cost ^{2/}						
Per crop acre - - - - -	\$ 4.86	\$ 9.92	\$ 7.05	\$ 6.53	\$ 6.36	\$ 6.82
Per \$100 gross earnings - - -	16	22	21	18	20	20
Horse and machinery cost						
per crop acre ^{1/} - - - - -	4.33	7.57	5.28	4.65	4.75	5.41
Improvement cost per acre - - -	.88	1.04	1.36	1.01	.99	1.23
Land tax per acre - - - - -	1.28	1.23	1.32	1.17	1.31	1.29

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

Larger crop yields per acre on the farms on higher-quality land, which amounted to 3.1 bushels of corn, .4 bushels of oats, 1.9 bushels of wheat, and 3.3 bushels of soybeans, indicate the relative productive level of the two groups of farms.

The operating expenses per acre averaged \$10.73 on the farms with the most tillable land and \$10.01 on the farms with the least tillable land. The combined cost per crop acre for labor, machinery, and horses was \$.59 smaller on the farms with the larger percent of tillable land, but the combined cost per acre for improvements and taxes was \$.21 larger.

The livestock-efficiency factors, such as poultry returns per hen, hog returns per litter of pigs farrowed, and dairy returns per cow milked, were not appreciably affected by the quality of land. These factors indicate that the two groups of farms were operated with about the same degree of efficiency. Therefore, it may be assumed that the differences in organization, land use, crop yields, and costs were principally due to the differences in the productivity of the land on the two groups of farms.

Source of Income

The 599 farms were divided into 6 groups according to source of income (Table 4). The items in this table, for the most part, were made to correspond with the items given in Table 3; therefore, a farmer may compare the data in the "Your farm" column in Table 3 with the "Source of income" column in Table 4, which corresponds to the classification for his own farm.

In a comparison of the groups of farms the fact that conditions affecting production and price relationships vary from year to year should be kept in mind. Therefore, the average differences in earnings in 1939 are not necessarily typical of the variations that may be expected over a long period of years. The following items, for example, indicate that generally the grain farms were located on the better land: high value of land per acre, large percent of land area tillable, large percent of land in grain, and high yield of corn per acre.

The returns per \$100 feed that are necessary to pay for feed (including pasture) and other costs, according to 5-year averages of complete cost studies (1933-1937), are as follows: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117. There is little wonder, therefore, that the 6 groups of accounting farms with different classes and proportions of livestock varied widely in their returns per \$100 worth of feed fed. The amount of feed fed per acre to productive livestock averaged \$14.27 on the cattle farms but only \$3.65 on the grain farms.

Differences in expenses are significant for the 6 groups of farms. Labor input was highest on the cattle farms, where 27.5 months of labor were used, and lowest on the grain and hog farms, where 21.1 months of labor were used. Horse and machinery cost per crop acre averaged \$7.57 on the dairy farms, \$5.28 on the hog farms, \$4.65 on the cattle farms, and only \$4.33 on the grain farms. Improvement cost per acre ranged from \$.88 on the grain farms to \$1.36 on the hog farms; and land taxes ranged from \$1.17 on the cattle farms to \$1.32 on the hog farms.

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 4, 1939

Items	Total acres in farm					
	Less than 121	121 to 200	201 to 280	281 to 360	361 to 440	441 or more
Number of farms - - - - -	46	162	160	99	37	55
Acres per farm- - - - -	98	168	244	321	401	587
<u>Investments</u>						
Total per farm - - - - -	\$16,302	\$26,590	\$37,832	\$49,553	\$59,859	\$82,826
Total per acre - - - - -	167	158	155	154	149	141
Land per acre - - - - -	101	110	111	113	105	101
Improvements per acre - - - - -	28	17	16	14	15	14
Machinery per acre ^{1/} - - - - -	12.97	9.80	9.27	8.95	8.10	7.19
<u>Earnings</u>						
Per farm						
Gross earnings- - - - -	\$2,520	\$4,024	\$5,826	\$7,334	\$8,643	\$12,678
Gross expenses ^{2/} - - - - -	1,470	1,991	2,644	3,171	3,944	5,200
Net earnings - - - - -	1,050	2,033	3,182	4,163	4,699	7,478
Per acre						
Gross earnings- - - - -	\$25.82	\$23.95	\$23.90	\$22.86	\$21.56	\$21.60
Gross expenses ^{2/} - - - - -	15.06	11.85	10.85	9.88	9.84	8.86
Net earnings - - - - -	10.76	12.10	13.05	12.98	11.72	12.74
Rate earned on investment - - - - -	6.4%	7.6%	8.4%	8.4%	7.9%	9.0%
Labor and management earnings - - - - -	\$ 731	\$1,257	\$1,828	\$2,224	\$2,174	\$3,837
<u>Size and Intensity</u>						
Percent land area tillable- - - - -	91.0	91.5	91.0	91.7	88.0	90.1
Percent tillable land in grain- - - - -	66.3	69.4	70.1	69.4	68.3	67.0
Percent in hay and pasture- - - - -	28.5	23.1	22.5	22.2	23.8	24.6
Feed fed per acre to prod. L. S.- - - - -	\$ 9.05	\$ 6.00	\$ 5.19	\$ 5.24	\$ 6.72	\$ 5.88
Percent of income from prod. L. S.- - - - -	51.9	38.6	34.9	32.3	40.3	37.7
Percent of income from grain- - - - -	28.1	44.6	49.5	51.7	45.2	47.4
Months of labor per 100 crop acres- - - - -	19.0	13.2	11.4	10.0	10.0	8.6
Totals months of labor- - - - -	13.8	17.0	21.2	24.3	28.7	35.8
<u>Crop Yields Per Acre</u>						
Corn, bu. - - - - -	63.5	61.9	61.3	62.8	61.0	64.5
Soybeans, bu. - - - - -	23.3	28.0	27.8	29.0	29.1	26.9
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 164	\$ 170	\$ 175	\$ 153	\$ 137	\$ 144
Hog returns per litter- - - - -	63	72	76	78	71	71
Dairy returns per cow - - - - -	84	81	93	78	59	75
<u>Expense Factors</u>						
Labor cost per crop acre ^{2/} - - - - -	\$ 8.93	\$ 6.42	\$ 5.68	\$ 4.85	\$ 4.80	\$ 4.47
Labor cost per \$100 gross earnings- - - - -	26	20	18	16	16	15
Horse and machinery cost per crop A. ^{1/} - - - - -	5.69	4.75	4.76	4.30	4.89	3.97
Improvement cost per acre - - - - -	1.61	1.05	.91	.87	.92	.89
Land tax per acre - - - - -	1.28	1.32	1.27	1.26	1.22	1.28

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

Size of Farm as Related to Earnings

The farm records in Farming-Type Area 4, when sorted according to the total acres in the farm, indicate that the larger farms had a greater total investment in land, improvements, and equipment than did the smaller farms. The operators on the larger farms took in more money during the year than did the operators on the smaller farms; and after deductions were made for farm business expenditures and interest on the investment, the 55 largest farms had labor and management earnings which averaged \$3,837 as contrasted with \$731 for the 46 smallest farms. The earnings, as measured by the rate earned on the investment, were 9.0 percent, and 6.4 percent, respectively for these two groups of farms. In years when the average rate earned on investment for groups of farms exceeds the capitalization rate (5 percent) the average labor and management earnings are higher on the larger farms than on the smaller ones, but these earnings are lower when the rate earned averages less than the capitalization rate.

The smaller farms were operated more intensively than were the larger farms. This variation was indicated by the higher gross earnings per acre and by the larger amount of feed fed per acre to productive livestock.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Farm Organization and Farm Earnings by Counties and Groups of Counties

Farming-type areas are formed by grouping together counties which are similar with respect to physical, economic, and biological characteristics. Although a classification of this kind is very useful for many purposes, no two counties within an area are exactly alike. A tabulation of farm account records by counties and groups of counties indicates some of these differences which are due to variations in quality of land, topography, amount of erosion, market outlets, weather conditions, and disease hazards. The effects of variations in these factors are indicated in the account records by differences in value of land per acre, taxes per acre, percent of land area tillable, size of farm, total acres in crops, percent of tillable land in important crops, crop yields, amount of feed fed to productive livestock, and the source of farm income (Tables 6 and 7).

In this report an average was calculated for each county from which 30 or more records were received. Averages were made in some instances with less than 30 records if it was necessary to eliminate some records because they were incomplete or not typical for the area. In any tabulation containing as few as 30 records, part of the variation from county to county is due to the fact that the averages do not represent a cross section of the county.

The tabulations by counties and by groups of counties may be used by extension specialists, farm advisers, and county program-building committees to represent the type of farm organization and the level of operating efficiency attained by a selected group of progressive farmers in the various parts of a farming-type area. Since the personnel of the accounting group changes slowly, comparisons may be made from county to county and from year to year even though these records are from farms with efficiency which is higher than average.

TABLE 6.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 4, 1939

Items	Ford	Cham- paign	Ver- million	Iroquois	Kankakee
Number of farms - - - - -	60	48	43	41	38
<u>Capital Investments</u>					
Land- - - - -	\$32,495	\$30,720	\$29,981	\$27,145	\$24,119
Farm improvements - - - - -	3,861	3,920	5,134	4,777	4,746
Horses- - - - -	495	396	389	466	337
Productive livestock: Cattle- - - - -	1,127	901	1,396	1,312	1,390
Hogs- - - - -	335	329	474	350	180
Sheep - - - - -	175	45	346	207	9
Poultry - - - - -	107	93	89	119	101
<u>Total productive livestock- - - - -</u>	(1,814)	(1,368)	(2,305)	(1,288)	(1,680)
Feed and grain- - - - -	3,472	2,234	3,099	3,181	3,404
Machinery and equipment - - - - -	2,046	2,253	2,376	2,271	2,470
Automobile (farm share) - - - - -	202	222	214	208	231
<u>Totals- - - - -</u>	\$44,322	\$41,820	\$43,428	\$40,036	\$36,287
<u>Receipts and Net Increases</u>					
Horses - - - - -	\$ --	\$ --	\$ --	\$ --	\$ --
Productive livestock: Cattle- - - - -	768	491	976	788	712
Dairy sales - - - - -	232	346	405	413	667
Hogs- - - - -	532	553	853	633	312
Sheep - - - - -	53	35	128	85	6
Poultry - - - - -	69	73	52	73	105
Egg sales - - - - -	111	130	104	142	115
<u>Total productive livestock- - - - -</u>	(1,772)	(1,628)	(2,525)	(2,134)	(1,917)
Farm products used in household - - - - -	237	215	248	235	220
Feed and grain - - - - -	3,260	3,208	3,322	2,835	3,119
Labor off farm - - - - -	33	43	68	71	74
Miscellaneous - - - - -	11	9	9	5	9
AAA payments- - - - -	650	484	826	763	676
<u>Totals- - - - -</u>	\$ 5,263	\$ 5,587	\$ 7,075	\$ 6,043	\$ 6,015
<u>Expenses and Net Decreases</u>					
Farm improvements - - - - -	\$ 214	\$ 272	\$ 266	\$ 266	\$ 256
Horses- - - - -	25	11	19	21	31
Productive livestock- - - - -	--	--	--	--	--
Feed and grain- - - - -	--	--	--	--	--
Machinery and equipment - - - - -	520	654	758	616	658
Automobile (farm share) - - - - -	122	133	128	132	152
Hired labor - - - - -	342	321	555	414	387
Miscellaneous - - - - -	27	28	33	31	28
Crop expense - - - - -	161	128	128	155	213
Livestock expense - - - - -	51	42	54	57	58
Taxes - - - - -	342	370	514	374	276
<u>Totals- - - - -</u>	\$ 1,881	\$ 1,952	\$ 2,525	\$ 2,066	\$ 2,059
Receipts less expenses- - - - -	\$ 4,082	\$ 3,628	\$ 4,550	\$ 3,977	\$ 3,956
Family labor- - - - -	136	120	184	196	171
Returns for labor, capital, mgt.- - - - -	3,246	3,508	4,366	3,781	3,785
Operator's labor- - - - -	556	527	540	560	508
Returns for capital and mgt.- - - - -	3,390	2,981	3,826	3,221	3,277
<u>Rate Earned on Investment - - - - -</u>	7.6%	7.1%	8.8%	8.0%	8.9%
Interest on investment- - - - -	\$ 2,220	\$ 2,021	\$ 2,175	\$ 2,002	\$ 1,849
Labor and Management Earnings - - - - -	1,726	1,417	2,191	1,772	1,936
<u>Nonfarm income</u>	\$ 38	\$ 254	\$ 162	\$ 37	\$ 80

TABLE 6.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 4, 1939 (Cont.)

Menard	Macon	Sangamon	Will	Platt and Moultrie	Mason and Cass	DeWitt and Logan	Edgar Coles, & Douglas	Kendall
34	33	32	30	51	49	43	57	34
\$21,339	\$34,172	\$29,493	\$18,167	\$37,942	\$22,002	\$29,423	\$31,453	\$28,880
3,017	3,728	3,820	4,650	4,629	3,281	3,899	4,135	6,887
397	420	442	309	432	499	377	350	387
1,431	1,177	1,807	2,007	1,459	878	1,493	1,243	2,633
584	379	965	389	324	593	571	692	890
52	49	72	64	81	35	133	43	138
101	124	88	113	92	88	95	110	141
(2,168)	(1,729)	(2,932)	(2,573)	(1,956)	(1,594)	(2,292)	(2,088)	(3,802)
1,812	3,181	2,274	2,338	3,447	2,382	2,968	3,233	3,340
1,839	1,989	1,842	1,929	2,401	1,715	2,273	2,545	2,323
200	241	97	136	197	157	201	184	207
\$30,772	\$45,460	\$40,900	\$30,102	\$51,004	\$31,630	\$41,433	\$43,988	\$45,826
\$ --	--	--	--	--	--	--	--	--
1,040	753	1,225	773	896	613	975	1,020	1,867
201	325	341	973	447	170	347	197	673
1,200	641	1,643	543	654	856	844	1,320	1,454
40	27	55	12	50	33	55	32	140
85	46	31	53	76	59	48	94	67
137	152	83	194	96	144	161	145	279
(2,703)	(1,944)	(3,378)	(2,548)	(2,219)	(1,875)	(2,430)	(2,808)	(4,480)
257	218	244	223	235	259	241	222	250
1,461	3,722	1,855	1,440	4,443	2,613	2,841	2,681	1,253
24	35	56	47	46	56	31	62	29
15	12	11	3	8	4	15	24	8
481	901	710	475	681	852	682	631	809
\$ 4,941	\$ 6,832	\$ 6,254	\$ 4,736	\$ 7,632	\$ 5,659	\$ 6,240	\$ 6,428	\$ 6,829
\$ 209	\$ 227	\$ 310	\$ 214	\$ 337	\$ 186	\$ 259	\$ 261	\$ 457
6	32	11	15	18	10	15	30	20
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
609	684	742	544	843	483	757	672	692
111	128	68	104	115	105	105	103	138
357	374	623	353	597	385	372	517	556
25	28	30	31	35	26	28	30	52
109	126	120	148	166	147	120	177	223
67	47	82	54	62	43	48	71	97
320	437	362	214	453	344	373	397	329
\$ 1,813	\$ 2,083	\$ 2,348	\$ 1,677	\$ 2,626	\$ 1,729	\$ 2,077	\$ 2,258	\$ 2,564
\$ 3,128	\$ 4,749	\$ 3,906	\$ 3,059	\$ 5,006	\$ 3,930	\$ 4,163	\$ 4,170	\$ 4,265
240	194	125	165	132	197	174	139	105
2,888	4,555	3,781	2,894	4,874	3,733	3,989	4,031	4,160
541	549	442	551	517	548	531	513	551
2,347	4,006	3,339	2,343	4,357	3,185	3,458	3,518	3,609
7.6%	8.8%	8.2%	7.8%	8.5%	10.1%	8.3%	8.0%	7.9%
\$ 1,537	\$ 2,275	\$ 2,045	\$ 1,505	\$ 2,550	\$ 1,582	\$ 2,072	\$ 2,199	\$ 2,291
1,351	2,280	1,736	1,389	2,324	2,151	1,917	1,832	1,869
\$ 111	\$ 189	\$ 171	\$ 105	\$ 134	\$ 102	\$ 76	\$ 80	\$ 43

TABLE 7.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 4, 1939

Items	Ford	Cham- paign	Ver- million	Iroquois	Kankakee
Rate earned on investment- - - - -	7.6%	7.1%	8.8%	8.0%	8.9%
Acres in farm- - - - -	264	231	303	254	266
Acres in crops - - - - -	201	179	225	184	207
Gross earnings per acre- - - - -	\$22.62	\$24.23	\$23.37	\$23.79	\$22.64
Total expenses per acre ^{2/} - - - - -	9.76	11.30	10.73	11.11	10.31
Net earnings per acre- - - - -	12.86	12.93	12.64	12.68	12.33
<u>Investments</u>					
Value of land per acre - - - - -	\$ 123	\$ 133	\$ 99	\$ 107	\$ 91
Value of improvements per acre - - -	15	17	17	19	18
Total investment per acre- - - - -	168	181	144	158	139
<u>Land Use</u>					
Percent of land area tillable- - - -	94.2	93.3	92.7	91.0	89.7
Percent of tillable land in:					
Corn - - - - -	38.4	34.7	32.1	35.4	36.3
Oats - - - - -	22.0	10.0	7.9	18.2	13.7
Wheat- - - - -	1.3	4.6	7.2	1.6	6.2
Soybeans - - - - -	8.7	22.5	20.1	10.6	17.2
Other crops- - - - -	5.9	7.5	7.8	7.7	7.1
Legume hay and pasture - - - - -	17.7	11.9	11.9	18.7	9.4
Nonlegume hay and pasture- - - - -	6.0	8.8	13.0	7.8	10.1
<u>Crop Yields</u>					
Corn - - - - -	60.7	62.9	61.8	63.6	55.5
Oats - - - - -	33.2	30.1	26.0	32.4	37.7
Wheat- - - - -	22.1	21.2	25.3	25.0	18.2
Soybeans - - - - -	27.6	30.1	26.8	25.4	21.0
<u>Livestock Factors</u>					
Value of feed fed to prod. L. S. - -	\$1,265	\$1,044	\$1,650	\$1,461	\$1,312
Feed fed per acre to prod. L. S. - -	4.80	4.53	5.45	5.75	4.94
Returns per acre from prod. L. S.- -	7.41	7.75	8.99	9.11	7.81
Returns per \$100 worth of feed fed -	154	171	165	158	158
Returns per \$100 invested in cattle-	79	95	99	95	96
Poultry returns per hen - - - - -	2.18	2.59	2.84	2.36	3.05
Number of litters farrowed - - - - -	10.1	12.0	13.5	9.8	8.4
Number of pigs weaned per litter - -	6.0	5.5	6.1	6.2	6.2
Returns per litter farrowed- - - - -	\$ 68	\$ 64	\$ 77	\$ 72	\$ 67
Average number of cows milked- - - -	4.3	5.2	6.2	6.3	7.1
Dairy returns per cow milked - - - -	\$ 73	\$ 79	\$ 80	\$ 77	\$ 105
<u>Expense Factors</u>					
Machinery cost per crop acre ^{1/} - - -	\$ 3.54	\$ 4.41	\$ 3.94	\$ 4.06	\$ 3.91
Horses and machinery cost per crop A. ^{1/} - - - - -	4.11	4.88	4.49	4.79	4.52
Labor cost per crop acre ^{2/} - - - - -	4.98	5.18	5.49	6.18	4.96
Labor cost per \$100 gross earnings ^{2/}	17	17	17	19	17
Number of work horses- - - - -	3.3	2.7	3.2	3.4	3.0
Value of feed fed to horses- - - - -	\$ 90	\$ 73	\$ 104	\$ 115	\$ 95
Improvement cost per acre- - - - -	.81	1.18	.88	1.05	.96
Taxes per acre - - - - -	1.32	1.60	1.70	1.47	1.04

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

TABLE 7.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 4, 1939 (Cont.)

Menard	Macon	Sangamon	Will	Piatt and Moultrie	Mason and Cass	DeWitt and Logan	Edgar, Coles, & Douglas	Kendall
7.6%	8.8%	8.2%	7.8%	8.5%	10.1%	8.3%	8.0%	7.9%
247	256	273	183	310	303	266	280	240
169	205	197	146	237	212	198	202	187
\$19.98	\$26.68	\$22.93	\$25.82	\$24.62	\$18.67	\$23.44	\$22.93	\$28.43
10.49	11.04	10.69	13.05	10.56	8.16	10.45	10.38	13.41
9.49	15.64	12.24	12.77	14.06	10.51	12.99	12.55	15.02
\$ 86	\$ 133	\$ 108	\$ 99	\$ 122	\$ 73	\$ 111	\$ 112	\$ 120
12	15	14	25	15	11	15	15	29
124	178	150	164	165	104	156	157	191
86.1	95.7	88.8	91.2	91.9	86.1	89.3	89.2	88.3
30.4	32.5	29.6	32.8	30.3	29.7	35.2	30.1	36.9
10.5	6.4	9.2	14.0	7.5	9.2	11.5	6.7	20.7
17.3	9.5	12.9	4.8	8.3	20.5	9.3	6.9	2.4
7.1	22.4	11.8	10.7	25.2	5.5	14.3	21.7	5.2
8.7	6.5	9.8	13.6	7.9	12.8	8.8	9.0	12.6
14.2	12.6	14.2	15.7	11.7	17.5	12.7	13.4	17.3
11.8	10.1	12.5	8.4	9.1	4.8	8.2	12.2	4.9
61.5	66.8	60.5	63.1	68.1	57.2	64.7	64.8	68.4
36.1	28.7	37.6	40.7	33.4	30.3	34.1	27.7	46.1
24.5	24.8	28.1	17.1	26.7	22.6	25.2	22.2	26.7
25.2	28.8	26.9	24.0	31.1	22.8	28.0	29.9	24.5
\$1,866	\$1,257	\$2,310	\$1,826	\$1,384	\$1,351	\$1,680	\$1,983	\$3,153
7.55	4.91	8.47	9.96	4.46	4.46	6.31	7.07	13.13
11.70	8.24	13.07	14.83	7.73	6.86	9.82	10.61	19.41
155	168	154	149	173	154	156	150	148
82	93	79	85	98	97	81	99	79
2.54	2.47	1.86	2.79	2.60	2.55	2.42	2.83	2.73
18.3	10.7	21.1	10.6	11.7	11.7	15.1	18.5	18.4
6.1	5.7	6.7	6.1	6.0	5.4	6.2	6.7	6.4
\$ 79	\$ 61	\$ 77	\$ 85	\$ 67	\$ 77	\$ 70	\$ 81	\$ 83
5.0	4.5	5.5	9.2	5.3	4.0	4.9	4.1	7.3
\$ 56	\$ 87	\$ 76	\$ 114	\$ 98	\$ 63	\$ 87	\$ 66	\$ 104
\$ 4.27	\$ 3.97	\$ 4.12	\$ 4.44	\$ 4.04	\$ 2.77	\$ 4.35	\$ 3.84	\$ 4.43
5.09	4.63	4.90	5.27	4.58	3.53	4.91	4.42	5.25
6.60	5.29	5.92	7.00	5.06	5.13	5.27	5.60	6.32
23	16	19	22	16	19	17	18	17
3.6	3.5	4.5	2.7	3.6	4.7	3.3	2.9	3.3
\$ 132	\$ 103	\$ 144	\$ 107	\$ 109	\$ 151	\$ 96	\$ 87	\$ 133
.85	.89	1.14	1.17	1.09	.61	.97	.93	1.90
1.29	1.71	1.33	1.17	1.46	1.13	1.40	1.42	1.37

Influence of Price Changes on Illinois Farm Incomes

All feed and grain, livestock, and other farm property on accounting farms must be valued at both the beginning and the end of the year. Prices at inventory time, therefore, have a marked influence on farm earnings. The influence is greatest where large stocks or supplies are on hand at inventory time; for example, a much larger supply of farm products was found on Illinois farms December 31, 1939, than a year earlier. In fact, grain and livestock inventories have been increasing on Illinois farms since the drouth of 1936 as a result of three years of exceptionally high crop yields and the influence of Agricultural Adjustment Programs which have caused farmers to grow more hay and pasture and to store corn on farms under seal. According to estimates made by the Bureau of Agricultural Economics, U.S.D.A., 356 million bushels of corn were on Illinois farms January 1, 1940, as compared with 325 million bushels January 1, 1939.

Livestock numbers on Illinois farms increased sharply in 1939 even though 62 million bushels of 1937 and 1938 corn were placed under seal at the end of the year and 83 million bushels of 1939 corn were sealed by March 31, 1940. The following data indicate the percentage increase in livestock numbers on 2520 accounting farms in Illinois from the beginning to the end of 1939: dairy cows, 2 percent; beef cows, 21 percent; feeder cattle, 17 percent; feeder lambs, 24 percent; brood sows, 4 percent; spring pigs, 38 percent; summer pigs, 23 percent; and fall pigs, 28 percent. Hog numbers have been increasing since 1935 and have now attained record levels; for example, 13.5 sows farrowed per farm on accounting farms in 1939 as contrasted with 9.9 sows farrowed per farm in 1938. The increase in beef cattle numbers is a part of the general up-swing taking place over the entire United States, and it may be expected to continue for several years.

These data indicate that supplies of both feed and livestock were greater at the time the 1939 closing inventory was taken than at any other inventory period in several years, and price changes, therefore, are important in interpreting farm earnings for the state and for farming-type areas in 1939.

Prices of important farm products.--Prices for all crops as well as for beef cattle and sheep were higher at the end of 1939 than they were at the beginning, whereas prices for horses, hogs, and poultry were lower. Most of these price increases occurred during the last four months of the year.

December 15, Illinois Farm Prices

	<u>1938</u>	<u>1939</u>	<u>Increase</u>	<u>Decrease</u>
Corn, bu.	\$.42	\$.47	\$.05	\$ --
Oats, bu.	.24	.35	.11	--
Wheat, bu.	.57	.88	.31	--
Soybeans, bu.	.65	.95	.30	--
Hay, tons	6.20	6.50	.30	--
Horses, hd.	88.00	85.00	--	3.00
Hogs, cwt.	7.00	5.10	--	1.90
Beef cattle, cwt.	7.70	8.30	.60	--
Sheep, cwt.	3.45	3.60	.15	--
Chickens, lb.	.13	.11	--	.02

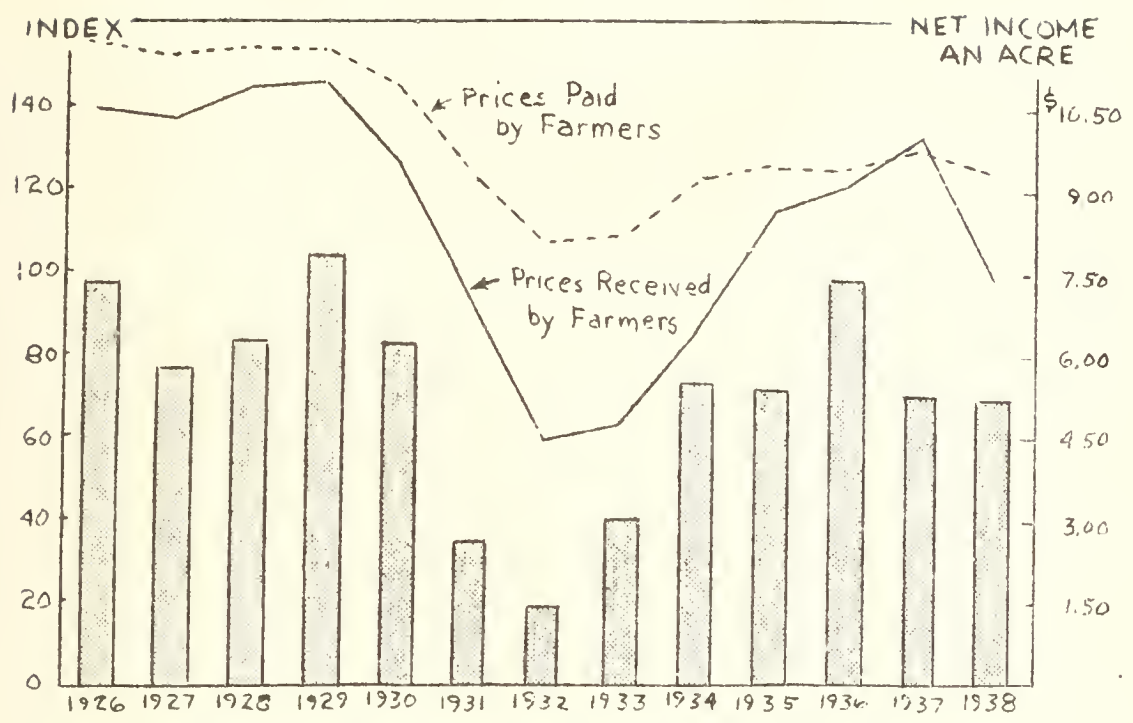


Fig. 1.--Average net cash income an acre (unpaid labor deducted) on Illinois accounting farms, prices paid by farmers in the United States, and prices received by Illinois farmers, 1926-1938.

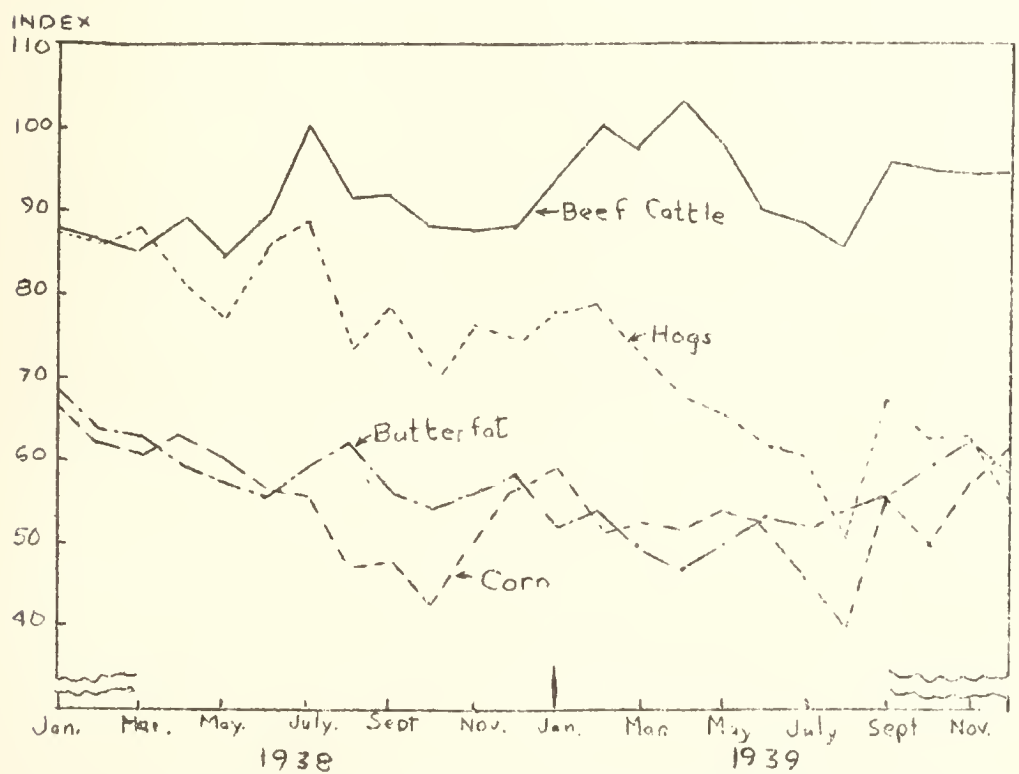


Fig. 2.--Monthly price indices of the average farm prices of corn, hogs, beef cattle, and butterfat, 1938 and 1939. (1924-1929 = 100)

Farm earnings are influenced by the average price received for farm products during the year as well as by the values at inventory time. Although nearly all commodities were higher in price at the end of the year than at the beginning, prices received for the following commodities averaged lower in 1939 than in 1938 by these amounts: corn, 2 cents per bushel; wheat and soybeans, 1 cent per bushel; hogs, \$1.50 per hundred; butterfat, 2 cents per pound; eggs, 3 cents per dozen; and chickens, 2 cents per pound. The prices for other commodities averaged higher in 1939 than in 1938 by the following amounts: oats, 4 cents per bushel; beef cattle, 50 cents per hundred; lambs, 42 cents per hundred; wool, 4 cents per pound; and apples, 12 cents per bushel.

Variation in earnings between the various type-of-farming areas is influenced by the relative prices of grains, livestock, and livestock products. In 1939 as in 1938 livestock had a price advantage over grain, but the advantage was not as marked as it was in 1938. The prices for meat animals dropped from 116 to 110 percent of the 1910-14 average, grains from 74 to 72 percent, chickens and eggs from 106 to 94 percent, and dairy products from 106 to 104 percent.

The corn-hog ratio also narrowed during the year to the disadvantage of the hog enterprise. The amount of corn equal in value to 100 pounds of hogs dropped from 19 bushels in February to 11 bushels in December (based on farm prices). Unfavorable feeding ratios will discourage expansion in hog numbers in 1940.

Crop Yields in Illinois, 1939

Crop yields in Illinois in 1939, as in 1938 and 1937, were unusually high. The weighted average yield of corn, oats, wheat, and soybeans was 133 percent of the 10-year average, 1929-1938. Corn contributed more than did any other crop to the high average yields. The yields of the various crops expressed in percentages of the 1929-1938 averages were: corn, 150; soybeans, 129; wheat, 121; and oats, 97.

Crop yields in all counties except Massac were above the 10-year average (1929-1938 = 100), but wide variations in yields occurred between individual counties and groups of counties. Four counties along the Ohio River had crop-yield indices under 105. In contrast to these counties, 31 were over 136. Many of the counties with the highest yields were in two groups, those located in southwestern and east north central Illinois. Crop-yield indices were adversely affected in southeastern Illinois by the wheat crop and in northern Illinois by low oat yields. Fifty-five counties, which were well-distributed over the state, had crop-yield indices from 121 to 135.

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FARM BUSINESS REPORT . . . 1939



FARMING-TYPE AREA FIVE West Central General Farming Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

Annual Farm Business Report

ON THREE HUNDRED FIFTEEN FARMS IN FARMING-TYPE AREA 5, 1939

By P. E. Johnston, J. B. Cunningham, and E. M. Hughes^{1/}

Farm earnings of accounting farms in Farming-Type Area 5 were higher in 1939 than in 1938. The net earnings per acre averaged \$9.77 in 1939, \$7.93 in 1938, \$8.21 in 1937, and \$7.72 in 1936. The items considered in calculating the net earnings included inventory changes, cash receipts, cash expenses, the value of the farm products used in the household (in 1938 and 1939 only), and unpaid family labor (Table 1).



Farming-Type Area 5
General Farming

Since the value of farm products used in the household was not included in the records prior to 1938, the earnings for 1938 and 1939 are not strictly comparable to those for other years. The value per acre of farm products used was \$1.15 in 1938 and \$.98 in 1939.

The accounting farms were larger than average, crop yields were above average, and the farms as a whole were operated with efficiency which was greater than average. Therefore, the figures contained in this report represent conditions which are better than average for this area. This fact is borne out by survey records taken in various areas of the state.

High crop yields and more livestock, accompanied by increased industrial activity and improved demand for farm products especially during the latter half of the year, were the principal factors producing higher earnings in 1939 (Figs. 1, 2, and 3).

^{1/} R. J. Mutti supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm accounts project was conducted in cooperation with the farm bureaus in the following counties and was supervised by the farm advisers indicated:

W. F. Coolidge, Morgan County	A. E. Snyder, Montgomery County
W. S. Batson, Shelby County	C. T. Kibler, Jersey County
G. B. Whitman, Adams County	R. T. Nicholas, Schuyler County
O. O. Mowery, Macoupin County	W. B. Bunn, Pike County
C. S. Love, Christian County	G. H. Reid, Scott County
W. F. Purnell, Greene County	E. H. Garlich, Brown County

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 5, 1936-1939

Items	Your farm	Average of all farms in area			
		1939	1938	1937	1936
Number of farms- - - - -	--	315	318	284	316
<u>Inventory Changes</u>					
Farm improvements- - - - -	\$	\$ 79	\$ 69	\$ 41	\$ 4
Livestock- - - - -		298	219	11	75
Feed and grain - - - - -		590	67	524	336
Machinery and equipment ^{1/} - - - - -		110	158	281	272
Automobile (farm share)- - - - -		11	4	--	--
Totals - - - - -	\$	\$1,108	\$ 517	\$ 957	\$ 687
<u>Cash Receipts</u>					
Farm improvements- - - - -	\$	\$ 12	\$ 3	\$ 2	\$ 5
Horses - - - - -		53	59	68	86
Productive livestock: Cattle - - - - -		1,668	1,144	1,453	1,069
Dairy sales- - - - -		432	466	473	360
Hogs - - - - -		1,482	1,488	1,748	1,563
Sheep- - - - -		115	90	114	95
Poultry- - - - -		95	85	94	90
Egg sales- - - - -		115	136	130	121
Total productive livestock - - - - -	()	(3,907)	(3,409)	(4,012)	(3,298)
Feed and grain - - - - -		1,387	1,167	1,410	1,383
Machinery and equipment ^{1/} - - - - -		265	256	322	283
Automobile (farm share)- - - - -		46	34	--	--
Labor off farm - - - - -		52	58	90	92
Miscellaneous- - - - -		18	8	6	7
AAA payments - - - - -		454	171	165	246
Totals - - - - -	\$	\$6,194	\$5,165	\$6,075	\$5,400
<u>Cash Expenses</u>					
Farm improvements- - - - -	\$	\$ 320	\$ 261	\$ 214	\$ 187
Horses - - - - -		30	38	45	61
Productive livestock: Cattle - - - - -		976	565	624	405
Hogs - - - - -		213	130	136	137
Sheep- - - - -		57	34	41	21
Poultry- - - - -		24	23	18	22
Total productive livestock - - - - -	()	(1,270)	(752)	(819)	(585)
Feed and grain - - - - -		688	524	1,121	847
Machinery and equipment ^{1/} - - - - -		872	813	996	920
Automobile (farm share) - - - - -		161	131	--	--
Hired labor- - - - -		379	318	351	260
Miscellaneous- - - - -		33	25	28	27
Crop expense - - - - -		133	118	283	210
Livestock expense- - - - -		61	52	45	30
Taxes- - - - -		289	256	256	245
Totals - - - - -	\$	\$4,236	\$3,288	\$4,158	\$3,372
<u>Summary</u>					
Cash balance - - - - -	\$	\$1,958	\$1,877	\$1,917	\$2,028
Farm products used in household ^{2/} - - - - -		256	279	--	--
Total inventory change - - - - -		1,108	517	857	687
Receipts less expenses - - - - -		3,322	2,673	2,774	2,715
Total unpaid labor - - - - -		769	755	761	778
Net earnings per farm- - - - -	\$	\$2,553	\$1,918	\$2,013	\$1,937
Net earnings per acre- - - - -	\$	\$ 9.77	\$ 7.93	\$ 8.21	\$ 7.72

^{1/} Includes farm share of automobile for 1936 and 1937.

^{2/} Not included as income for 1936 and 1937.

Inventory Changes, Cash Receipts, Cash Expenses, and Earnings

Inventory changes.--The year 1939 was the fourth consecutive year of increasing inventories, the increases averaging \$1,108 in 1939, \$517 in 1938, \$857 in 1937, and \$687 in 1936 (Table 1). The largest increases in 1939 were in feed and grain and in livestock. The increased value of feed and grain represented higher prices at the end of the year as well as larger quantities of grain on hand (Page 1 and Fig. 2). The average amounts of grain on hand in Area 5 at the two inventory periods follow:

	<u>Beginning of year (bushels)</u>	<u>End of year (bushels)</u>
Corn	2,609	3,033
Oats	436	353
Wheat	122	220
Soybeans	104	130

Cash receipts. Cash receipts reached the highest level in four years, averaging \$6,194 in 1939 (Table 1). Total productive livestock, grain, and AAA payments were larger in 1939 than in 1938. The larger AAA receipts were mainly due to a doubling-up in payments, many farmers receiving payments in 1939 for participation in both the 1938 and 1939 programs.

Cash expenses. Cash expenses were also larger in 1939 than in any of the last four years. Every cash expense item, except horses, was larger in 1939 than in 1938. The largest increase in expenditures was for cattle, the purchases averaging \$976 in 1939 and \$565 in 1938.

Earnings. Cash receipts exceeded cash expenses by \$1,958 in 1939. Cash balance, the difference between these receipts and expenses, is the average amount of money available for family living expenses, interest, debt payments, and savings.

The amounts deducted for operator's and family labor remained rather uniform during the 4-year period, a difference of only \$23, occurring between the low year, 1938, and the high year, 1936. The uniformity in valuation was due to the fact that approximately the same amount of family labor was available each year and to the fact that the same rate (\$50 per month) was charged for the physical labor of the operator and other mature members of the family.

The net earnings per farm averaged \$2,553 in 1939 as contrasted with \$1,918 for 1938. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding the value of farm products used in the household and the inventory increases to the cash balance and by subtracting the value of unpaid labor from the resulting total. Therefore, this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

TABLE 2.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 5, 1939

Items	Your farm	Average of all farms	Land area tillable	
			85 percent or more	Less than 85 percent
Number of farms - - - - -	--	315	156	159
<u>Capital Investments</u>				
Land- - - - -	\$ _____	\$18,253	\$21,134	\$15,427
Farm improvements - - - - -	_____	3,453	3,392	3,513
Horses - - - - -	_____	407	406	3,408
Productive livestock: Cattle- - -	_____	1,490	1,402	1,576
Hogs- - - - -	_____	629	620	637
Sheep - - - - -	_____	91	58	123
Poultry - - - - -	_____	102	110	94
<u>Total productive livestock- - -</u>	(_____)	(2,312)	(2,190)	(2,430)
Feed and grain - - - - -	_____	1,998	2,202	1,798
Machinery and equipment - - - - -	_____	1,775	1,958	1,596
Automobile (farm share) - - - - -	_____	173	194	153
Totals- - - - -	\$ _____	\$28,371	\$31,476	\$25,325
<u>Receipts and Net Increases</u>				
Horses - - - - -	\$ _____	\$ --	\$ --	\$ --
Productive livestock: Cattle- - -	_____	1,021	992	1,050
Dairy sales - - - - -	_____	432	432	433
Hogs- - - - -	_____	1,260	1,185	1,333
Sheep - - - - -	_____	77	68	86
Poultry - - - - -	_____	63	78	49
Egg sales - - - - -	_____	115	122	108
<u>Total productive livestock- - -</u>	(_____)	(2,968)	(2,877)	(3,059)
Farm products used in household -	_____	256	253	259
Feed and grain - - - - -	_____	1,289	1,845	744
Labor off farm - - - - -	_____	52	56	49
Miscellaneous - - - - -	_____	18	20	15
AAA payments - - - - -	_____	454	465	443
Totals- - - - -	\$ _____	\$ 5,037	\$ 5,516	\$ 4,569
<u>Expenses and Net Decreases</u>				
Farm improvements - - - - -	\$ _____	\$ 209	\$ 213	\$ 205
Horses - - - - -	_____	10	11	10
Productive livestock- - - - -	_____	--	--	--
Feed and grain- - - - -	_____	--	--	--
Machinery and equipment - - - - -	_____	497	566	430
Automobile (farm share) - - - - -	_____	104	113	95
Hired labor - - - - -	_____	379	393	365
Miscellaneous - - - - -	_____	33	31	36
Crop expense- - - - -	_____	133	139	127
Livestock expense - - - - -	_____	61	58	64
Taxes - - - - -	_____	289	320	259
Totals- - - - -	\$ _____	\$ 1,715	\$ 1,844	\$ 1,591
Receipts less expenses- - - - -	\$ _____	\$ 3,322	\$ 3,672	\$ 2,978
Family labor- - - - -	_____	245	233	256
Returns for labor, capital, mgt.	_____	3,077	3,439	2,722
Operator's labor- - - - -	_____	524	543	505
Returns for capital and mgt.- -	_____	2,553	2,896	2,217
Rate Earned on Investment - - - - -	_____ %	9.0%	9.2%	8.8%
Interest on investment- - - - -	\$ _____	\$ 1,418	\$ 1,573	\$ 1,266
Labor and Management Earnings - - -	_____	1,659	1,866	1,456
Nonfarm income- - - - -	\$ _____	\$ 113	\$ 99	\$ 126

Variation in farm earnings.--A wide variation was found in earnings on the farms in Area 5; for example, 26 farms earned less than 3 percent on the investment, with an average rate earned of 1.1 percent; but in contrast, 25 farms earned 15 percent or more, with an average rate earned of 17.9 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had a loss of \$310 for labor and management earnings as contrasted with a gain of \$4,152 for the latter group. By studying the reasons for these variations, farm operators can improve their chances of financial success. The variation in earnings and in size of farm for all records in the areas was as follows:

<u>Rate earned on investment (percent)</u>	<u>Number of farms</u>	<u>Average rate earned (percent)</u>	<u>Acres per farm</u>	<u>Capital invested per farm</u>	<u>Gross earnings per farm</u>	<u>Net earnings per farm</u>	<u>Labor and management earnings</u>
Less than 3.0	26	1.1	236	\$21,179	\$2,916	\$ 236	\$ -310
3.0 to 6.9	74	5.4	265	29,293	4,250	1,570	627
7.0 to 10.9	121	8.8	266	30,391	5,307	2,679	1,683
11.0 to 14.9	69	12.6	252	26,533	5,923	3,347	2,561
15.0 or more	25	17.9	280	28,414	8,300	5,073	4,152

Comparison of Farms According to Quality of Land

The 315 farms were divided into two groups according to the percent of land area tillable. Of this total number of farms, 156 had 85 percent or more of land area tillable, and 159 had less than 85 percent tillable. The average percent tillable was 93.7 for the former group and 65.7 for the latter group.

This grouping of farms gives each farmer an opportunity to compare his farm with the average of other farms having a similar quality of land as well as with the average of all accounting farms (Tables 2 and 3).

The total capital investment averaged \$31,476 per farm, or \$130 per acre, for the group of farms having the larger percent of land area tillable, as compared with a capital investment averaging \$25,325, or \$90 per acre, for the group of farms having the smaller percent of land area tillable.

The receipts and net increases were \$947 larger, and expenses and net decreases \$253 larger, on farms of higher quality land than on those of lower quality land. The livestock receipts were \$182 smaller for the farms with the larger percent of land area tillable, whereas the grain receipts were \$1,101 larger. The rate earned on investment was 9.2 percent and 8.8 percent and the labor and management earnings \$1,866 and \$1,456, respectively, for the two groups of farms.

The farms of higher quality land were 38 acres smaller than those on lower quality land; yet the former has 34 acres more land in crops. They also had a larger percent of tillable land in soybeans and in hay and pasture but a smaller percent in other crops. The amount of livestock per farm was practically the same for the two groups of farms as indicated by the value of feed fed to productive livestock (Table 3).

TABLE 3.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 5, 1939

Items	Your farm	Average of all farms	Land area tillable	
			85 percent or more	Less than 85 percent
Rate earned on investment- - - - -	_____ %	9.0%	9.2%	8.8%
Acres in farm- - - - -	_____	261	242	280
Acres in crops - - - - -	_____	159	176	142
Gross earnings per acre- - - - -	\$ _____	\$ 19.27	\$ 22.79	\$ 16.29
Total expenses per acre ^{2/} - - - - -	_____	9.50	10.82	8.39
Net earnings per acre - - - - -	_____	9.77	11.97	7.90
<u>Investments</u>				
Value of land per acre - - - - -	\$ _____	\$ 70	\$ 87	\$ 55
Value of improvements per acre - - -	_____	13	14	13
Total investment per acre- - - - -	_____	109	130	90
<u>Land Use</u>				
Percent of land area tillable- - - -	_____	78.6	93.7	65.7
Percent of tillable land in:				
Corn - - - - -	_____	28.4	28.5	28.2
Oats - - - - -	_____	8.5	8.0	9.0
Wheat- - - - -	_____	14.2	14.4	14.0
Soybeans - - - - -	_____	9.4	13.0	5.1
Other crops- - - - -	_____	9.9	8.3	11.8
Legume hay and pasture - - - - -	_____	17.6	15.1	20.7
Nonlegume hay and pasture- - - - -	_____	12.0	12.7	11.2
<u>Crop Yields</u>				
Corn - - - - -	_____	61.5	62.2	60.8
Oats - - - - -	_____	32.5	34.1	31.0
Wheat- - - - -	_____	24.7	25.9	23.3
Soybeans - - - - -	_____	26.7	28.0	23.2
<u>Livestock Factors</u>				
Value of feed fed to prod. L. S. - -	\$ _____	\$ 1,958	\$ 1,944	\$ 1,971
Feed fed per acre to prod. L. S. - -	_____	7.49	8.03	7.03
Returns per acre from prod. L. S.- -	_____	12.07	12.67	11.56
Returns per \$100 worth of feed fed -	_____	161	158	164
Returns per \$100 invested in cattle-	_____	93	96	91
Poultry returns per hen- - - - -	_____	2.24	2.23	2.24
Number of litters farrowed - - - - -	_____	19.0	16.7	21.2
Number of pigs weaned per litter - -	_____	6.2	6.2	6.1
Returns per litter farrowed- - - - -	\$ _____	\$ 78	\$ 80	\$ 76
Average number of cows milked- - -	_____	6.1	6.0	6.2
Dairy returns per cow milked - - -	\$ _____	\$ 80	\$ 79	\$ 82
<u>Expense Factors</u>				
Machinery cost per crop acre ^{1/} - - -	\$ _____	\$ 3.79	\$ 3.87	\$ 3.70
Horse and machinery cost per crop A.	_____	4.55	4.52	4.60
Labor cost per crop acre ^{2/} - - - - -	_____	7.08	6.49	7.59
Labor cost per \$100 gross earnings ^{2/}	_____	22	21	24
Number of work horses- - - - -	_____	3.8	3.7	3.8
Value of feed fed to horses- - - - -	\$ _____	\$ 111	\$ 104	\$ 118
Improvement cost per acre- - - - -	_____	.80	.88	.73
Taxes per acre - - - - -	_____	1.11	1.32	.92

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS,
FARMS WITH LESS THAN 85 PERCENT OF THE LAND AREA TILLABLE

Accounting Farms in Farming-Type Area 5, 1939

The numbers above the lines across the middle of the page are the averages for the 159 farms included in this group for the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings									Factors that affect expenses			
			Percent tillable land in legume hay and pasture	Crop yields			Feed fed per acre to prod. L. S.	Returns per \$100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked	Total expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Labor cost per \$100 gross earnings
				Corn, bu.	Oats, bu.	Wheat, bu.									
19	480	31	36	86	51	33	17	264	3.50	126	132	3.40	.85	2.60	9
17	440	28	33	81	47	31	15	244	3.25	114	122	4.40	1.60	3.60	12
15	400	25	30	76	43	29	13	224	3.00	106	112	5.40	2.35	4.60	15
13	360	22	27	71	39	27	11	204	2.75	96	102	6.40	3.10	5.60	18
11	320	19	24	66	35	25	9	184	2.50	86	92	7.40	3.85	6.60	21
8.8	280	16.29	20.7	60.8	31.0	23.3	7.03	164	2.24	76	82	8.39	4.60	7.59	24
7	240	13	18	56	27	21	5	144	2.00	66	72	9.40	5.35	8.60	27
5	200	10	15	51	23	19	3	124	1.75	56	62	10.40	6.10	9.60	30
3	160	7	12	46	19	17	1	104	1.50	46	52	11.40	6.85	10.60	33
1	120	4	9	41	15	15	--	84	1.25	36	42	12.40	7.60	11.60	36
-1	80	1	6	36	11	13	--	64	1.00	26	32	13.40	8.35	12.60	39

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 5, 1939

Items	Source of income					
	Grain 40%+	Dairy sales 40%+	Hogs 40%+	Cattle 40%+	General farms	
					L.S. 60%-	L.S. 60%+
Number of farms - - - - -	87	17	47	23	92	47
Percent income from prod. L.S. - -	30.5	86.3	80.7	88.5	50.4	77.8
Percent income from crops - - - -	56.2	--	3.6	--	30.2	6.7
<u>Investments</u>						
Total per farm- - - - -	\$31,641	\$17,672	\$27,391	\$41,891	\$24,974	\$28,410
Total per acre- - - - -	111	98	115	111	103	109
Land per acre - - - - -	78	51	73	65	66	66
Improvements per acre - - - - -	11	18	15	13	13	15
Machinery per acre ^{1/} - - - - -	7.89	7.27	8.04	6.76	7.10	7.23
<u>Earnings</u>						
Per farm						
Gross earnings- - - - -	\$ 5,575	\$ 4,477	\$ 4,419	\$ 7,728	\$ 4,523	\$ 5,109
Gross expenses ^{2/} - - - - -	2,720	2,633	2,294	3,706	2,211	2,567
Net earnings- - - - -	2,855	1,844	2,125	4,022	2,312	2,542
Per acre						
Gross earnings- - - - -	\$ 19.51	\$ 24.82	\$ 18.61	\$ 20.46	\$ 18.66	\$ 19.60
Gross expenses ^{2/} - - - - -	9.52	14.60	9.66	9.81	9.12	9.85
Net earnings- - - - -	9.99	10.22	8.95	10.65	9.54	9.75
Rate earned on investment - - -	9.0%	10.4%	7.8%	9.6%	9.3%	8.9%
Labor and mgt. earnings - - - -	\$ 1,789	\$ 1,468	\$ 1,271	\$ 2,462	\$ 1,613	\$ 1,640
<u>Size and Intensity</u>						
Acres per farm - - - - -	286	180	238	378	242	261
Percent land area tillable- - -	84.5	66.1	73.9	72.7	80.6	74.3
Percent tillable land in grain-	69.0	47.5	61.4	60.3	59.1	58.0
Percent in hay and pasture- - -	21.9	48.5	29.7	31.0	32.4	36.5
Feed fed per acre to prod. L.S. \$	4.25	\$ 10.65	\$ 10.14	\$ 12.58	\$ 6.16	\$ 9.67
Months of labor per 100 crop A.	11.4	32.2	16.8	13.8	14.8	16.5
Total months of labor - - - - -	22.7	26.0	22.2	28.3	22.1	23.2
<u>Crop Yields Per Acre</u>						
Corn, bu. - - - - -	60.8	60.5	62.8	66.4	59.7	62.7
Wheat, bu.- - - - -	26.0	24.1	24.6	20.4	24.5	25.0
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 155	\$ 209	\$ 155	\$ 148	\$ 166	\$ 166
Hog returns per litter- - - - -	66	90	82	79	74	75
Dairy returns per cow - - - - -	72	126	48	67	76	81
<u>Expense Factors</u>						
Labor cost ^{2/}						
Per crop acre - - - - -	\$ 5.61	\$ 15.10	\$ 8.14	\$ 6.74	\$ 6.76	\$ 7.88
Per \$100 gross earnings - - -	20	27	24	18	22	22
Horse and machinery cost						
per crop acre ^{1/} - - - - -	4.37	7.02	4.55	4.81	4.09	5.37
Improvement cost per acre - - -	.70	.96	.78	.88	.76	.99
Land tax per acre - - - - -	1.12	.69	.92	.87	.93	.95

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor

Larger crop yields per acre on the farms on higher quality land, which amounted to 1.4 bushels of corn, 3.1 bushels of oats, 2.6 bushels of wheat, and 4.8 bushels of soybeans, indicate the relative productive level of the two groups of farms.

The operating expenses per acre averaged \$10.82 on the farms with the most tillable land and \$8.39 on the farms with the least tillable land. The combined cost per crop acre for labor, machinery, and horses was \$1.18 smaller on the farms with the larger percent of tillable land, but the combined cost per acre for improvements and taxes was \$.55 larger.

The livestock-efficiency factors, such as poultry returns per hen, hog returns per litter of pigs farrowed, and dairy returns per cow milked, were not appreciably affected by the quality of land. These factors indicate that the two groups of farms were operated with about the same degree of efficiency. Therefore, it may be assumed that the differences in organization, land use, crop yields, and costs were principally due to the differences in the productivity of the land on the two groups of farms.

Source of Income

The 315 farms were divided into 6 groups according to source of income (Table 4). The items in this table, for the most part, were made to correspond with the items given in Table 3; therefore, a farmer may compare the data in the "Your farm" column of Table 3 with the "Source of income" column in Table 4, which corresponds to the classification for his own farm.

In a comparison of the groups of farms, the fact that conditions affecting production and price relationships vary from year to year should be kept in mind. Therefore, the average differences in earnings in 1939 are not necessarily typical of the variations that may be expected over a long period of years. The following items, for example, indicate that generally the grain farms were located on the better land: high value of land per acre, large percent of land area tillable, large percent of land in grain, and high taxes per acre.

According to 5-year averages (1933-1937) of complete cost studies the returns per \$100 feed that are necessary to pay for feed (including pasture) and other costs, are as follows: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117. There is little wonder, therefore, that the six groups of accounting farms with different classes and proportions of livestock varied widely in their returns per \$100 worth of feed fed. The amount of feed fed per acre to productive livestock averaged \$12.58 on the cattle farms but only \$4.25 on the grain farms.

Differences in expenses are significant for the six groups of farms. Labor input was highest on the cattle farms, where 28.3 months of labor were used, and lowest on the general farms with least livestock, where 22.1 months of labor were used. Horse and machinery cost per crop acre averaged \$7.02 on the dairy farms, \$4.81 on the cattle farms, \$4.55 on the hog farms, and only \$4.37 on the grain farms. Improvement costs per acre ranged from \$.70 on the grain farms to \$.99 on the general livestock farms. Taxes ranged from \$.69 on the dairy farms to \$1.12 on the grain farms.

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 5, 1939

Items	Total acres in farm					
	41 to 120	121 to 200	201 to 280	281 to 360	361 to 440	441 or more
Number of farms - - - - -	27	110	83	39	18	38
Acres per farm- - - - -	105	168	241	315	391	568
<u>Investments</u>						
Total per farm- - - - -	\$12899	\$19006	\$26203	\$38873	\$31326	\$59032
Total per acre- - - - -	123	113	109	123	80	104
Land per acre - - - - -	73	71	69	82	50	69
Improvements per acre - - - - -	17	15	14	12	11	12
Machinery per acre ^{1/} - - - - -	10.28	8.48	7.39	8.48	6.35	6.04
<u>Earnings</u>						
Per farm						
Gross earnings- - - - -	\$2,499	\$3,401	\$4,926	\$6,856	\$5,482	\$9,754
Gross expenses ^{2/} - - - - -	1,446	1,877	2,296	2,950	2,750	4,795
Net earnings- - - - -	1,053	1,524	2,630	3,906	2,732	4,959
Per acre						
Gross earnings- - - - -	\$23.80	\$20.18	\$20.41	\$21.74	\$14.01	\$17.17
Gross expenses ^{2/} - - - - -	13.77	11.14	9.51	9.35	7.03	8.44
Net earnings- - - - -	10.03	9.04	10.90	12.39	6.98	8.73
Rate earned on investment - - - - -	8.2%	8.0%	10.0%	10.0%	8.7%	8.4%
Labor and management earnings - - - - -	\$ 925	\$1,114	\$1,833	\$2,488	\$1,711	\$2,498
<u>Size and Intensity</u>						
Percent land area tillable- - - - -	87.8	81.6	79.2	82.5	71.6	74.2
Percent tillable land in grain- - - - -	60.7	60.1	61.7	67.6	59.0	62.4
Percent in hay and pasture- - - - -	33.8	33.0	31.1	26.2	27.0	27.2
Feed fed per acre to prod. L. S.- - - - -	\$ 9.09	\$ 7.58	\$ 7.84	\$ 8.22	\$ 5.84	\$ 7.00
Percent of income from prod. L. S.- - - - -	61.7	61.0	60.1	55.0	61.0	57.3
Percent of income from grain- - - - -	18.3	21.2	24.5	30.9	21.6	29.7
Months of labor per 100 crop acres- - - - -	21.9	18.3	14.7	11.8	13.2	11.7
Total months of labor - - - - -	15.6	19.3	21.8	25.0	29.2	36.9
<u>Crop Yields Per Acre</u>						
Corn, bu. - - - - -	59.5	60.1	62.0	66.4	55.5	61.0
Wheat, bu.- - - - -	23.5	24.9	25.9	26.5	20.9	23.8
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 178	\$ 175	\$ 167	\$ 154	\$ 157	\$ 145
Hog returns per litter- - - - -	72	71	83	79	78	73
Dairy returns per cow - - - - -	77	79	81	89	68	88
<u>Expense Factors</u>						
Labor cost per crop acre ^{2/} - - - - -	\$10.59	\$ 8.82	\$ 7.00	\$ 5.77	\$ 5.94	\$ 5.48
Labor cost per \$100 gross earnings- - - - -	30	27	21	18	24	18
Horse and machinery cost per crop A. ^{1/} - - - - -	4.73	4.69	4.81	4.19	3.24	4.85
Improvement cost per acre - - - - -	1.20	.90	.75	.81	.59	.78
Land tax per acre - - - - -	1.13	.97	.96	1.01	.65	1.07

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

Size of Farm As Related to Earnings

The farm records in Farming-Type Area 5, when sorted according to the total acres in the farm, indicate that the larger farms had a greater total investment in land, improvements, and equipment than did the smaller farms. The operators on the larger farms took in more money during the year than did the operators on the smaller farms; and after deductions were made for farm business expenditures and interest on the investment, the 38 largest farms had labor and management earnings which averaged \$2,498 as contrasted with \$925 for the 27 smallest farms. The earnings, as measured by the rate earned on the investment, averaged slightly higher, however, for the middle-sized farms than for either the largest or the smallest farms. In years when the average rate earned on investment for groups of farms exceeds the capitalization rate (5 percent), the average labor and management earnings are higher on the larger farms than on the smaller ones, but these earnings are lower when the rate earned averages less than the capitalization rate.

The smaller farms were operated more intensively than were the larger farms. This variation was indicated by the much higher gross earnings per acre, by the larger proportion of total land tillable, by the higher investments per acre, by the larger amount of feed fed per acre to productive livestock, and by the larger amount of labor used per 100 crop acres.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Farm Organization and Farm Earnings by Counties
and Groups of Counties

Farming-type areas are formed by grouping together counties which are similar with respect to physical, economic, and biological characteristics. Although a classification of this kind is very useful for many purposes, no two counties within an area are exactly alike. A tabulation of farm account records by counties and groups of counties indicates some of these differences which are due to variations in quality of land, topography, amount of erosion, market outlets, weather conditions, and disease hazards. The effects of variations in these factors are indicated in the account records by differences in value of land per acre, taxes per acre, percent of land area tillable, size of farm, total acres in crops, percent of tillable land in important crops, crop yields, amount of feed fed to productive livestock, and the source of farm income (Tables 6 and 7).

In this report an average was calculated for each county from which 30 or more records were received. Averages were made in some instances with less than 30 records if it was necessary to eliminate some records because they were incomplete or not typical for the area. In any tabulation containing as few as 30 records, part of the variation from county to county is due to the fact that the averages do not represent a cross section of the county.

The tabulations by counties and by groups of counties may be used by extension specialists, farm advisers, and county program-building committees to represent the type of farm organization and the level of operating efficiency attained by a selected group of progressive farmers in the various parts of a farming-type area. Since the personnel of the accounting group changes slowly, comparisons may be made from county to county and from year to year, even though these records are from farms with efficiency which is higher than average.

TABLE 6.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 5, 1939

Items	Morgan	Shelby	Adams	Macoupin	Christian
Number of farms - - - - -	38	38	37	35	31
Capital Investments					
Land - - - - -	\$26,483	\$16,400	\$12,812	\$14,148	\$24,195
Farm improvements - - - - -	3,339	2,494	3,448	4,087	3,817
Horses - - - - -	374	343	423	388	369
Productive livestock: Cattle - -	1,462	841	1,160	1,821	1,314
Hogs - - - - -	695	229	651	466	708
Sheep - - - - -	90	109	96	156	61
Poultry - - - - -	96	125	83	169	113
<u>Total productive livestock - - -</u>	<u>(2,343)</u>	<u>(1,304)</u>	<u>(1,990)</u>	<u>(2,612)</u>	<u>(2,196)</u>
Feed and grain - - - - -	2,238	1,896	1,592	2,016	2,277
Machinery and equipment - - - -	2,111	1,564	1,422	2,024	2,079
Automobile (farm share) - - - -	189	164	177	160	199
<u>Totals - - - - -</u>	<u>\$37,077</u>	<u>\$24,165</u>	<u>\$21,864</u>	<u>\$25,435</u>	<u>\$35,132</u>
Receipts and Net Increases					
Horses - - - - -	\$ 2	\$ --	\$ --	\$ --	\$ --
Productive livestock: Cattle - - -	1,002	484	773	1,182	1,051
Dairy sales	417	497	256	294	226
Hogs - - - - -	1,495	488	1,200	902	1,345
Sheep - - - - -	125	91	60	118	64
Poultry - - - - -	64	63	52	182	51
Egg sales - - - - -	112	171	88	194	119
<u>Total productive livestock - - -</u>	<u>(3,215)</u>	<u>(1,794)</u>	<u>(2,429)</u>	<u>(3,572)</u>	<u>(2,856)</u>
Farm products used in household -	252	239	259	279	266
Feed and grain - - - - -	1,973	1,972	704	873	2,089
Labor off farm - - - - -	49	56	64	65	45
Miscellaneous - - - - -	12	15	18	21	20
AAA payments - - - - -	551	333	359	500	409
<u>Totals - - - - -</u>	<u>\$ 6,054</u>	<u>\$ 4,409</u>	<u>\$ 3,833</u>	<u>\$ 5,310</u>	<u>\$ 5,685</u>
Expenses and Net Decreases					
Farm improvements - - - - -	\$ 193	\$ 183	\$ 208	\$ 190	\$ 231
Horses - - - - -	--	9	9	23	9
Productive livestock - - - - -	--	--	--	--	--
Feed and grain - - - - -	--	--	--	--	--
Machinery and equipment - - - - -	606	473	424	475	571
Automobile (farm share) - - - - -	106	92	103	108	138
Hired labor - - - - -	444	259	264	424	331
Miscellaneous - - - - -	71	25	24	28	29
Crop expense - - - - -	142	125	107	174	113
Livestock expense - - - - -	70	37	54	69	57
Taxes - - - - -	326	256	207	205	357
<u>Totals - - - - -</u>	<u>\$ 1,958</u>	<u>\$ 1,459</u>	<u>\$ 1,400</u>	<u>\$ 1,696</u>	<u>\$ 1,836</u>
Receipts less expenses - - - - -	\$ 4,096	\$ 2,950	\$ 2,433	\$ 3,614	\$ 3,849
Family labor - - - - -	188	182	303	453	282
Returns for labor, capital, mgt.	3,908	2,768	2,130	3,161	3,567
Operator's labor - - - - -	522	567	510	483	509
Returns for capital and mgt. - -	3,386	2,201	1,620	2,678	3,058
<u>Rate Earned on Investment - - - -</u>	<u>9.1%</u>	<u>9.1%</u>	<u>7.4%</u>	<u>10.5%</u>	<u>8.7%</u>
Interest on investment - - - - -	\$ 1,854	\$ 1,208	\$ 1,093	\$ 1,272	\$ 1,757
Labor and Management Earnings - - -	2,054	1,560	1,037	1,889	1,810
Nonfarm income - - - - -	\$ 134	\$ 125	\$ 116	\$ 75	\$ 128

TABLE 6.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 5, 1939 (Cont.)

Items	Greene	Montgomery and Jersey	Schuyler Pike, Scott and Brown
Number of farms - - - - -	27	47	62
<u>Capital Investments</u>			
Land- - - - -	\$19,082	\$15,297	\$18,817
Farm improvements - - - - -	3,939	3,176	3,570
Horses- - - - -	417	460	444
Productive livestock: Cattle- - - - -	2,248	1,567	1,613
Hogs- - - - -	566	657	877
Sheep - - - - -	62	63	90
Poultry - - - - -	85	101	68
<u>Total productive livestock- - - - -</u>	<u>(2,961)</u>	<u>(2,388)</u>	<u>(2,648)</u>
Feed and grain- - - - -	1,889	1,726	2,259
Machinery and equipment - - - - -	1,727	1,534	1,821
Automobile (farm share) - - - - -	135	180	175
Totals- - - - -	\$30,150	\$24,761	\$29,734
<u>Receipts and Net Increases</u>			
Horses - - - - -	\$ --	\$ --	\$ --
Productive livestock: Cattle- - - - -	1,752	888	1,188
Dairy sales - - - - -	559	589	119
Hogs- - - - -	1,604	1,082	1,771
Sheep - - - - -	34	60	66
Poultry - - - - -	46	41	32
Egg sales - - - - -	76	122	64
<u>Total productive livestock- - - - -</u>	<u>(4,071)</u>	<u>(2,782)</u>	<u>(3,240)</u>
Farm products used in household - - - - -	213	285	245
Feed and grain - - - - -	845	1,095	977
Labor off farm - - - - -	40	61	40
Miscellaneous - - - - -	4	32	14
AAA payments- - - - -	473	449	518
Totals- - - - -	\$ 5,646	\$ 4,704	\$ 5,034
<u>Expenses and Net Decreases</u>			
Farm improvements - - - - -	\$ 238	\$ 206	\$ 226
Horses- - - - -	9	13	16
Productive livestock- - - - -	--	--	--
Feed and grain- - - - -	--	--	--
Machinery and equipment - - - - -	610	402	489
Automobile (farm share) - - - - -	78	91	113
Hired labor - - - - -	511	354	440
Miscellaneous - - - - -	29	29	29
Crop expense- - - - -	151	102	150
Livestock expense - - - - -	93	55	61
Taxes - - - - -	338	228	375
Totals- - - - -	\$ 2,057	\$ 1,480	\$ 1,899
Receipts less expenses- - - - -	\$ 3,589	\$ 3,224	\$ 3,135
Family labor- - - - -	175	252	172
Returns for labor, capital, mgt.- - - - -	3,414	2,972	2,963
Operator's labor- - - - -	517	541	527
Returns for capital and mgt.- - - - -	2,897	2,431	2,436
<u>Rate Earned on Investment - - - - -</u>	<u>9.6%</u>	<u>9.8%</u>	<u>8.2%</u>
Interest on investment- - - - -	\$ 1,507	\$ 1,238	\$ 1,486
Labor and Management Earnings - - - - -	1,907	1,734	1,477
Nonfarm income - - - - -	\$ 80	\$ 151	\$ 90

TABLE 7.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 5, 1939

Items	Morgan	Shelby	Adams	Macoupin
Rate earned on investment- - - - -	9.1%	9.1%	7.4%	10.5%
Acres in farm- - - - -	271	238	225	265
Acres in crops - - - - -	190	158	125	161
Gross earnings per acre- - - - -	\$ 22.33	\$ 18.56	\$ 17.04	\$ 20.01
Total expenses per acre ^{2/} - - - - -	9.84	9.29	9.84	9.92
Net earnings per acre- - - - -	12.49	9.27	7.20	10.09
<u>Investments</u>				
Value of land per acre - - - - -	\$ 98	\$ 69	\$ 57	\$ 53
Value of improvements per acre - - -	12	10	15	15
Total investment per acre- - - - -	137	102	97	96
<u>Land Use</u>				
Percent of land area tillable- - - -	85.4	85.9	77.5	76.0
Percent of tillable land in:				
Corn - - - - -	32.7	28.9	23.2	24.8
Oats - - - - -	9.2	5.9	14.1	10.5
Wheat- - - - -	18.5	5.3	13.0	15.2
Soybeans - - - - -	9.8	17.5	5.6	5.5
Other crops- - - - -	5.6	9.5	9.0	11.6
Legume hay and pasture - - - - -	15.4	17.9	20.5	18.0
Nonlegume hay and pasture- - - - -	8.8	15.0	14.6	14.4
<u>Crop Yields</u>				
Corn - - - - -	65.2	55.8	56.1	61.6
Oats - - - - -	38.4	26.9	34.4	29.5
Wheat- - - - -	26.7	22.8	19.8	24.2
Soybeans - - - - -	25.4	25.0	28.6	25.7
<u>Livestock Factors</u>				
Value of feed fed to prod. L. S. - -	\$2,117	\$1,078	\$1,641	\$2,194
Feed fed per acre to prod. L. S. - -	7.81	4.54	7.30	8.27
Returns per acre from prod. L. S.- -	12.58	8.26	11.62	14.21
Returns per \$100 worth of feed fed -	161	182	159	172
Returns per \$100 invested in cattle-	92	117	90	113
Poultry returns per hen - - - - -	2.30	2.34	2.26	2.27
Number of litters farrowed - - - - -	21.4	7.8	20.2	15.0
Number of pigs weaned per litter - -	6.2	6.8	6.2	6.1
Returns per litter farrowed- - - - -	\$ 79	\$ 86	\$ 73	\$ 82
Average number of cows milked- - - -	6.0	7.1	5.9	8.6
Dairy returns per cow milked - - - -	\$ 83	\$ 79	\$ 56	\$ 108
<u>Expense Factors</u>				
Machinery cost per crop acre ^{1/} - - -	\$ 3.75	\$ 3.57	\$ 4.21	\$ 3.62
Horses and machinery cost per crop A. ^{1/} - - - - -	4.32	4.21	5.15	4.53
Labor cost per crop acre ^{2/} - - - - -	5.81	6.18	8.32	8.23
Labor cost per \$100 gross earnings ^{2/}	18	22	27	25
Number of work horses - - - - -	4.1	3.4	3.6	3.8
Value of feed fed to horses- - - - -	\$ 112	\$ 92	\$ 109	\$ 123
Improvement cost per acre- - - - -	.71	.77	.92	.72
Taxes per acre - - - - -	1.20	1.08	.92	.77

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

TABLE 7.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 5, 1939 (Cont.)

Items	Christian	Greene	Montgomery and Jersey	Schuyler Pike, Scott and Brown
Rate earned on investment- - - - -	8.7%	9.6%	9.8%	8.2%
Acres in farm- - - - -	242	298	232	305
Acres in crops - - - - -	185	155	144	158
Gross earnings per acre- - - - -	\$ 23.47	\$ 18.91	\$ 20.23	\$ 16.52
Total expenses per acre ^{2/} - - - - -	10.84	9.21	9.77	8.53
Net earnings per acre- - - - -	12.63	9.70	10.46	7.99
<u>Investments</u>				
Value of land per acre - - - - -	\$ 100	\$ 64	\$ 66	\$ 62
Value of improvements per acre - - -	16	13	14	12
Total investment per acre- - - - -	145	101	106	98
<u>Land Use</u>				
Percent of land area tillable- - - -	91.7	68.0	82.1	70.3
Percent of tillable land in:				
Corn - - - - -	25.0	35.2	25.6	30.4
Oats - - - - -	5.3	3.8	7.5	9.9
Wheat- - - - -	15.1	17.7	15.0	14.2
Soybeans - - - - -	26.5	2.9	8.2	3.0
Other crops- - - - -	5.6	12.0	13.6	11.4
Legume hay and pasture - - - - -	10.5	18.6	17.8	20.5
Nonlegume hay and pasture- - - - -	12.0	9.8	12.3	10.6
<u>Crop Yields</u>				
Corn - - - - -	63.1	64.8	61.8	61.6
Oats - - - - -	32.2	29.6	29.9	33.2
Wheat- - - - -	28.3	24.0	27.8	22.1
Soybeans - - - - -	28.8	25.7	28.2	24.5
<u>Livestock Factors</u>				
Value of feed fed to prod. L. S. ✓ -	\$2,046	\$2,603	\$1,867	\$2,198
Feed fed per acre to prod. L. S. - -	8.45	8.72	8.03	7.21
Returns per acre from prod. L. S.- -	12.63	14.15	12.85	11.20
Returns per \$100 worth of feed fed -	149	162	160	155
Returns per \$100 invested in cattle-	86	93	90	81
Poultry returns per hen - - - - -	2.15	2.11	2.20	1.96
Number of litters farrowed - - - - -	16.4	20.9	13.9	26.4
Number of pigs weaned per litter - -	6.3	6.2	6.0	6.1
Returns per litter farrowed- - - - -	\$ 85	72	80	75
Average number of cows milked- - - -	4.3	7.3	7.1	3.8
Dairy returns per cow milked - - - -	\$ 71	\$ 85	\$ 95	\$ 53
<u>Expense Factors</u>				
Machinery cost per crop acre ^{1/} - - -	\$ 3.84	\$ 4.44	\$ 3.43	\$ 3.82
Horses and machinery cost per crop A. ^{1/} - - - - -	4.38	5.34	4.44	4.57
Labor cost per crop acre ^{2/} - - - - -	5.83	7.51	7.80	6.98
Labor cost per \$100 gross earnings ^{2/}	19	21	24	22
Number of work horses- - - - -	3.4	4.1	3.9	4.0
Value of feed fed to horses- - - - -	\$ 91	\$ 130	\$ 133	\$ 102
Improvement cost per acre- - - - -	.95	.80	.89	.74
Taxes per acre - - - - -	1.47	1.13	.98	1.23

^{1/} Includes farm share of automobile.
^{2/} Includes operator's and family labor.

Influence of Price Changes on Illinois Farm Incomes

All feed and grain, livestock, and other farm property on accounting farms must be valued at both the beginning and the end of the year. Prices at inventory time, therefore, have a marked influence on farm earnings. The influence is greatest where large stocks or supplies are on hand at inventory time; for example, a much larger supply of farm products was found on Illinois farms December 31, 1939, than a year earlier. In fact, grain and livestock inventories have been increasing on Illinois farms since the drouth of 1936 as a result of three years of exceptionally high crop yields and the influence of Agricultural Adjustment Programs which have caused farmers to grow more hay and pasture and to store corn on farms under seal. According to estimates made by the Bureau of Agricultural Economics, U.S.D.A., 356 million bushels of corn were on Illinois farms January 1, 1940, as compared with 325 million bushels January 1, 1939.

Livestock numbers on Illinois farms increased sharply in 1939 even though 62 million bushels of 1937 and 1938 corn were placed under seal at the end of the year and 83 million bushels of 1939 corn were sealed by March 31, 1940. The following data indicate the percentage increase in livestock numbers on 2520 accounting farms in Illinois from the beginning to the end of 1939; dairy cows, 2 percent; beef cows, 21 percent; feeder cattle, 17 percent; feeder lambs, 24 percent; brood cows, 4 percent; spring pigs, 38 percent; summer pigs, 23 percent; and fall pigs, 28 percent. Hog numbers have been increasing since 1935 and have now attained record levels; for example, 13.5 sows farrowed per farm on accounting farms in 1939 as contrasted with 9.9 sows farrowed per farm in 1938. The increase in beef cattle numbers is a part of the general up-swing taking place over the entire United States, and it may be expected to continue for several years.

These data indicate that supplies of both feed and livestock were great at the time the 1939 closing inventory was taken than at any other inventory period in several years, and price changes, therefore, are important in interpreting farm earnings for the state and for farming-type areas in 1939.

Prices of important farm products.--Prices for all crops as well as for beef cattle and sheep were higher at the end of 1939 than they were at the beginning, whereas prices for horses, hogs, and poultry were lower. Most of these price increases occurred during the last four months of the year.

December 15, Illinois Farm Prices

	<u>1938</u>	<u>1939</u>	<u>Increase</u>	<u>Decrease</u>
Corn, bu.	\$.42	\$.47	\$.05	\$ --
Oats, bu.	.24	.35	.11	--
Wheat, bu.	.57	.88	.31	--
Soybeans, bu.	.65	.95	.30	--
Hay, tons	6.20	6.50	.30	--
Horses, hd.	88.00	85.00	--	3.00
Hogs, cwt.	7.00	5.10	--	1.90
Beef cattle, cwt.	7.70	8.30	.60	--
Sheep, cwt.	3.45	3.60	.15	--
Chickens, lb.	.13	.11	--	.02

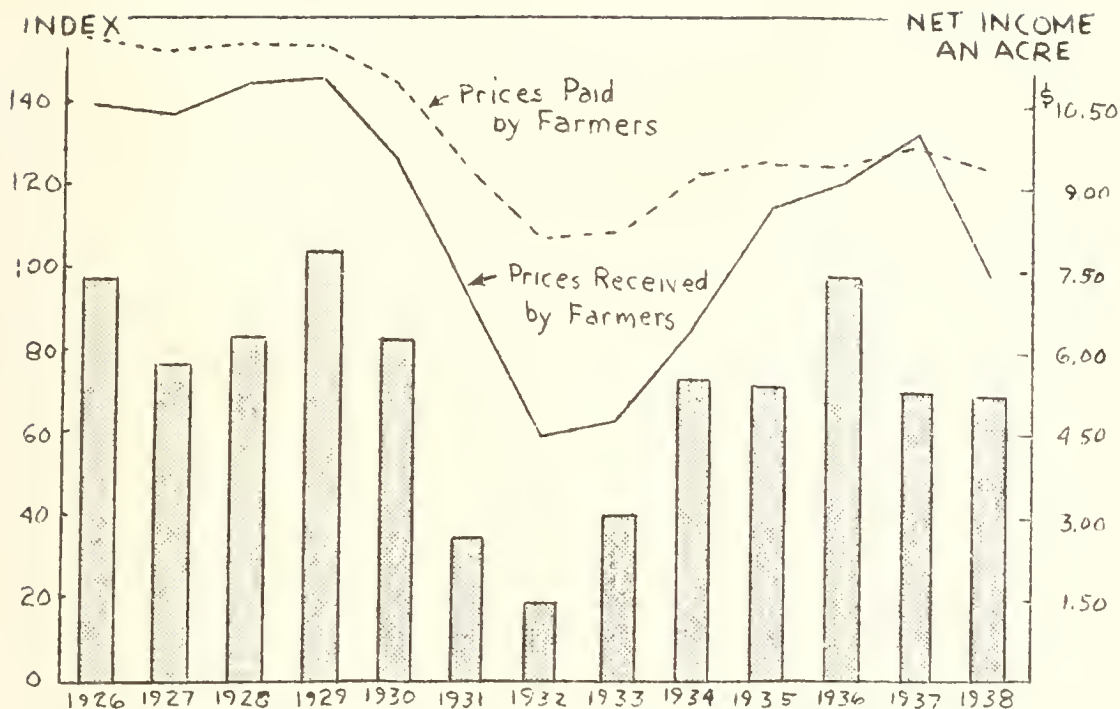


Fig. 1.--Average net cash income an acre (unpaid labor deducted) on Illinois accounting farms, prices paid by farmers in the United States, and prices received by Illinois farmers, 1926-1938.

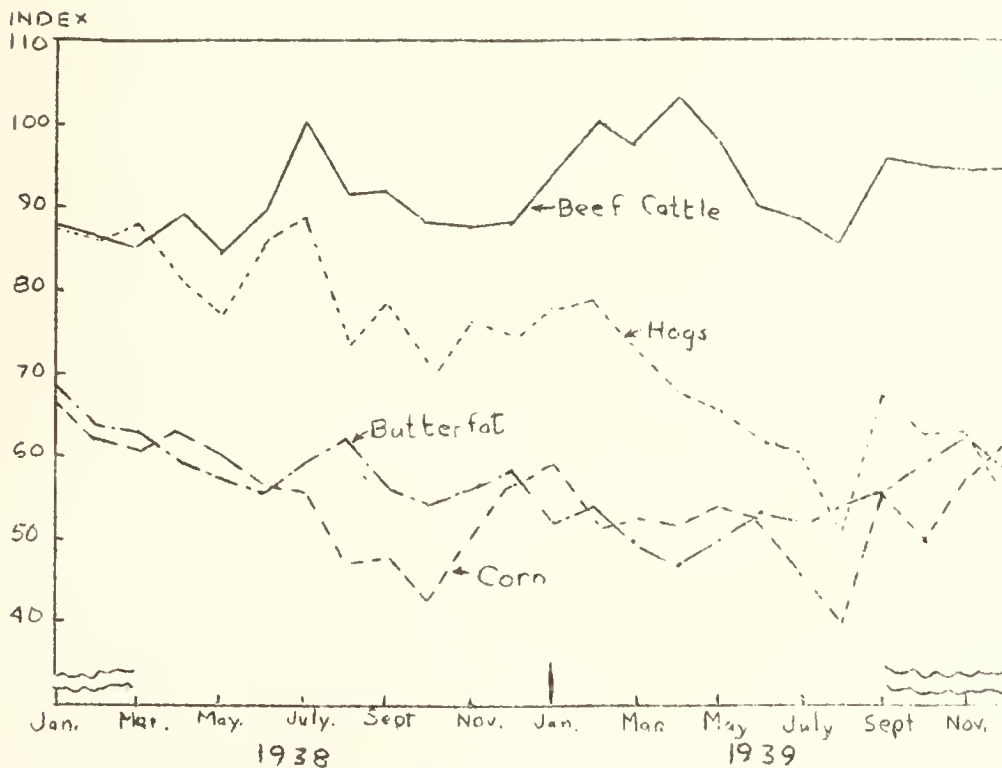


Fig. 2.--Monthly price indices of the average farm prices of corn, hogs, beef cattle, and butterfat, 1938 and 1939. (1924-1929 = 100)

Farm earnings are influenced by the average price received for farm products during the year as well as by the values at inventory time. Although nearly all commodities were higher in price at the end of the year than at the beginning, prices received for the following commodities averaged lower in 1939 than in 1938 by these amounts: corn, 2 cents per bushel; wheat and soybeans, 1 cent per bushel; hogs, \$1.50 per hundred; butterfat, 2 cents per pound; eggs, 3 cents per dozen; and chickens, 2 cents per pound. The prices for other commodities averaged higher in 1939 than in 1938 by the following amounts: oats, 4 cents per bushel; beef cattle, 50 cents per hundred; lambs, 42 cents per hundred; wool, 4 cents per pound; and apples, 12 cents per bushel.

Variation in earnings between the various type-of-farming areas is influenced by the relative prices of grains, livestock, and livestock products. In 1939 as in 1938 livestock had a price advantage over grain, but the advantage was not as marked as it was in 1938. The prices for meat animals dropped from 116 to 110 percent of the 1910-14 average, grains from 74 to 72 percent, chickens and eggs from 106 to 94 percent, and dairy products from 106 to 104 percent.

The corn-hog ratio also narrowed during the year to the disadvantage of the hog enterprise. The amount of corn equal in value to 100 pounds of hogs dropped from 19 bushels in February to 11 bushels in December (based on farm prices). Unfavorable feeding ratios will discourage expansion in hog numbers in 1940.

Crop Yields in Illinois, 1939

Crop yields in Illinois in 1939, as in 1938 and 1937, were unusually high. The weighted average yield of corn, oats, wheat, and soybeans was 133 percent of the 10-year average, 1929-1938. Corn contributed more than did any other crop to the high average yields. The yields of the various crops expressed in percentages of the 1929-1938 averages were: corn, 150; soybeans, 129; wheat, 121; and oats, 97.

Crop yields in all counties except Massac were above the 10-year average (1929-1938 = 100), but wide variations in yields occurred between individual counties and groups of counties. Four counties along the Ohio River had crop-yield indices under 105. In contrast to these counties, 31 were over 136. Many of the counties with the highest yields were in two groups, those located in southwestern and east north central Illinois. Crop-yield indices were adversely affected in southeastern Illinois by the wheat crop and in northern Illinois by low oat yields. Fifty-five counties, which were well-distributed over the state, had crop-yield indices from 121 to 135.

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FARM BUSINESS REPORT . . . 1939



FARMING-TYPE AREA SIX St. Louis Dairy and Wheat Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

Annual Farm Business Report

ON TWO HUNDRED SEVENTY-ONE FARMS IN FARMING-TYPE AREA 6, 1939

By P. E. Johnston, J. B. Cunningham, and E. N. Searls^{1/}

Farm earnings of accounting farms in Farming-Type Area 6 were higher in 1939 than in 1938. The average net earnings per acre were \$7.96 in 1939, \$5.11 in 1938, \$6.17 in 1937, and \$5.84 in 1936. The items considered in calculating the net earnings included inventory changes, cash receipts, cash expenses, the value of the farm products used in the household (in 1938 and 1939 only), and unpaid family labor (Table 1).



▨ Farming-Type Area 6
Wheat, Dairy and Poultry

Since the value of farm products used in the household was not included in the records prior to 1938, the earnings for 1938 and 1939 are not strictly comparable to those for other years. The value per acre of farm products used was \$1.39 in 1938 and \$1.31 in 1939.

The accounting farms were larger than average, crop yields were above average, and the farms as a whole were operated with efficiency which was greater than average. Therefore, the figures contained in this report represent conditions which are better than average for this area. This fact is borne out by survey records taken in various areas of the state.

High crop yields and more livestock, accompanied by increased industrial activity and improved demand for farm products especially during the latter half of the year, were the principal factors producing higher earnings in 1939 (Figs. 1, 2, and 3).

^{1/} R. J. Mutti supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm accounts project was conducted in cooperation with the farm bureaus in the following counties and was supervised by the farm advisers indicated:

T. W. May, Madison County
E. C. Secor, Randolph County
C. S. Cutright, Effingham County
I. F. Green, Bond County
B. W. Tillman, St. Clair County

E. S. Amrine, Monroe County
C. E. Twigg, Clinton County
J. B. Turner, Fayette County
O. W. Hertz, Washington County

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 6, 1936-1939

Items	Your farm 1939	Average of all farms in area			
		1939	1938	1937	1936
Number of farms- - - - -	--	271	289	267	233
Inventory Changes					
Farm improvements- - - - -	\$ _____	\$ 54	\$ 96	\$ 65	\$ 58
Livestock- - - - -	_____	142	52	116	83
Feed and grain - - - - -	_____	332	-135	173	231
Machinery and equipment ^{1/} - - - - -	_____	56	161	261	128
Automobile (farm share)- - - - -	_____	13	8	--	--
Totals - - - - -	\$ _____	\$ 597	\$ 182	\$ 615	\$ 500
Cash Receipts					
Farm improvements- - - - -	\$ _____	\$ 8	\$ 9	\$ 1	\$ 2
Horses - - - - -	_____	45	56	69	63
Productive livestock: Cattle - - - - -	_____	449	476	385	422
Dairy sales- - - - -	_____	841	874	836	677
Hogs - - - - -	_____	584	601	593	607
Sheep- - - - -	_____	38	51	50	69
Poultry- - - - -	_____	115	117	127	139
Egg sales- - - - -	_____	225	282	260	264
Total productive livestock - - - - -	(_____)	(2,252)	(2,401)	(2,251)	(2,178)
Feed and grain - - - - -	_____	852	701	1,053	825
Machinery and equipment ^{1/} - - - - -	_____	170	189	221	171
Automobile (farm share)- - - - -	_____	28	30	--	--
Labor off farm - - - - -	_____	50	63	73	74
Miscellaneous- - - - -	_____	15	10	11	7
AAA payments - - - - -	_____	229	94	153	117
Totals - - - - -	\$ _____	\$3,649	\$3,553	\$3,832	\$3,437
Cash Expenses					
Farm improvements- - - - -	\$ _____	\$ 219	\$ 258	\$ 210	\$ 193
Horses - - - - -	_____	28	47	60	68
Productive livestock: Cattle - - - - -	_____	248	173	137	135
Hogs - - - - -	_____	51	63	39	72
Sheep- - - - -	_____	5	5	21	15
Poultry- - - - -	_____	28	29	28	31
Total productive livestock - - - - -	(_____)	(332)	(270)	(225)	(253)
Feed and grain - - - - -	_____	412	364	532	447
Machinery and equipment ^{1/} - - - - -	_____	570	693	762	551
Automobile (farm share)- - - - -	_____	114	121	--	--
Hired labor- - - - -	_____	229	204	196	164
Miscellaneous- - - - -	_____	23	25	24	26
Crop expense - - - - -	_____	84	95	231	160
Livestock expense- - - - -	_____	42	34	28	26
Taxes- - - - -	_____	163	156	150	137
Totals - - - - -	\$ _____	\$2,216	\$2,267	\$2,418	\$2,025
Summary					
Cash balance - - - - -	\$ _____	\$1,433	\$1,286	\$1,414	\$1,412
Farm products used in household ^{2/} - - - - -	_____	264	290	--	--
Total inventory change - - - - -	_____	597	182	615	500
Receipts less expenses - - - - -	_____	2,294	1,758	2,029	1,912
Total unpaid labor - - - - -	_____	688	697	714	717
Net earnings per farm- - - - -	\$ _____	\$1,606	\$1,061	\$1,315	\$1,195
Net earnings per acre- - - - -	\$ _____	\$ 7.96	\$ 5.11	\$ 6.17	\$ 5.84

^{1/} Includes farm share of automobile for 1936 and 1937.

^{2/} Not included as income for 1936 and 1937.

Inventory Changes, Cash Receipts, Cash Expenses, and Earnings

Inventory changes.--The year 1939 was the fourth consecutive year of increasing inventories, the increases averaging \$597 in 1939, \$182 in 1938, \$615 in 1937, and \$500 in 1936 (Table 1). The largest increases in 1939 were in feed and grain and in livestock. The increased value of feed and grain represented higher prices at the end of the year as well as larger quantities of grain on hand (Page i and Fig. 2). The average amounts of grain on hand in Area 6 at the two inventory periods follow:

	<u>Beginning of year (bushels)</u>	<u>End of year (bushels)</u>
Corn	940	1217
Oats	271	274
Wheat	260	267
Soybeans	25	25

Cash receipts. Cash receipts reached the second highest level in four years, averaging \$3,649 in 1939. Feed and grain and AAA receipts were larger in 1939 than in 1938, but productive livestock sales were smaller. The larger AAA receipts were mainly due to a doubling-up in payments, many farmers receiving payments in 1939 for participation in both the 1938 and 1939 programs. (Table 1).

Cash expenses. Cash expenses were lower in 1939 than in either 1938 or 1937, but they were higher in 1939 than in 1936. Less money was spent for improvements, machinery, and crop expenses in 1939 than in 1938, although more was spent for productive livestock, feed and grain, labor, livestock expense, and taxes.

Earnings. Cash receipts exceeded cash expenses in 1939 by \$1,423, or by a larger margin than that for any other year during the past four years. Cash balance, the difference between these receipts and expenses, is the average amount of money available for family living expenses, interest, debt payments, and savings.

The amounts deducted for operator's and family labor remained rather uniform during the 4-year period, a difference of only \$29 occurring between the low year, 1939, and the high year, 1936. The uniformity in valuation was due to the fact that approximately the same amount of family labor was available each year and to the fact that the same rate (\$40 per month) was charged for the physical labor of the operator and other mature members of the family.

The net earnings per farm averaged \$1,606 in 1939 as contrasted with \$1,061 for 1938. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding the value of farm products used in the household and the inventory increases to the cash balance and by subtracting the value of unpaid labor from the resulting total. Therefore, this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

TABLE 2.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 6, 1939

Items	Your farm	Average of all farms	Land-area tillable	
			85 percent or more	Less than 85 percent
Number of farms - - - - -	--	271	132	139
<u>Capital investments</u>				
Land- - - - -	\$ _____	\$ 9,851	\$ 10,480	\$ 9,254
Farm improvements - - - - -	_____	2,690	2,614	2,763
Horses- - - - -	_____	451	468	435
Productive livestock: Cattle- - - - -	_____	972	964	980
Hogs- - - - -	_____	279	257	301
Sheep - - - - -	_____	37	27	46
Poultry - - - - -	_____	155	152	157
<u>Total productive livestock-</u> - - - -	(_____)	(1,443)	(1,400)	(1,484)
Feed and grain- - - - -	_____	1,302	1,418	1,192
Machinery and equipment - - - - -	_____	1,508	1,572	1,447
Automobile (farm share) - - - - -	_____	143	152	134
Totals- - - - -	\$ _____	\$ 17,388	\$ 18,104	\$ 16,709
<u>Receipts and Net Increases</u>				
Horses - - - - -	\$ _____	\$ --	\$ --	\$ --
Productive livestock: Cattle- - - - -	_____	389	380	397
Dairy sales - - - - -	_____	841	853	830
Hogs--- - - - -	_____	524	411	631
Sheep - - - - -	_____	31	20	43
Poultry - - - - -	_____	73	71	73
Egg sales - - - - -	_____	225	237	212
<u>Total productive livestock</u> - - - - -	(_____)	(2,083)	(1,972)	(2,186)
Farm products used in household	_____	264	263	266
Feed and grain- - - - -	_____	772	1,053	505
Labor off farm- - - - -	_____	50	53	47
Miscellaneous - - - - -	_____	15	10	20
AAA payments- - - - -	_____	229	247	212
Totals- - - - -	\$ _____	\$ 3,413	\$ 3,598	\$ 3,236
<u>Expenses and Net Decreases</u>				
Farm improvements - - - - -	\$ _____	\$ 157	\$ 151	\$ 163
Horses - - - - -	_____	4	5	3
Productive livestock- - - - -	_____	--	--	--
Feed and grain- - - - -	_____	--	--	--
Machinery and equipment - - - - -	_____	344	337	350
Automobile (farm share) - - - - -	_____	73	76	70
Hired labor - - - - -	_____	229	253	207
Miscellaneous - - - - -	_____	23	24	23
Crop expense - - - - -	_____	84	92	76
Livestock expense - - - - -	_____	42	41	42
Taxes - - - - -	_____	163	171	154
Totals- - - - -	\$ _____	\$ 1,119	\$ 1,150	\$ 1,088
Receipts less expenses- - - - -	\$ _____	\$ 2,294	\$ 2,448	\$ 2,148
Family labor- - - - -	_____	258	237	278
Returns for labor, capital, mgt.- - - - -	_____	2,036	2,211	1,870
Operator's labor- - - - -	_____	430	431	430
Returns for capital and mgt.- - - - -	_____	1,606	1,780	1,440
<u>Rate Earned on Investment</u> - - - - -	_____ %	9.2%	9.8%	8.6%
Interest on investment- - - - -	\$ _____	\$ 869	\$ 905	\$ 836
Labor and Management Earnings - - - - -	_____	1,167	1,306	1,034
Nonfarm income - - - - -	\$ _____	\$ 111	\$ 95	\$ 126

Variation in farm earnings.--A wide variation was found in earnings on the farms in Area 6; for example, 30 farms earned less than 3 percent on their investment, with an average rate earned of less than 1 percent, but in contrast 33 farms earned 15 percent or more, with an average rate earned of 18 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had a loss of \$117 for labor and management earnings as contrasted with a gain of \$2,441 for the latter group. By studying the reasons for these variations, farm operators can improve their chances of financial success. The variation in earnings and in size of farm for all records in the areas was as follows:

<u>Rate earned on investment (percent)</u>	<u>Number of farms</u>	<u>Average rate earned (percent)</u>	<u>Acres per farm</u>	<u>Capital in-vested per farm</u>	<u>Gross earnings per farm</u>	<u>Net earnings per farm</u>	<u>Labor and management earnings</u>
Less than 3.0	30	.9	174	\$12,980	\$1,796	\$ 116	\$ -117
3.0 to 6.9	55	5.3	218	18,224	2,993	958	483
7.0 to 10.9	101	8.9	208	18,533	3,569	1,649	1,149
11.0 to 14.9	52	12.8	196	18,239	4,505	2,334	1,857
15 or more	33	18.2	189	15,158	4,594	2,761	2,441

Comparison of Farms According to Quality of Land

The 271 farms were divided into two groups according to the percent of land area tillable. Of this total number of farms 132 had 85 percent or more of land area tillable, and 139 had less than 85 percent tillable. Thus, the average percent tillable was 92.6 for the former group and 68.8 for the latter group.

This grouping of farms gives each farmer an opportunity to compare his farm with the average of other farms having a similar quality of land as well as with the average of all accounting farms (Tables 2 and 3).

The capital investment averaged \$18,104, or \$97 per acre, for the group of farms having the larger percent of land area tillable, as compared with a capital investment averaging \$16,709, or \$77 per acre, for the group of farms having the smaller percent of land area tillable.

The receipts and net increases were \$362 larger on farms of higher quality land than on those of lower quality land, and expenses and net decreases were \$62 larger. The livestock receipts were \$214 smaller for the farms with the larger percent of land area tillable, whereas the grain receipts were \$548 larger. The rate earned on investment was 9.8 percent and 8.6 percent, respectively, for the two groups of farms, and the labor and management earnings were \$1,306 and \$1,034.

The farms on higher quality land were 30 acres smaller than those on lower quality land; yet the former had 20 acres more land in crops. They also had a larger percent of tillable land in grain crops but a smaller percent in hay and pasture. The amount of livestock per farm was practically the same for the two groups of farms as indicated by the value of feed fed to productive livestock and the capital invested in productive livestock (Table 4).

TABLE 3.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 6, 1939

Items	Your farm	Average of all farms	Land-area tillable	
			85 percent or more	Less than 85 percent
Rate earned on investment- - - - -	_____ %	9.2%	9.8%	8.6%
Acres in farm- - - - -	_____	201.7	186.1	216.6
Acres in crops - - - - -	_____	120.8	131.1	111.0
Gross earnings per acre- - - - -	\$ _____	\$ 16.92	\$ 19.33	\$ 14.94
Total expenses per acre ^{2/} - - - - -	_____	8.96	9.77	8.29
Net earnings per acre- - - - -	_____	7.96	9.56	6.65
<u>Investments</u>				
Value of land per acre - - - - -	\$ _____	\$ 49.	\$ 56.	\$ 43.
Value of improvements per acre - - - - -	_____	13.	14.	13.
Total investment per acre- - - - -	_____	86.	97.	77.
<u>Land Use</u>				
Percent of land-area tillable- - - - -	_____	79.5	92.6	68.8
Percent of tillable land in:				
Corn - - - - -	_____	19.1	19.5	18.7
Oats - - - - -	_____	8.8	9.3	8.2
Wheat- - - - -	_____	21.3	21.6	20.8
Soybeans - - - - -	_____	2.2	2.3	2.0
Other crops- - - - -	_____	12.1	11.4	13.0
Legume hay and pasture - - - - -	_____	23.3	21.0	26.0
Non-legume hay and pasture - - - - -	_____	13.2	14.9	11.3
<u>Crop Yields</u>				
Corn - - - - -	_____	53.2	55.5	50.5
Oats - - - - -	_____	28.2	28.1	28.5
Wheat- - - - -	_____	24.7	25.5	23.8
Soybeans - - - - -	_____	18.9	19.7	18.0
<u>Livestock Factors</u>				
Value of feed fed to prod. L. S. - - - - -	\$ _____	\$1,268.	\$1,200.	\$1,333.
Feed fed per acre to prod. L. S. - - - - -	_____	6.29	6.45	6.15
Returns per acre from prod. L. S.- - - - -	_____	11.23	11.60	10.92
Returns per \$100 worth of feed fed - - - - -	_____	179.	180.	177.
Returns per \$100 invested in cattle - - - - -	_____	122.	123.	121.
Poultry returns per hen- - - - -	_____	2.30	2.26	2.28
Number of litters farrowed - - - - -	_____	8.6	6.5	10.5
Number of pigs weaned per litter - - - - -	_____	6.5	6.3	6.5
Returns per litter farrowed- - - - -	\$ _____	\$ 81.	\$ 77.	\$ 82.
Average number of cows milked- - - - -	_____	9.1	9.3	8.9
Dairy returns per cow milked - - - - -	\$ _____	\$ 101.	\$ 101.	\$ 102.
<u>Expense Factors</u>				
Machinery cost per crop acre ^{1/} - - - - -	\$ _____	\$ 3.45	\$ 3.15	\$ 3.78
Horse and machinery cost per crop A. - - - - -	_____	4.68	4.36	5.03
Labor cost per crop acre ^{2/} - - - - -	_____	7.39	6.84	8.06
Labor cost per \$100 gross earnings ^{2/} - - - - -	_____	26.	25.	28.
Number of work horses- - - - -	_____	4.0	4.0	4.0
Value of feed fed to horses- - - - -	\$ _____	\$ 144.	\$ 154.	\$ 135.
Improvement cost per acre- - - - -	_____	.78	.81	.75
Taxes per acre - - - - -	_____	.81	.92	.71

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS, ON FARMS WITH MORE THAN 85 PERCENT OF THE LAND AREA TILLABLE

Accounting Farms in Farming-Type Area 6, 1939

The numbers above the lines across the middle of the page are the averages for the 132 farms included in this group for the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings									Factors that affect expenses			
			Percent tillable land in legume hay and pasture	Crop yields			Feed fed per acre to prod. L. S.	Returns per \$100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked	Total expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Labor cost per \$100 gross earnings
				Corn, bu.	Oats, bu.	Wheat, bu.									
20	286	34	36	76	48	36	16	280	3.80	127	151	5	2.00	2	10
18	266	31	33	72	44	34	14	260	3.50	117	141	6	2.50	3	13
16	246	28	30	68	40	32	12	240	3.20	107	131	7	3.00	4	16
14	226	25	27	64	36	30	10	220	2.90	97	121	8	3.50	5	19
12	206	22	24	60	32	28	8	200	2.60	87	111	9	4.00	6	22
9.8	186	19.33	21	55.5	28.1	25.5	6.45	180	2.26	77	101	9.77	4.36	6.84	25
8	166	16	18	52	24	24	4	160	2.00	67	91	11	5.00	8	28
6	146	13	15	48	20	22	2	140	1.70	57	81	12	5.50	9	31
4	126	10	12	44	16	20	0	120	1.40	47	71	13	6.00	10	34
2	106	7	9	40	12	18	-	100	1.10	37	61	14	6.50	11	37
0	86	4	6	36	8	16	-	80	.80	27	51	15	7.00	12	40

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 6, 1939

Items	Source of income					
	Grain 40%+	Dairy sales 40%+	Hogs ^{3/} 40%+	Truck crop	General farms	
					L.S. 60%-	L.S. 60%+
Number of farms - - - - -	41	52	11	11	89	67
Percent income from prod. L. S. -	32.9	73.8	91.0	33.8	49.5	74.1
Percent income from crops - - - -	51.0	13.3	--	53.8	29.8	9.9
<u>Investments</u>						
Total per farm- - - - -	\$18,085	\$17,605	\$19,203	\$17,074	\$16,619	\$17,569
Total per acre- - - - -	86	96	87	104	76	91
Land per acre - - - - -	56	50	48	60	44	49
Improvements per acre - - - - -	11	16	14	14	12	15
Machinery per acre ^{1/} - - - - -	8.16	10.14	7.10	12.20	7.12	7.97
<u>Earnings</u>						
Per farm						
Gross earnings- - - - -	\$ 3,329	\$ 3,652	\$ 5,586	\$ 4,522	\$ 3,163	\$ 3,367
Gross expenses ^{2/} - - - - -	1,710	1,862	3,898	2,508	1,675	1,837
Net earnings- - - - -	1,619	1,790	1,688	2,014	1,488	1,530
Per acre						
Gross earnings- - - - -	\$ 15.90	\$ 19.91	\$ 25.28	\$ 27.57	\$ 14.54	\$ 17.42
Gross expenses ^{2/} - - - - -	8.16	10.15	17.64	15.29	7.70	9.51
Net earnings- - - - -	7.74	9.76	7.64	12.28	6.84	7.91
Rate earned on investment - - -	8.9%	10.2%	8.8%	11.8%	8.95%	8.7%
Labor and mgt. earnings - - - -	\$ 1,166	\$ 1,327	\$ 1,109	\$ 1,603	\$ 1,093	\$ 1,078
<u>Size and Intensity</u>						
Acres per farm - - - - -	209.3	183.4	221.0	164.0	217.6	193.2
Percent land-area tillable- - -	85.7	77.2	72.9	77.7	78.9	79.6
Percent tillable land in grain-	64.4	50.8	49.8	45.8	51.7	53.9
Percent in hay and pasture- - -	27.2	42.7	35.6	23.9	37.5	39.3
Feed fed per acre to prod. L.S.	\$ 3.51	\$ 7.75	\$ 16.36	\$ 4.83	\$ 4.61	\$ 7.87
Months of labor per 100 crop A.	14.4	21.3	16.4	28.6	17.4	20.2
Total months of labor - - - - -	20.7	22.7	19.2	30.7	21.6	23.5
<u>Crop Yields Per Acre</u>						
Corn, bu. - - - - -	56.0	55.6	49.7	55.6	50.1	54.0
Wheat, bu.- - - - -	24.8	24.7	24.6	26.0	24.8	24.3
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 171	\$ 202	\$ 144	\$ 223	\$ 175	\$ 177
Hog returns per litter- - - - -	69	73	82	73	84	82
Dairy returns per cow - - - - -	79	129	95	105	85	91
<u>Expense Factors</u>						
Labor cost ^{2/} - - - - -						
Per crop acre - - - - -	\$ 5.80	\$ 8.41	\$ 6.59	\$ 11.68	\$ 6.52	\$ 7.72
Per \$100 gross earnings - - - -	25	25	14	28	26	27
Horse and machinery cost						
per crop acre ^{1/} - - - - -	3.89	5.86	6.24	6.57	4.03	4.81
Improvement cost per acre - - -	.52	.83	1.32	.81	.70	.93
Land tax per acre - - - - -	.81	.62	.78	1.21	.65	.67

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

^{3/} Includes several large and specialized hog farms.

Larger crop yields per acre on the farms on higher quality land, which amounted to 5 bushels of corn, 1.7 bushels of wheat, and 1.7 bushels of soybeans, indicate the relative productive level of the two groups of farms.

The operating expenses per acre averaged \$9.77 on the farms with the most tillable land and \$8.79 on the farms with the least tillable land. The combined cost per crop acre for labor, machinery, and horses was \$1.89 smaller on the farms with the larger percent of tillable land, although the combined cost per acre for improvements and taxes was \$.27 larger.

The livestock-efficiency factors, such as poultry returns per hen, hog returns per litter of pigs farrowed, and dairy returns per cow milked, were not appreciably affected by the quality of land. These factors indicate that the two groups of farms were operated with about the same degree of efficiency. Therefore, it may be assumed that the differences in organization, land use, crop yields, and costs were principally due to the differences in the productivity of the land on the two groups of farms.

Source of Income

The 271 farms were divided into six groups according to source of income (Table 4). The items in this table, for the most part, were made to correspond with the items given in Table 3; therefore, a farmer may compare the data in the "Your farm" column of Table 3 with the "Source of income" column in Table 4, which corresponds to the classification for his own farm.

In a comparison of the groups of farms the fact that conditions affecting production and price relationships vary from year to year should be kept in mind. Therefore, the average differences in earnings in 1939 are not necessarily typical of the variations that may be expected over a long period of years. The following items, for example, indicate that generally the grain farms were located on the better land: high value of land per acre, large percent of land area tillable, large percent of land in grain, and high yield of corn per acre.

The returns per \$100 feed that are necessary to pay for feed (including pasture) and other costs, according to 5-year averages of complete cost studies (1933-1937), follow: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117. There is little wonder, therefore, that the six groups of accounting farms with different classes and proportions of livestock varied widely in their returns per \$100 worth of feed fed. The amount of feed fed per acre to productive livestock averaged \$16.36 on the hog farms but only \$3.51 on the grain farms.

Differences in expenses are significant for the six groups of farms. Labor input was highest on the truck farms, where 30.7 months of labor were used, and lowest on the hog farms, where 19.2 months of labor were used; horse and machinery cost per crop acre averaged \$6.57 on the truck farms, \$6.24 on the hog farms, \$5.86 on the dairy farms, and only \$3.89 on the grain farms; improvement costs per acre ranged from \$1.32 on the hog farms to \$.52 on the grain farms; and land taxes ranged from \$1.21 on the truck farms to \$.62 on the dairy farms.

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 6, 1939

Items	Total acres in farm				
	41 to 120	121 to 200	201 to 280	281 to 360	361 or more
Number of farms - - - - -	48	110	79	23	11
Acres per farm- - - - -	101.0	166.8	236.1	321.8	492.1
<u>Investments</u>					
Total per farm- - - - -	\$11,705	\$15,320	\$19,357	\$24,980	\$32,861
Total per acre- - - - -	116	92	82	78	67
Land per acre - - - - -	61	49	48	46	43
Improvements per acre - - - - -	21	15	12	11	9
Machinery per acre ^{1/} - - - - -	10.47	9.38	7.78	6.93	5.14
<u>Earnings</u>					
Per farm					
Gross earnings- - - - -	\$ 2,416	\$ 3,093	\$ 3,831	\$ 4,555	\$ 5,627
Gross expenses ^{2/} - - - - -	1,354	1,628	2,032	2,403	2,775
Net earnings- - - - -	1,062	1,465	1,799	2,152	2,852
Per acre					
Gross earnings- - - - -	\$ 23.92	\$ 18.54	\$ 16.23	\$ 14.15	\$ 11.44
Gross expenses ^{2/} - - - - -	13.40	9.76	8.61	7.46	5.64
Net earnings- - - - -	10.52	8.78	7.62	6.69	5.80
Rate earned on investment - - - - -	9.1%	9.6%	9.3%	8.6%	8.7%
Labor and management earnings - - - - -	\$ 878	\$ 1,142	\$ 1,273	\$ 1,288	\$ 1,659
<u>Size and Intensity</u>					
Percent land-area tillable- - - - -	83.6	82.0	81.8	75.4	65.3
Percent tillable land in grain - - -	52.1	55.2	54.7	52.7	49.4
Percent in hay and pasture- - - - -	39.3	36.2	35.5	37.5	38.6
Feed fed per acre to prod. L. S.- - -	\$ 8.86	\$ 7.27	\$ 5.79	\$ 5.18	\$ 3.89
Percent of income from prod. L. S.- -	64	63.8	58.8	56.3	58.1
Percent of income from grain- - - - -	20.6	20.4	24.9	22.5	27.2
Months of labor per 100 crop acres- -	28.5	19.2	16.5	16.4	15.1
Total months of labor - - - - -	19.0	20.4	24.1	29.2	30.8
<u>Crop Yields Per Acre</u>					
Corn, bu. - - - - -	59.5	55.1	52.4	47.9	48.8
Wheat, bu.- - - - -	25.5	25.8	23.7	25.1	22.1
<u>Livestock Returns</u>					
Per \$100 feed fed- - - - -	\$ 190	\$ 177	\$ 180	\$ 168	\$ 180
Hog returns per litter- - - - -	75	81	77	88	86
Dairy returns per cow - - - - -	113	100	97	103	109
<u>Expense Factors</u>					
Labor cost per crop acre ^{2/} - - - - -	\$ 11.04	\$ 7.44	\$ 6.40	\$ 6.34	\$ 5.92
Labor cost per \$100 gross earnings- -	30	25	24	25	21
Horse and machinery cost per crop A. ^{1/}	5.49	4.75	4.63	4.28	4.11
Improvement cost per acre - - - - -	1.03	.85	.70	.70	.66
Land tax per acre - - - - -	.96	.71	.68	.64	.51

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

Size of Farm As Related to Earnings

The farm records in Farming-Type Area 6, when sorted according to the total acres in the farm, indicate that the larger farms had a greater total investment in land, improvements, and equipment than did the smaller farms. The operators on the larger farms took in more money during the year than did the operators on the smaller farms; and after deductions were made for farm business expenditures and interest on the investment, the 11 largest farms had labor and management earnings which averaged \$1,659 as contrasted with \$878 for the 48 smallest farms. The earnings, as measured by the rate earned on the investment, were slightly higher, however, for the smaller farms than for the larger ones. In years when the average rate earned on investment for groups of farms exceeds the capitalization rate (5 percent) the average labor and management earnings are higher on the larger farms than on the smaller ones, but these earnings are lower when the rate earned averages less than the capitalization rate.

The smaller farms were operated more intensively than were the larger farms. This variation was indicated by the much higher gross and net earnings per acre, by the larger proportion of total land tillable, by the higher land values, by the larger amount of feed fed per acre to productive livestock, and by the substantially higher crop yields.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Farm Organization and Farm Earnings by Counties and Groups of Counties

Farming-type areas are formed by grouping together counties which are similar with respect to physical, economic, and biological characteristics. Although a classification of this kind is very useful for many purposes, no two counties within an area are exactly alike. A tabulation of farm account records by counties and groups of counties indicates some of these differences which are due to variations in quality of land, topography, amount of erosion, market outlets, weather conditions, and disease hazards. The effects of variations in these factors are indicated in the account records by differences in value of land per acre, taxes per acre, percent of land area tillable, size of farm, total acres in crops, percent of tillable land in important crops, crop yields, amount of feed fed to productive livestock, and the source of farm income (Tables 6 and 7).

In this report an average was calculated for each county from which 30 or more records were received. Averages were made in some instances with less than 30 records if it was necessary to eliminate some records because they were incomplete or not typical for the area. In any tabulation containing as few as 30 records, part of the variation from county to county is due to the fact that the averages do not represent a cross section of the county.

The tabulations by counties and by groups of counties may be used by extension specialists, farm advisers, and county program-building committees to represent the type of farm organization and the level of operating efficiency attained by a selected group of progressive farmers in the various parts of a farming-type area. Since the personnel of the accounting group changes slowly, comparisons may be made from county to county and from year to year even though these records are from farms with efficiency which is higher than average.

TABLE 6.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 6, 1939

Items	Madison	Randolph	Effingham	Bond ^{1/}
Number of farms - - - - -	81	33	30	28
<u>Capital Investments</u>				
Land- - - - -	\$ 9,325	\$ 8,752	\$ 7,485	\$10,953
Farm improvements - - - - -	2,592	2,685	2,338	3,150
Horses - - - - -	441	506	415	280
Productive livestock: Cattle- - - - -	1,098	855	1,015	1,096
Hogs- - - - -	238	208	159	620
Sheep - - - - -	17	21	63	104
Poultry - - - - -	143	113	168	109
<u>Total productive livestock- - - - -</u>	<u>(1,496)</u>	<u>(1,197)</u>	<u>(1,405)</u>	<u>(1,929)</u>
Feed and grain - - - - -	1,274	1,218	1,046	1,329
Machinery and equipment - - - - -	1,512	1,416	1,004	1,573
Automobile (farm share) - - - - -	139	118	131	183
<u>Totals- - - - -</u>	<u>\$16,779</u>	<u>\$15,892</u>	<u>\$13,824</u>	<u>\$19,397</u>
<u>Receipts and Net Increases</u>				
Horses - - - - -	\$ --	\$ 35	\$ 4	\$ --
Productive livestock: Cattle- - - - -	390	528	346	515
Dairy sales - - - - -	1,086	547	643	916
Hogs- - - - -	375	373	200	1,629
Sheep - - - - -	13	29	62	86
Poultry - - - - -	63	58	144	7
Egg sales - - - - -	168	204	205	133
<u>Total productive livestock- - - - -</u>	<u>(2,095)</u>	<u>(1,739)</u>	<u>(1,600)</u>	<u>(3,286)</u>
Farm products used in household - - - - -	257	265	256	214
Feed and grain- - - - -	798	599	507	186
Labor off farm- - - - -	45	45	27	134
Miscellaneous - - - - -	14	3	35	15
AAA payments- - - - -	109	276	224	227
<u>Totals- - - - -</u>	<u>\$ 3,318</u>	<u>\$ 2,962</u>	<u>\$ 2,653</u>	<u>\$ 4,062</u>
<u>Expenses and Net Decreases</u>				
Farm improvements - - - - -	\$ 129	\$ 177	\$ 128	\$ 265
Horses- - - - -	12	--	--	4
Productive livestock- - - - -	--	--	--	--
Feed and grain- - - - -	--	--	--	--
Machinery and equipment - - - - -	284	371	218	395
Automobile (farm share) - - - - -	69	69	69	91
Hired labor - - - - -	245	166	99	290
Miscellaneous - - - - -	22	25	22	22
Crop expense- - - - -	83	80	66	108
Livestock expense - - - - -	37	34	36	50
Taxes - - - - -	144	162	125	182
<u>Totals- - - - -</u>	<u>\$ 1,025</u>	<u>\$ 1,084</u>	<u>\$ 763</u>	<u>\$ 1,407</u>
<u>Receipts less expenses- - - - -</u>	<u>\$ 2,293</u>	<u>\$ 1,878</u>	<u>\$ 1,890</u>	<u>\$ 2,655</u>
Family labor- - - - -	245	252	290	273
Returns for labor, capital, mgt.- - - - -	2,048	1,626	1,600	2,382
Operator's labor- - - - -	436	444	417	429
Returns for capital and mgt.- - - - -	1,612	1,182	1,183	1,953
<u>Rate Earned on Investment - - - - -</u>	<u>9.6%</u>	<u>7.4%</u>	<u>8.6%</u>	<u>10.1%</u>
Interest on investment- - - - -	\$ 839	\$ 795	\$ 691	\$ 969
<u>Labor and Management Earnings - - - - -</u>	<u>1,209</u>	<u>831</u>	<u>909</u>	<u>1,413</u>
Non farm income - - - - -	\$ 100	\$ 62	\$ 244	\$ 87

^{1/} Thirty or more records were completed in these counties, but certain ones were not used in the report since they were incomplete or not typical.

TABLE 6.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 6, 1939 (Cont.)

Items	St.Clair ^{1/}	Monroe	Clinton, Fayette, & Washington
Number of farms - - - - -	28	28	43
<u>Capital Investments</u>			
Land- - - - -	\$12,329	\$12,628	\$ 9,199
Farm improvements - - - - -	3,400	2,199	2,684
Horses- - - - -	601	426	484
Productive livestock: Cattle- - - - -	812	482	1,137
Hogs- - - - -	409	240	217
Sheep - - - - -	10	19	52
Poultry - - - - -	157	170	218
<u>Total productive livestock-</u> - - - - -	(1,388)	(911)	(1,624)
Feed and grain- - - - -	1,485	1,220	1,516
Machinery and equipment - - - - -	1,717	1,660	1,644
Automobile (farm share) - - - - -	183	134	128
Totals- - - - -	\$21,103	\$19,178	\$17,279
<u>Receipts and Net Increases</u>			
Horses- - - - -	\$ 8	\$ --	\$ --
Productive livestock: Cattle- - - - -	365	188	372
Dairy sales - - - - -	689	486	1,027
Hogs - - - - -	684	422	390
Sheep - - - - -	14	20	30
Poultry - - - - -	114	113	39
Egg sales - - - - -	294	333	304
<u>Total productive livestock-</u> - - - - -	(2,160)	(1,562)	(2,162)
Farm products used in household - - - - -	281	315	272
Feed and grain - - - - -	1,262	1,171	843
Labor off farm - - - - -	51	24	39
Miscellaneous - - - - -	24	9	11
AAA payments- - - - -	276	436	261
Totals- - - - -	\$ 4,062	\$ 3,517	\$ 3,588
<u>Expenses and Net Decreases</u>			
Farm improvements - - - - -	\$ 172	\$ 139	\$ 147
Horses- - - - -	--	32	16
Productive livestock- - - - -	--	--	--
Feed and grain- - - - -	--	--	--
Machinery and equipment - - - - -	422	443	375
Automobile (farm share) - - - - -	79	79	66
Hired labor - - - - -	355	179	252
Miscellaneous - - - - -	24	18	27
Crop expense- - - - -	97	70	86
Livestock expense - - - - -	58	34	48
Taxes - - - - -	238	180	151
Totals- - - - -	\$ 1,445	\$ 1,174	\$ 1,168
Receipts less expenses- - - - -	\$ 2,617	\$ 2,343	\$ 2,420
Family labor- - - - -	236	373	196
Returns for labor, capital, mgt.- - - - -	2,381	1,970	2,224
Operator's labor- - - - -	472	433	389
Returns for capital and mgt.- - - - -	1,909	1,537	1,835
<u>Rate Earned on Investment</u> - - - - -	9.1%	8.0%	10.6%
Interest on investment- - - - -	\$ 1,055	\$ 958	\$ 864
Labor and Management Earnings - - - - -	1,326	1,012	1,360
Non farm income - - - - -	\$ 31	\$ 61	\$ 174

^{1/} Thirty or more records were completed in these counties, but certain ones were not used in the report since they were incomplete or not typical.

TABLE 7.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 6, 1939

Items	Madison	Randolph	Effingham	Bond
Rate earned on investment- - - - -	9.6%	7.4%	8.6%	10.1%
Acres in farm- - - - -	163	218	217	264
Acres in crops - - - - -	106	130	119	142
Gross earnings per acre- - - - -	\$ 20.30	\$ 13.56	\$ 12.25	\$ 15.36
Total expenses per acre ^{2/} - - - - -	10.44	8.15	6.79	7.98
Net earnings per acre- - - - -	9.86	5.41	5.46	7.38
<u>Investments</u>				
Value of land per acre - - - - -	\$ 57	\$ 40	\$ 35	\$ 41
Value of improvements per acre - - -	16	12	11	12
Total investment per acre- - - - -	103	73	64	73
<u>Land Use</u>				
Percent of land-area tillable- - - -	80.0	83.9	79.4	76.6
Percent of tillable land in:				
Corn - - - - -	21.9	13.7	19.2	18.9
Oats - - - - -	6.7	8.8	10.0	8.7
Wheat- - - - -	24.0	25.7	7.4	12.7
Soybeans - - - - -	.9	2.1	3.9	3.5
Other crops- - - - -	13.1	10.6	10.4	15.0
Legume hay and pasture - - - - -	21.5	30.5	19.6	25.5
Non-legume hay and pasture - - - -	11.9	8.6	29.5	15.7
<u>Crop Yields</u>				
Corn - - - - -	61.1	45.9	41.2	50.4
Oats - - - - -	26.6	28.1	23.3	23.0
Wheat- - - - -	25.0	20.8	23.8	22.3
<u>Livestock Factors</u>				
Value of feed fed to prod. L. S. - -	\$1,148	\$1,239	\$ 930	\$2,072
Feed fed per acre to prod. L. S. - -	7.03	5.67	4.29	7.83
Returns per acre from prod. L. S.- -	13.89	8.80	8.21	12.95
Returns per \$100 worth of feed fed -	198	155	191	165
Returns per \$100 invested in cattle-	131	108	102	117
Poultry returns per hen - - - - -	2.30	2.39	2.38	1.48
Number of litters farrowed - - - - -	6.8	4.9	5.0	26.9
Number of pigs weaned per litter - -	6.3	6.7	6.4	6.8
Returns per litter farrowed- - - - -	\$ 73	\$ 91	\$ 66	\$ 86
Average number of cows milked- - - -	10.6	7.1	8.9	10.8
Dairy returns per cow milked - - - -	\$ 108	\$ 90	\$ 83	\$ 100
<u>Expense Factors</u>				
Machinery cost per crop acre ^{1/} - - -	\$ 3.32	\$ 3.38	\$ 2.42	\$ 3.43
Horses and machinery cost per crop A. ^{1/} - - - - -	4.81	4.17	3.46	4.10
Labor cost per crop acre ^{2/} - - - - -	8.57	6.47	6.56	6.58
Labor cost per \$100 gross earnings ^{2/}	27	28	29	23
Number of work horses- - - - -	4.1	4.3	4.1	2.9
Value of feed fed to horses- - - - -	\$ 146	\$ 138	\$ 128	\$ 90
Improvement cost per acre- - - - -	.79	.81	.59	1.00
Taxes per acre - - - - -	.88	.74	.58	.69

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

TABLE 7.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 6, 1939 (cont.)

Items	St. Clair	Monroe	Clinton, Fayette, & Washington
Rate earned on investment- - - - -	9.1%	8.0%	10.6%
Acres in farm- - - - -	194	240	190
Acres in crops - - - - -	132	120	122
Gross earnings per acre- - - - -	\$ 20.92	\$ 14.67	\$ 18.88
Total expenses per acre ^{2/} - - - - -	11.09	8.26	9.22
Net earnings per acre- - - - -	9.83	6.41	9.66
<u>Investments</u>			
Value of land per acre - - - - -	\$ 63	\$ 53	\$ 48
Value of improvements per acre - - - - -	18	9	14
Total investment per acre- - - - -	109	80	91
<u>Land Use</u>			
Percent of land-area tillable- - - - -	85.4	70.1	81.3
Percent of tillable land in:			
Corn - - - - -	19.5	16.8	21.2
Oats - - - - -	10.6	5.2	12.6
Wheat- - - - -	27.5	32.2	18.8
Soybeans - - - - -	1.7	--	3.5
Other crops- - - - -	12.5	13.0	9.3
Legume hay and pasture - - - - -	20.8	27.3	20.1
Non-legume hay and pasture- - - - -	7.2	5.5	14.5
<u>Crop Yields</u>			
Corn - - - - -	58.5	55.5	49.6
Oats - - - - -	33.9	31.0	31.6
Wheat- - - - -	27.3	24.6	23.1
<u>Livestock Factors</u>			
Value of feed fed to prod. L. S. - - - - -	\$1,254	\$1,011	\$1,407
Feed fed per acre to prod. L. S. - - - - -	6.46	4.22	7.41
Returns per acre from prod. L. S.- - - - -	12.19	7.40	12.41
Returns per \$100 worth of feed fed - - - - -	189	175	168
Returns per \$100 invested in cattle- - - - -	126	129	126
Poultry returns per hen - - - - -	2.76	2.88	1.80
Number of litters farrowed - - - - -	10.5	6.1	6.7
Number of pigs weaned per litter - - - - -	5.8	5.9	6.7
Returns per litter farrowed- - - - -	\$ 78	\$ 81	\$ 86
Average number of cows milked- - - - -	7.3	5.5	10.2
Dairy returns per cow milked - - - - -	\$ 102	\$ 98	\$ 110
<u>Expense Factors</u>			
Machinery cost per crop acre ^{1/} - - - - -	\$ 3.78	\$ 4.36	\$ 3.61
Horses and machinery cost per crop A. ^{1/} - - - - -	5.39	5.72	4.96
Labor cost per crop acre ^{2/} - - - - -	7.81	8.02	6.54
Labor cost per \$100 gross earnings ^{2/} - - - - -	25	27	22
Number of work horses- - - - -	5.2	3.9	3.8
Value of feed fed to horses- - - - -	\$ 221	\$ 131	\$ 149
Improvement cost per acre- - - - -	.89	.58	.77
Taxes per acre - - - - -	1.23	.75	.79

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

Influence of Price Changes on Illinois Farm Incomes

All feed and grain, livestock, and other farm property on accounting farms must be valued at both the beginning and the end of the year. Prices at inventory time, therefore, have a marked influence on farm earnings. The influence is greatest where large stocks or supplies are on hand at inventory time; for example, a much larger supply of farm products was found on Illinois farms December 31, 1939, than a year earlier. In fact, grain and livestock inventories have been increasing on Illinois farms since the drouth of 1936 as a result of three years of exceptionally high crop yields and the influence of Agricultural Adjustment Programs which have caused farmers to grow more hay and pasture and to store corn on farms under seal. According to estimates made by the Bureau of Agricultural Economics, U.S.D.A., 356 million bushels of corn were on Illinois farms January 1, 1940, as compared with 325 million bushels January 1, 1939.

Livestock numbers on Illinois farms increased sharply in 1939 even though 62 million bushels of 1937 and 1938 corn were placed under seal at the end of the year and 83 million bushels of 1939 corn were sealed by March 31, 1940. The following data indicate the percentage increase in livestock numbers on 2520 accounting farms in Illinois from the beginning to the end of 1939; dairy cows, 2 percent; beef cows, 21 percent; feeder cattle, 17 percent; feeder lambs, 24 percent; brood sows, 4 percent; spring pigs, 38 percent; summer pigs, 23 percent; and fall pigs, 28 percent. Hog numbers have been increasing since 1935 and have now attained record levels; for example, 13.5 sows farrowed per farm on accounting farms in 1939 as contrasted with 9.9 sows farrowed per farm in 1938. The increase in beef cattle numbers is a part of the general up-swing taking place over the entire United States, and it may be expected to continue for several years.

These data indicate that supplies of both feed and livestock were greater at the time the 1939 closing inventory was taken than at any other inventory period in several years, and price changes, therefore, are important in interpreting farm earnings for the state and for farming-type areas in 1939.

Prices of important farm products.--Prices for all crops as well as for beef cattle and sheep were higher at the end of 1939 than they were at the beginning, whereas prices for horses, hogs, and poultry were lower. Most of these price increases occurred during the last four months of the year.

December 15, Illinois Farm Prices

	<u>1938</u>	<u>1939</u>	<u>Increase</u>	<u>Decrease</u>
Corn, bu.	\$.42	\$.47	\$.05	\$ --
Oats, bu.	.24	.35	.11	--
Wheat, bu.	.57	.88	.31	--
Soybeans, bu.	.65	.95	.30	--
Hay, tons	6.20	6.50	.30	--
Horses, hd.	88.00	85.00	--	3.00
Hogs, cwt.	7.00	5.10	--	1.90
Beef cattle, cwt.	7.70	8.30	.60	--
Sheep, cwt.	3.45	3.60	.15	--
Chickens, lb.	.13	.11	--	.02

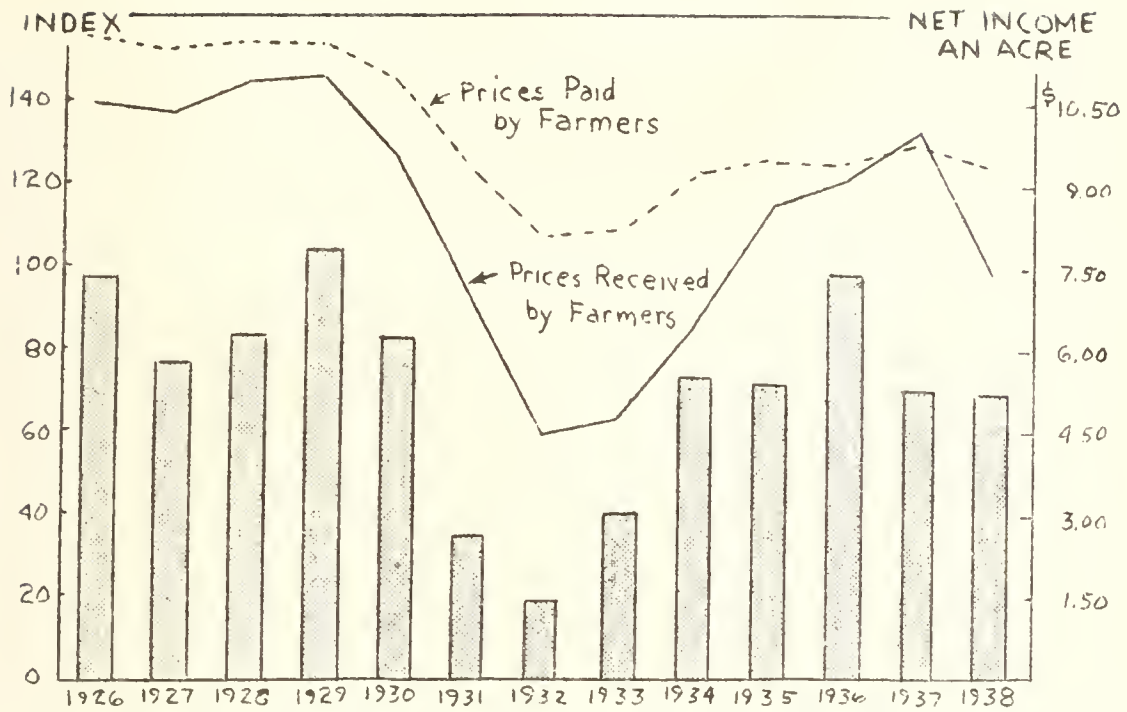


Fig. 1.--Average net cash income an acre (unpaid labor deducted) on Illinois accounting farms, prices paid by farmers in the United States, and prices received by Illinois farmers, 1926-1938.

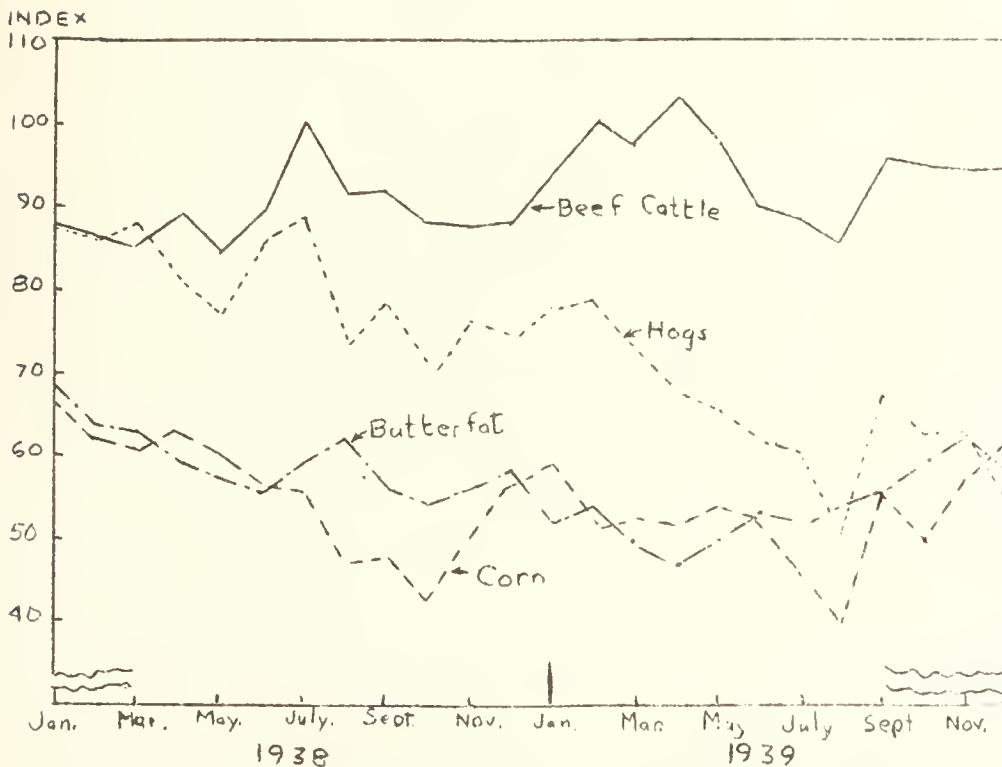


Fig. 2.--Monthly price indices of the average farm prices of corn, hogs, beef cattle, and butterfat, 1938 and 1939. (1924-1929 = 100)

Farm earnings are influenced by the average price received for farm products during the year as well as by the values at inventory time. Although nearly all commodities were higher in price at the end of the year than at the beginning, prices received for the following commodities averaged lower in 1939 than in 1938 by these amounts: corn, 2 cents per bushel; wheat and soybeans, 1 cent per bushel; hogs, \$1.50 per hundred; butterfat, 2 cents per pound; eggs, 3 cents per dozen; and chickens, 2 cents per pound. The prices for other commodities averaged higher in 1939 than in 1938 by the following amounts: oats, 4 cents per bushel; beef cattle, 50 cents per hundred; lambs, 42 cents per hundred; wool, 4 cents per pound; and apples, 12 cents per bushel.

Variation in earnings between the various type-of-farming areas is influenced by the relative prices of grains, livestock, and livestock products. In 1939 as in 1938 livestock had a price advantage over grain, but the advantage was not as marked as it was in 1938. The prices for meat animals dropped from 116 to 110 percent of the 1910-14 average, grains from 74 to 72 percent, chickens and eggs from 106 to 94 percent, and dairy products from 106 to 104 percent.

The corn-hog ratio also narrowed during the year to the disadvantage of the hog enterprise. The amount of corn equal in value to 100 pounds of hogs dropped from 19 bushels in February to 11 bushels in December (based on farm prices). Unfavorable feeding ratios will discourage expansion in hog numbers in 1940.

Crop Yields in Illinois, 1939

Crop yields in Illinois in 1939, as in 1938 and 1937, were unusually high. The weighted average yield of corn, oats, wheat, and soybeans was 133 percent of the 10-year average, 1929-1938. Corn contributed more than did any other crop to the high average yields. The yields of the various crops expressed in percentages of the 1929-1938 averages were: corn, 150; soybeans, 129; wheat, 121; and oats, 97.

Crop yields in all counties except Massac were above the 10-year average (1929-1938 = 100), but wide variations in yields occurred between individual counties and groups of counties. Four counties along the Ohio River had crop-yield indices under 105. In contrast to these counties, 31 were over 136. Many of the counties with the highest yields were in two groups, those located in southwestern and east north central Illinois. Crop-yield indices were adversely affected in southeastern Illinois by the wheat crop and in northern Illinois by low oat yields. Fifty-five counties, which were well-distributed over the state, had crop-yield indices from 121 to 135.

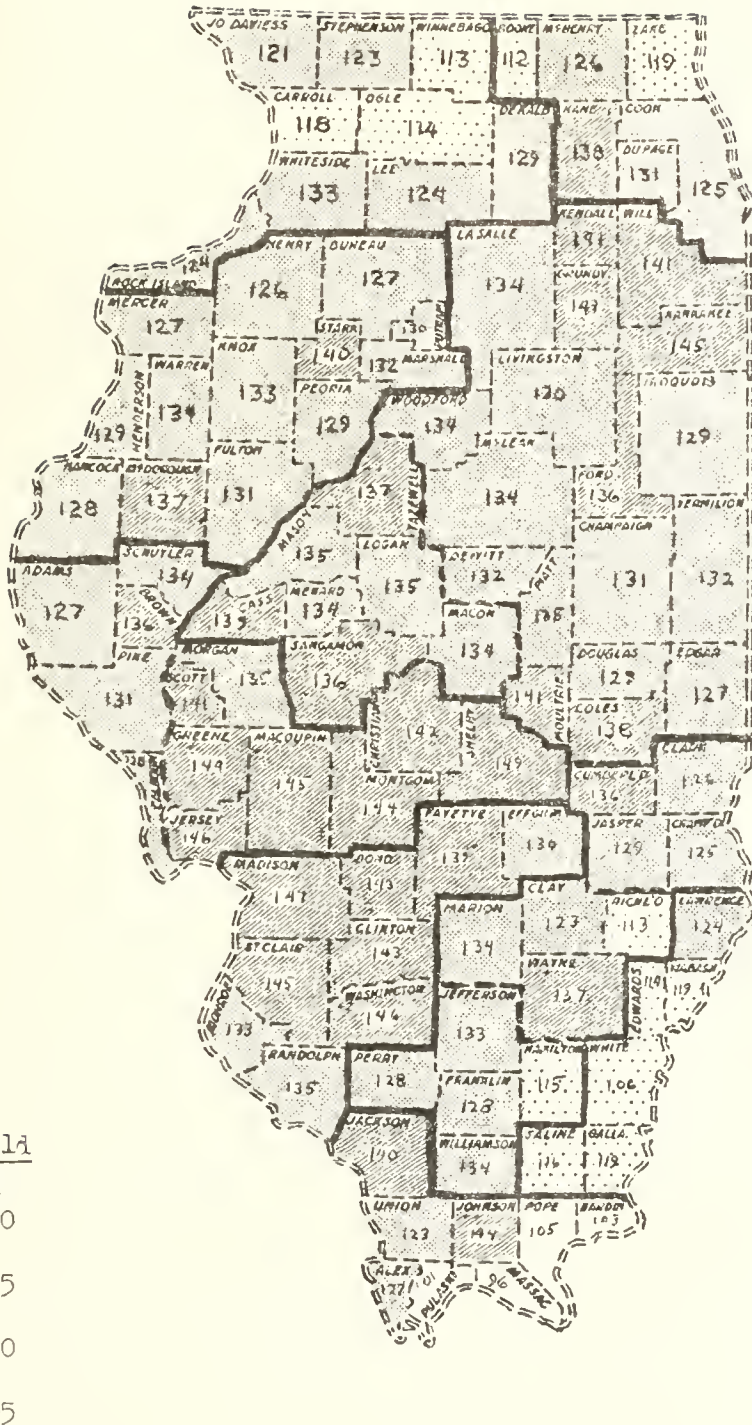


Fig. 3.--Crop yields for 1939, compared with 10-year average yields (1929-1938) for the same county. The indices are based on county yields of corn, oats, wheat, and soybeans. (Data from Illinois Cooperative Crop Reporting Service.)

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FARM BUSINESS REPORT . . . 1939



FARMING-TYPE AREA SEVEN South Central Mixed Farming Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

Annual Farm Business Report

ON ONE HUNDRED THREE FARMS IN FARMING-TYPE AREA 7, 1939

By P. E. Johnston, J. B. Cunningham, and E. N. Searls^{1/}

Farm earnings of accounting farms in Farming-Type Area 7 were higher in 1939 than in 1938. The net earnings per acre averaged \$4.30 in 1939, \$3.71 in 1938, \$3.48 in 1937, and \$4.97 in 1936. The items considered in calculating the net earnings included inventory changes, cash receipts, cash expenses, the value of the farm products used in the household (in 1938 and 1939 only), and unpaid family labor (Table 1).



Farming-Type Area 7

Mixed Farming

Since the value of farm products used in the household was not included in the records prior to 1938, the earnings for 1938 and 1939 are not strictly comparable to those for other years. The value per acre of farm products used was \$1.24 in 1938 and \$1.12 in 1939.

The accounting farms were larger than average, crop yields were above average, and the farms as a whole were operated with efficiency which was greater than average. Therefore, the figures contained in this report represent conditions which are better than average for this area. This fact is borne out by survey records taken in various areas of the state.

High crop yields and more livestock, accompanied by increased industrial activity and improved demand for farm products especially during the latter half of the year, were the principal factors producing higher earnings in 1939 (Figs. 1, 2, and 3).

^{1/} R. J. Mutti supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm accounts project was conducted in cooperation with the farm bureaus in the following counties and was supervised by the farm advisers indicated:

W. L. Sidwell, Jefferson County	F. J. Blackburn, Marion County
R. L. Ash, Clark County	Dee Small, Williamson County
R. E. Apple, Jasper County	C. L. Beatty, Richland County
Harold Allison, Crawford County	R. K. Wise, Clay County
J. A. Embser, Franklin-Hamilton Counties	

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 7, 1936-1939

Items	Your farm	Average of all farms in area			
		1939	1938	1937	1936
Number of farms- - - - -	--	103	96	62	83
<u>Inventory Changes</u>					
Farm improvements- - - - -	\$	\$ 56	\$ 75	\$ 58	\$ 37
Livestock- - - - -		121	42	136	-39
Feed and grain - - - - -		138	-21	95	290
Machinery and equipment ^{1/} - - - - -		72	137	172	170
Automobile (farm share)- - - - -		20	-4	--	--
Totals - - - - -	\$	\$ 407	\$ 229	\$ 461	\$ 458
<u>Cash Receipts</u>					
Farm improvements- - - - -	\$	\$ 2	\$ 3	\$ 7	\$ --
Horses - - - - -		65	73	51	54
Productive livestock: Cattle - - - - -		632	687	537	553
Dairy sales- - - - -		316	385	292	302
Hogs - - - - -		694	766	834	923
Sheep- - - - -		57	81	66	91
Poultry- - - - -		101	123	132	134
Egg sales- - - - -		207	244	284	278
Total productive livestock - - - - -	()	(2,007)	(2,186)	(2,145)	(2,281)
Feed and grain - - - - -		495	395	532	509
Machinery and equipment ^{1/} - - - - -		109	84	162	137
Automobile (farm share)- - - - -		27	15	--	--
Labor off farm - - - - -		39	32	78	76
Miscellaneous- - - - -		17	7	10	12
AAA payments - - - - -		179	134	122	77
Totals - - - - -	\$	\$2,940	\$2,929	\$3,107	\$3,146
<u>Cash Expenses</u>					
Farm improvements- - - - -	\$	\$ 215	\$ 196	\$ 186	\$ 144
Horses - - - - -		49	30	38	42
Productive livestock: Cattle - - - - -		255	294	234	137
Hogs - - - - -		58	60	58	70
Sheep- - - - -		16	18	19	17
Poultry- - - - -		24	27	26	30
Total productive livestock - - - - -	()	(353)	(399)	(337)	(254)
Feed and grain - - - - -		335	348	548	570
Machinery and equipment ^{1/} - - - - -		474	481	569	506
Automobile (farm share)- - - - -		123	81	--	--
Hired labor- - - - -		160	172	172	149
Miscellaneous- - - - -		18	20	18	20
Crop expense - - - - -		84	93	190	126
Livestock expense- - - - -		28	28	19	22
Taxes- - - - -		132	144	121	115
Totals - - - - -	\$	\$1,971	\$1,992	\$2,198	\$1,948
<u>Summary</u>					
Cash balance - - - - -	\$	\$ 969	\$ 937	\$ 909	\$1,198
Farm products used in household ^{2/} - - - - -		254	268	--	--
Total inventory change - - - - -		407	229	461	458
Receipts less expenses - - - - -		1,630	1,434	1,370	1,656
Total unpaid labor - - - - -		654	632	640	642
Net earnings per farm- - - - -	\$	\$ 976	\$ 802	\$ 730	\$1,014
Net earnings per acre- - - - -	\$	\$ 4.30	\$ 3.71	\$ 3.48	\$ 4.97

^{1/} Includes farm share of automobile for 1936 and 1937.

^{2/} Not included as income for 1936 and 1937.

Inventory Changes, Cash Receipts, Cash Expenses, and Earnings

Inventory changes.--The year 1939 was the fourth consecutive year of increasing inventories, the increases averaging \$407 in 1939, \$229 in 1938, \$461 in 1937, and \$458 in 1936 (Table 1). The largest increases in 1939 were in feed and grain and in livestock. The increased value of feed and grain represented higher prices at the end of the year as well as larger quantities of grain on hand (Page 1 and Fig. 2). The average amounts of grain on hand in Area 7 at the two inventory periods follow:

	Beginning of year <hr/> (bushels)	End of year <hr/> (bushels)
Corn	1,140	1,260
Oats	147	180
Wheat	109	73
Soybeans	33	30

Cash receipts. Cash receipts averaged \$2,940 in 1939 and were about the same as in 1938 (Table 1). Feed and grain and AAA receipts were larger in 1939 than in 1938, but livestock sales were smaller. The larger AAA receipts were mainly due to a doubling-up in payments, many farmers receiving payments in 1939 for participation in both the 1938 and 1939 programs.

Cash expenses. Cash expenses were lower in 1939 than in either 1938 or 1937, but they were higher in 1939 than in 1936. Less money was spent for livestock, feed and grain, hired labor, crop expense, and taxes in 1939 than in 1938, but more was spent for farm improvements and horses.

Earnings. Cash receipts exceeded cash expenses in 1939 by \$969, or by a larger margin than that for any year since 1936. Cash balance, the difference between these receipts and expenses, is the average amount of money available for family living expenses, interest, debt payments, and savings.

The amounts deducted for operator's and family labor remained rather uniform during the 4-year period, a difference of only \$22 occurring between the low year, 1938, and the high year, 1939. The uniformity in valuation was due to the fact that approximately the same amount of family labor was available each year and to the fact that the same rate (\$40 per month) was charged for the physical labor of the operator and other mature members of the family.

The net earnings per farm averaged \$976 in 1939 as contrasted with \$802 for 1938. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding the value of farm products used in the household and the inventory increases to the cash balance and by subtracting the value of unpaid labor from the resulting total. Therefore, this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

TABLE 2.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 7, 1939

Items	Your farm	Average of all farms	Land area tillable	
			85 percent or more	Less than 85 percent
Number of farms - - - - -	--	103	54	49
<u>Capital Investments</u>				
Land - - - - -	\$ _____	\$ 7,681	\$ 6,673	\$ 8,793
Farm improvements - - - - -	_____	2,118	1,826	2,439
Horses - - - - -	_____	384	353	418
Productive livestock: Cattle- - - - -	_____	868	857	880
Hogs- - - - -	_____	319	266	378
Sheep - - - - -	_____	64	55	74
Poultry - - - - -	_____	127	120	134
<u>Total productive livestock- - - - -</u>	(_____)	(1,378)	(1,298)	(1,466)
Feed and grain - - - - -	_____	1,048	997	1,105
Machinery and equipment - - - - -	_____	1,081	983	1,188
Automobile (farm share) - - - - -	_____	116	115	118
Totals- - - - -	\$ _____	\$13,806	\$12,245	\$15,527
<u>Receipts and Net Increases</u>				
Horses - - - - -	\$ _____	\$ 20	\$ 18	\$ 21
Productive livestock: Cattle- - - - -	_____	491	441	547
Dairy sales - - - - -	_____	316	415	208
Hogs- - - - -	_____	623	516	739
Sheep - - - - -	_____	53	40	67
Poultry - - - - -	_____	81	72	90
Egg sales - - - - -	_____	207	192	224
<u>Total productive livestock- - - - -</u>	(_____)	(1,771)	(1,676)	(1,875)
Farm products used in household - - - - -	_____	254	241	268
Feed and grain - - - - -	_____	298	334	259
Labor off farm - - - - -	_____	39	38	40
Miscellaneous - - - - -	_____	17	12	23
AAA payments- - - - -	_____	179	190	167
Totals- - - - -	\$ _____	\$ 2,578	\$ 2,509	\$ 2,653
<u>Expenses and Net Decreases</u>				
Farm improvements - - - - -	\$ _____	\$ 157	\$ 155	\$ 159
Horses - - - - -	_____	--	--	--
Productive livestock- - - - -	_____	--	--	--
Feed and grain- - - - -	_____	--	--	--
Machinery and equipment - - - - -	_____	293	269	319
Automobile (farm share) - - - - -	_____	76	79	73
Hired labor - - - - -	_____	160	156	165
Miscellaneous - - - - -	_____	18	18	18
Crop expense- - - - -	_____	84	78	90
Livestock expense - - - - -	_____	28	29	27
Taxes - - - - -	_____	132	134	131
Totals- - - - -	\$ _____	\$ 948	\$ 918	\$ 982
Receipts less expenses- - - - -	\$ _____	\$ 1,630	\$ 1,591	\$ 1,671
Family labor- - - - -	_____	228	258	194
Returns for labor, capital, mgt.- - - - -	_____	1,402	1,333	1,477
Operator's labor- - - - -	_____	426	418	434
Returns for capital and mgt.- - - - -	_____	976	915	1,043
<u>Rate Earned on Investment - - - - -</u>	_____ %	7.1%	7.5%	6.7%
Interest on investment- - - - -	\$ _____	\$ 691	\$ 612	\$ 776
Labor and Management Earnings - - - - -	_____	711	721	701
Nonfarm income- - - - -	\$ _____	\$ 176	\$ 173	\$ 180

Variation in farm earnings.--A wide variation was found in earnings on the farms in Area 7; for example, 13 farms earned less than 1 percent on the investment, with an average rate earned of -1.4 percent; but in contrast 14 farms earned 13 percent or more, with an average rate earned of 18.4 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had a loss of \$160 for labor and management earnings as contrasted with a gain of \$1,788 for the latter group. By studying the reasons for these variations, farm operators can improve their chances of financial success. The variation in earnings and in size of farm for all records in the area was as follows:

<u>Rate earned on investment (percent)</u>	<u>Number of farms</u>	<u>Average rate earned (percent)</u>	<u>Acres per farm</u>	<u>Capital invested per farm</u>	<u>Gross earnings per farm</u>	<u>Net earnings per farm</u>	<u>Labor and management earnings</u>
Less than 1.0	13	-1.4	166	\$ 8,584	\$1,362	\$ -118	\$ -160
1.0 to 4.9	24	3.1	214	15,653	2,496	490	181
5.0 to 8.9	32	6.9	254	16,517	3,084	1,142	714
9.0 to 12.9	20	10.4	246	13,112	2,940	1,364	1,156
13.0 or more	14	18.4	216	10,285	3,500	1,890	1,788

Comparison of Farms According to Percent of Land Area Tillable

The 103 farms were divided into two groups according to the percent of land area tillable. Of this total number of farms, 54 had 85 percent or more of land area tillable, and 49 had less than 85 percent tillable. The average percent tillable was 91.3 for the former group and 73.5 for the latter group.

There was a tendency for the farms with the larger percent of land area tillable to have low-producing gray prairie soil and for the farms with the smaller percent of land area tillable to have rough land associated with small areas of high-producing bottomland.

This grouping of farms gives each farmer an opportunity to compare his farm with the average of other farms having a similar proportion of tillable land as well as with the average of all accounting farms (Tables 2 and 3).

The capital investment averaged \$12,245, or \$56 per acre, for the group of farms having the larger percent of land area tillable, as compared with a capital investment averaging \$15,527, or \$65 per acre, for the group of farms having the smaller percent of land area tillable.

The receipts and net increases were \$144 smaller and expenses and net decreases \$64 smaller on farms with the larger percent of land area tillable than on those with the smaller percent tillable. The livestock receipts were \$199 smaller for the farms with the larger percent of land area tillable, whereas the grain receipts were \$75 larger. The rate earned on investment was 7.5 percent and 6.7 percent, and the labor and management earnings were \$721 and \$701 respectively, for the two groups of farms.

TABLE 3.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 7, 1939

Items	Your farm	Average of all farms	Land area tillable	
			85 percent or more	Less than 85 percent
Rate earned on investment- - - - -	_____ %	7.1%	7.5%	6.7%
Acres in farm- - - - -	_____	227	217	238
Acres in crops - - - - -	_____	124	129	118
Gross earnings per acre- - - - -	\$ _____	\$ 11.36	\$ 11.58	\$ 11.12
Total expenses per acre ^{2/} - - - - -	_____	7.06	7.36	6.75
Net earnings per acre - - - - -	_____	4.30	4.22	4.37
<u>Investments</u>				
Value of land per acre - - - - -	\$ _____	\$ 34	\$ 31	\$ 37
Value of improvements per acre - - -	_____	9	8	10
Total investment per acre- - - - -	_____	61	57	65
<u>Land Use</u>				
Percent of land area tillable- - - -	_____	82.4	91.3	73.5
Percent of tillable land in:				
Corn - - - - -	_____	21.2	19.4	23.6
Oats - - - - -	_____	7.1	8.4	5.6
Wheat- - - - -	_____	9.0	7.6	10.8
Soybeans - - - - -	_____	2.1	1.8	2.5
Other crops- - - - -	_____	14.5	16.0	12.2
Legume hay and pasture - - - - -	_____	23.0	22.6	23.7
Nonlegume hay and pasture - - - -	_____	23.1	24.2	21.6
<u>Crop Yields</u>				
Corn - - - - -	_____	40.9	37.6	44.2
Oats - - - - -	_____	22.3	23.4	19.8
wheat- - - - -	_____	19.2	20.2	18.1
<u>Livestock Factors</u>				
Value of feed fed to prod. L. S. - -	\$ _____	\$ 1,164	\$ 1,081	\$ 1,256
Feed fed per acre to prod. L. S. - -	_____	5.13	4.99	5.27
Returns per acre from prod. L. S.- -	_____	8.59	8.53	8.65
Returns per \$100 worth of feed fed -	_____	168	171	164
Returns per \$100 invested in cattle-	_____	96	102	91
Poultry returns per hen- - - - -	_____	2.35	2.38	2.34
Number of litters farrowed - - - - -	_____	9.2	7.1	12.2
Number of pigs weaned per litter - -	_____	6.6	6.6	6.6
Returns per litter farrowed- - - - -	\$ _____	\$ 79	\$ 83	\$ 75
Average number of cows milked- - - -	_____	5.5	6.4	4.6
Dairy returns per cow milked - - - -	\$ _____	\$ 71	\$ 76	\$ 63
<u>Expense Factors</u>				
Machinery cost per crop acre ^{1/} - - -	\$ _____	\$ 2.98	\$ 2.69	\$ 3.32
Horse and machinery cost per crop A.	_____	3.68	3.34	4.09
Labor cost per crop acre ^{2/} - - - - -	_____	6.26	6.15	6.38
Labor cost per \$100 gross earnings ^{2/}	_____	30	32	28
Number of work horses- - - - -	_____	3.4	3.3	3.6
Value of feed fed to horses- - - - -	\$ _____	\$ 106	\$ 101	\$ 112
Improvement cost per acre- - - - -	_____	.69	.72	.67
Taxes per acre - - - - -	_____	.58	.62	.55

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS,
FARMS WITH MORE THAN 85 PERCENT OF THE LAND AREA TILLABLE

Accounting Farms in Farming-Type Area 7, 1939

The numbers above the lines across the middle of the page are the averages for the 54 farms included in this group for the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings									Factors that affect expenses			
			Percent tillable land in legume hay and pasture	Crop yields			Feed fed per acre to prod. L. S.	Returns per \$100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked	Total expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Labor cost per \$100 gross earnings
				Corn, bu.	Oats, bu.	Wheat, bu.									
17	317	22	38	58	38	30	10	221	3.88	133	126	2	.75	2.50	17
15	297	20	35	54	35	28	9	211	3.58	123	116	3	1.25	3.25	20
13	277	18	32	50	32	26	8	201	3.28	113	106	4	1.75	4.00	23
11	257	16	29	46	29	24	7	191	2.98	103	96	5	2.25	4.75	26
9	237	14	26	42	26	22	6	181	2.68	93	86	6	2.75	5.50	29
7.5	217	11.58	22.6	37.6	23.4	20.2	4.99	171	2.38	83	76	7.36	3.34	6.15	32
5	197	10	20	34	20	18	4	161	2.08	73	66	8	3.75	7.00	35
3	177	8	17	30	17	16	3	151	1.78	63	56	9	4.25	7.75	38
1	157	6	14	26	14	14	2	141	1.48	53	46	10	4.75	8.50	41
-1	137	4	11	22	11	12	1	131	1.18	43	36	11	5.25	9.25	44
-3	117	2	8	18	8	10	0	121	.88	33	26	12	5.75	10.00	47

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 7, 1939

Items	Source of income			
	Grain 40% +	Hogs 40% +	General farms	
			L.S. 60%-	L.S. 60% +
Number of farms - - - - -	10	14	38	41
Percent income from prod. L.S.- - - - -	35.5	87.8	46.7	81.9
Percent income from crops - - - - -	50.6	--	27.7	--
<u>Investments</u>				
Total per farm- - - - -	\$15277	\$16832	\$10891	\$15116
Total per acre- - - - -	54	70	50	69
Land per acre - - - - -	36	39	29	36
Improvements per acre - - - - -	6	11	7	12
Machinery per acre ^{1/} - - - - -	4.91	6.23	3.76	6.42
<u>Earnings</u>				
Per farm				
Gross earnings- - - - -	\$3,199	\$2,965	\$2,264	\$2,810
Gross expenses ^{2/} - - - - -	1,511	1,983	1,367	1,937
Net earnings- - - - -	1,688	982	897	873
Per acre				
Gross earnings- - - - -	\$ 11.25	\$ 12.33	\$ 10.44	\$ 12.90
Gross expenses ^{2/} - - - - -	5.31	8.25	6.30	8.89
Net earnings- - - - -	5.94	4.08	4.14	4.01
Rate earned on investment - - - - -	11.0%	5.8%	8.2%	5.8%
Labor and mgt. earnings - - - - -	\$1,372	\$ 594	\$ 779	\$ 527
<u>Size and Intensity</u>				
Acres per farm - - - - -	284	240	217	218
Percent land area tillable- - - - -	86.0	75.7	82.6	83.6
Percent tillable land in grain- - - - -	50.6	48.0	39.0	38.2
Percent in hay and pasture- - - - -	27.7	44.3	46.9	52.1
Feed fed per acre to prod. L.S. - - - - -	\$ 2.74	\$ 7.33	\$ 3.14	\$ 6.89
Months of labor per 100 crop A. - - - - -	10.0	16.8	14.0	19.3
Total months of labor - - - - -	17.0	19.6	18.1	21.3
<u>Crop Yields Per Acre</u>				
Corn, bu. - - - - -	47.8	39.1	37.6	41.8
Wheat, bu.- - - - -	21.1	15.8	19.8	19.4
<u>Livestock Returns</u>				
Per \$100 feed fed - - - - -	\$ 170	\$ 158	\$ 181	\$ 166
Hog returns per litter- - - - -	75	81	74	81
Dairy returns per cow - - - - -	55	75	57	81
<u>Expense Factors</u>				
<u>Labor cost^{2/}</u>				
Per crop acre - - - - -	\$ 4.08	\$ 6.60	\$ 5.53	\$ 7.75
Per \$100 gross earnings - - - - -	22	26	32	30
<u>Horse and machinery cost</u>				
per crop acre ^{1/} - - - - -	3.10	4.05	3.08	4.41
Improvement cost per acre - - - - -	.35	.74	.40	1.06
Land tax per acre - - - - -	.47	.59	.47	.54

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

The farms with the larger percent of land area tillable were 21 acres smaller; yet they had 11 acres more land in crops than did those farms with the smaller percent of land area tillable. Oat and wheat yields were higher but corn yields were lower on the farms with the higher percent tillable than on those with the lower percent tillable. In this farming-type area the flat prairie land, a large percent of which is tillable, is often low in productivity.

The operating expenses per acre averaged \$7.36 on the farms with the most tillable land and \$6.75 on the farms with the least tillable land. The combined cost per crop acre for labor, machinery, and horses was \$.98 smaller on the farms with the larger percent of tillable land, but the combined cost per acre for improvements and taxes was \$.12 larger.

The livestock-efficiency factors, such as poultry returns per hen, hog returns per litter of pigs farrowed, and dairy returns per cow milked, were not appreciably affected by the percent of land area tillable. These factors indicate that the livestock on the two groups of farms was managed with nearly the same degree of efficiency.

Source of Income

The 103 farms were divided into 4 groups according to source of income (Table 4). The items in this table, for the most part, were made to correspond with the items given in Table 3; therefore, a farmer may compare the data in the "Your farm" column of Table 3 with the "Source of income" column in Table 4, which corresponds to the classification for his own farm.

In a comparison of the groups of farms the fact that conditions affecting production and price relationships vary from year to year should be kept in mind. Therefore, the average differences in earnings in 1939 are not necessarily typical of the variations that may be expected over a long period of years. The following items, for example, indicate that generally the grain farms were located on the better land: large percent of land area tillable, large percent of land in grain, and high yield of corn and wheat per acre.

The returns per \$100 feed that are necessary to pay for feed (including pasture) and other costs, according to 5-year averages of complete cost studies (1933-1937), are as follows: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117. There is little wonder, therefore, that the 4 groups of accounting farms with different classes and proportions of livestock varied widely in their returns per \$100 worth of feed fed. The amount of feed fed per acre to productive livestock averaged \$7.33 on the hog farms but only \$2.74 on the grain farms.

Differences in expenses are significant for the 4 groups of farms. Labor input was highest on the general farms with the most livestock, where 21.3 months of labor were used, and lowest on the grain farms, where 17.0 months of labor were used; horse and machinery cost per crop acre averaged \$4.41 on the general farms with the most livestock, \$4.05 on the hog farms, and only \$3.10 on the grain farms; improvement costs per acre ranged from \$1.06 on the general farms with the most livestock to \$.35 on the grain farms; and land taxes ranged from \$.47 on the grain farms to \$.59 on the hog farms.

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 7, 1939

Items	Total acres in farm		
	61 to 180	181 to 300	301 or more
Number of farms - - - - -	36	49	18
Acres per farm - - - - -	125	240	396
<u>Investments</u>			
Total per farm - - - - -	\$ 8,075	\$14,394	\$23,668
Total per acre - - - - -	64	60	60
Land per acre - - - - -	33	34	34
Improvements per acre - - - - -	11	9	8
Machinery per acre ^{1/} - - - - -	5.64	4.90	5.65
<u>Earnings</u>			
Per farm			
Gross earnings - - - - -	\$ 1,668	\$ 2,617	\$ 4,292
Gross expenses ^{2/} - - - - -	1,147	1,667	2,338
Net earnings - - - - -	521	950	1,954
Per acre			
Gross earnings - - - - -	\$ 13.30	\$ 10.92	\$ 10.84
Gross expenses ^{2/} - - - - -	9.15	6.96	5.90
Net earnings - - - - -	4.15	3.96	4.94
Rate earned on investment - - - - -	6.5%	6.6%	8.3%
Labor and management earnings - - - - -	\$ 511	\$ 667	\$ 1,233
<u>Size and Intensity</u>			
Percent land area tillable - - - - -	85.4	81.2	82.5
Percent tillable land in grain - - - - -	38.4	42.0	42.3
Percent in hay and pasture - - - - -	51.8	44.0	45.9
Feed fed per acre to prod. L. S. - - - - -	\$ 5.99	\$ 5.12	\$ 4.59
Percent of income from prod. L. S. - - - - -	76.0	68.6	63.1
Percent of income from grain - - - - -	--	10.7	22.0
Months of labor per 100 crop acres - - - - -	227	15.2	12.2
Total months of labor - - - - -	15.4	20.1	26.2
<u>Crop Yields Per Acre</u>			
Corn, bu. - - - - -	39.0	38.8	45.8
Wheat, bu. - - - - -	16.8	19.2	20.2
<u>Livestock Returns</u>			
Per \$100 feed fed - - - - -	\$ 192	\$ 160	\$ 161
Hog returns per litter - - - - -	82	78	77
Dairy returns per cow - - - - -	78	67	66
<u>Expense Factors</u>			
Labor cost per crop acre ^{2/} - - - - -	\$ 9.09	\$ 6.04	\$ 4.85
Labor cost per \$100 gross earnings - - - - -	37	30	24
Horse and machinery cost per crop A. ^{1/} - - - - -	4.56	3.59	3.26
Improvement cost per acre - - - - -	.90	.68	.57
Land tax per acre - - - - -	.59	.53	.46

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

Size of Farm as Related to Earnings

The farm records in Farming-Type Area 7, when sorted according to the total acres in the farm, indicate that the larger farms had a greater total investment in land, improvements, and equipment than did the smaller farms. The operators on the larger farms took in more money during the year than did the operators on the smaller farms; and after deductions were made for farm business expenditures and interest on the investment, the 18 largest farms had labor and management earnings which averaged \$1,233 as contrasted with \$511 for the 36 smallest farms. The earnings, as measured by the rate earned on the investment, were 8.3 and 6.5, respectively, for the two groups of farms. In years when the average rate earned on investment for groups of farms exceeds the capitalization rate (5 percent), the average labor and management earnings are higher on the larger farms than on the smaller ones, but these earnings are lower when the rate earned averages less than the capitalization rate.

The smaller farms were operated more intensively than were the larger farms. This variation was indicated by the much higher gross earnings per acre, and by the larger amount of feed fed per acre to productive livestock.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Farm Organization and Farm Earnings by Counties and Groups of Counties

Farming-type areas are formed by grouping together counties which are similar with respect to physical, economic, and biological characteristics. Although a classification of this kind is very useful for many purposes, no two counties within an area are exactly alike. A tabulation of farm account records by counties and groups of counties indicates some of these differences which are due to variations in quality of land, topography, amount of erosion, market outlets, weather conditions, and disease hazards. The effects of variations in these factors are indicated in the account records by differences in value of land per acre, taxes per acre, percent of land area tillable, size of farm, total acres in crops, percent of tillable land in important crops, crop yields, amount of feed fed to productive livestock, and the source of farm income (Tables 6 and 7).

In this report an average was calculated for each county from which 30 or more records were received. Averages were made in some instances with less than 30 records if it was necessary to eliminate some records because they were incomplete or not typical for the area. In any tabulation containing as few as 30 records, part of the variation from county to county is due to the fact that the averages do not represent a cross section of the county.

The tabulations by counties and by groups of counties may be used by extension specialists, farm advisers, and county program-building committees to represent the type of farm organization and the level of operating efficiency attained by a selected group of progressive farmers in the various parts of a farming-type area. Since the personnel of the accounting group changes slowly, comparisons may be made from county to county and from year to year even though these records are from farms with efficiency which is higher than average.

TABLE 6.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 7, 1939

Items	Jefferson	Clark, Jasper, and Crawford	Marion, Franklin, Hamilton, Richland, Williamson, and Clay
Number of farms - - - - -	25	36	42
<u>Capital Investments</u>			
Land- - - - -	\$ 5,506	\$11,257	\$ 5,911
Farm improvements - - - - -	1,513	2,855	1,845
Horses- - - - -	431	353	383
Productive livestock; Cattle- - - - -	583	1,110	830
Hogs- - - - -	223	504	218
Sheep - - - - -	73	58	63
Poultry - - - - -	129	150	107
<u>Total productive livestock- - - - -</u>	<u>(1,008)</u>	<u>(1,822)</u>	<u>(1,218)</u>
Feed and grain- - - - -	873	1,300	937
Machinery and equipment - - - - -	783	1,406	979
Automobile (farm share) - - - - -	104	156	89
Totals- - - - -	\$10,218	\$19,149	\$11,362
<u>Receipts and Net Increases</u>			
Horses - - - - -	\$ 21	\$ --	\$ 44
Productive livestock: Cattle- - - - -	278	702	438
Dairy sales - - - - -	266	252	401
Hogs- - - - -	451	944	448
Sheep - - - - -	60	48	53
Poultry - - - - -	72	120	52
Egg sales - - - - -	180	276	164
<u>Total productive livestock- - - - -</u>	<u>(1,307)</u>	<u>(2,342)</u>	<u>(1,556)</u>
Farm products used in household - - - - -	270	255	243
Feed and grain - - - - -	227	435	223
Labor off farm - - - - -	22	33	54
Miscellaneous - - - - -	9	18	21
AAA payments - - - - -	173	194	171
Totals- - - - -	\$ 2,029	\$ 3,277	\$ 2,312
<u>Expenses and Net Decreases</u>			
Farm improvements - - - - -	\$ 129	\$ 172	\$ 160
Horses- - - - -	--	10	--
Productive livestock- - - - -	--	--	--
Feed and grain- - - - -	--	--	--
Machinery and equipment - - - - -	222	366	273
Automobile (farm share) - - - - -	56	86	79
Hired labor - - - - -	109	261	104
Miscellaneous - - - - -	18	26	11
Crop expense- - - - -	72	107	71
Livestock expense - - - - -	16	47	18
Taxes - - - - -	95	181	113
Totals- - - - -	\$ 717	\$ 1,256	\$ 829
Receipts less expenses- - - - -	\$ 1,312	\$ 2,021	\$ 1,483
Family labor- - - - -	183	192	285
Returns for labor, capital, mgt.- - - - -	1,129	1,829	1,198
Operator's labor- - - - -	439	435	411
Returns for capital and mgt.- - - - -	690	1,394	787
<u>Rate Earned on Investment - - - - -</u>	<u>6.8%</u>	<u>7.3%</u>	<u>6.9%</u>
Interest on investment- - - - -	\$ 511	\$ 958	\$ 568
Labor and Management Earnings - - - - -	618	871	630
Nonfarm income- - - - -	\$ 75	\$ 63	\$ 333

TABLE 7.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 7, 1939

Items	Jefferson	Clark, Jasper, and Crawford	Marion, Franklin, Hamilton, Richland, Williamson, and Clay
Rate earned on investment- - - - -	6.8%	7.3%	6.9%
Acres in farm- - - - -	192	258	221
Acres in crops - - - - -	102	138	125
Gross earnings per acre- - - - -	\$ 10.58	\$ 12.70	\$ 10.44
Total expenses per acre ^{2/} - - - - -	6.98	7.30	6.88
Net earnings per acre- - - - -	3.60	5.40	3.56
<u>Investments</u>			
Value of land per acre - - - - -	\$ 29	\$ 44	\$ 27
Value of improvements per acre - - -	8	11	8
Total investment per acre- - - - -	53	74	51
<u>Land Use</u>			
Percent of land area tillable- - - -	83.4	80.3	83.9
Percent of tillable land in:			
Corn - - - - -	19.4	25.3	18.3
Oats - - - - -	6.8	6.8	7.7
Wheat- - - - -	10.5	10.5	6.9
Soybeans - - - - -	1.0	2.7	2.1
Other crops- - - - -	9.1	15.0	16.5
Legume hay and pasture - - - - -	27.4	20.8	23.0
Nonlegume hay and pasture- - - - -	25.8	18.9	25.5
<u>Crop Yields</u>			
Corn - - - - -	34.6	50.6	31.0
Oats - - - - -	23.9	20.9	22.6
Wheat- - - - -	21.1	18.3	18.8
Soybeans - - - - -	6.9	22.5	9.0
<u>Livestock Factors</u>			
Value of feed fed to prod. L. S. - -	\$942	\$1,564	\$954
Feed fed per acre to prod. L. S. - -	4.91	6.06	4.31
Returns per acre from prod. L. S.- -	7.79	9.80	7.80
Returns per \$100 worth of feed fed -	159	162	181
Returns per \$100 invested in cattle-	105	87	104
Poultry returns per hen - - - - -	2.19	2.52	2.28
Number of litters farrowed - - - - -	7.0	12.2	6.4
Number of pigs weaned per litter - -	6.7	6.6	6.6
Returns per litter farrowed- - - - -	\$ 73	\$ 77	\$ 89
Average number of cows milked- - - -	5.7	4.9	6.0
Dairy returns per cow milked - - - -	\$ 60	\$ 68	\$ 78
<u>Expense Factors</u>			
Machinery cost per crop acre ^{1/} - - -	\$ 2.73	\$ 3.27	\$ 2.83
Horses and machinery cost per crop A. ^{1/} - - - - -	3.72	4.04	3.32
Labor cost per crop acre ^{2/} - - - - -	6.95	6.19	6.20
Labor cost per \$100 gross earnings ^{2/}	35	26	33
Number of work horses- - - - -	3.4	3.4	3.5
Value of feed fed to horses- - - - -	\$122	\$ 96	\$106
Improvement cost per acre- - - - -	.67	.67	.72
Taxes per acre - - - - -	.50	.70	.51

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

Influence of Price Changes on Illinois Farm Incomes

All feed and grain, livestock, and other farm property on accounting farms must be valued at both the beginning and the end of the year. Prices at inventory time, therefore, have a marked influence on farm earnings. The influence is greatest where large stocks or supplies are on hand at inventory time; for example, a much larger supply of farm products was found on Illinois farms December 31, 1939, than a year earlier. In fact, grain and livestock inventories have been increasing on Illinois farms since the drouth of 1936 as a result of three years of exceptionally high crop yields and the influence of Agricultural Adjustment Programs which have caused farmers to grow more hay and pasture and to store corn on farms under seal. According to estimates made by the Bureau of Agricultural Economics, U.S.D.A., 356 million bushels of corn were on Illinois farms January 1, 1940, as compared with 325 million bushels January 1939.

Livestock numbers on Illinois farms increased sharply in 1939 even though 62 million bushels of 1937 and 1938 corn were placed under seal at the end of the year and 83 million bushels of 1939 corn were sealed by March 31, 1940. The following data indicate the percentage increase in livestock numbers on 2520 accounting farms in Illinois from the beginning to the end of 1939: dairy cows, 2 percent; beef cows, 21 percent; feeder cattle, 17 percent; feeder lambs, 24 percent; brood sows, 4 percent; spring pigs, 38 percent; summer pigs, 23 percent; and fall pigs 28 percent. Hog numbers have been increasing since 1935 and have now attained record levels; for example, 13.5 sows farrowed per farm on accounting farms in 1939 as contrasted with 9.9 sows farrowed per farm in 1938. The increase in beef cattle numbers is a part of the general up-swing taking place over the entire United States, and it may be expected to continue for several years.

These data indicate that supplies of both feed and livestock were greater at the time the 1939 closing inventory was taken than at any other inventory period in several years, and price changes, therefore, are important in interpreting farm earnings for the state and for farming-type areas in 1939.

Prices of important farm products.--Prices for all crops as well as for beef cattle and sheep were higher at the end of 1939 than they were at the beginning, whereas prices for horses, hogs, and poultry were lower. Most of these price increases occurred during the last four months of the year.

December 15, Illinois Farm Prices

	<u>1938</u>	<u>1939</u>	<u>Increase</u>	<u>Decrease</u>
Corn, bu.	\$.42	\$.47	\$.05	\$ --
Oats, bu.	.24	.35	.11	--
Wheat, bu.	.57	.88	.31	--
Soybeans, bu.	.65	.95	.30	--
Hay, tons	6.20	6.50	.30	--
Horses, hd.	88.00	85.00	--	3.00
Hogs, cwt.	7.00	5.10	--	1.90
Beef cattle, cwt.	7.70	8.30	.60	--
Sheep, cwt.	3.45	3.60	.15	--
Chickens, lb.	.13	.11	--	.02

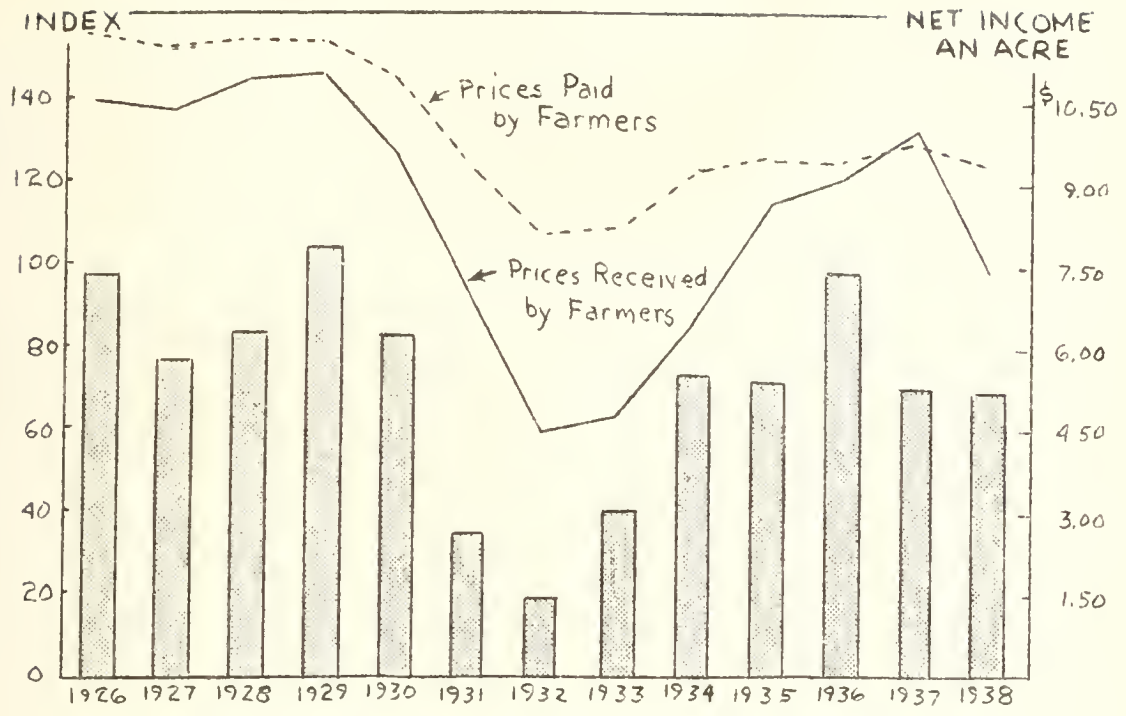


Fig. 1.--Average net cash income an acre (unpaid labor deducted) on Illinois accounting farms, prices paid by farmers in the United States, and prices received by Illinois farmers, 1926-1938.

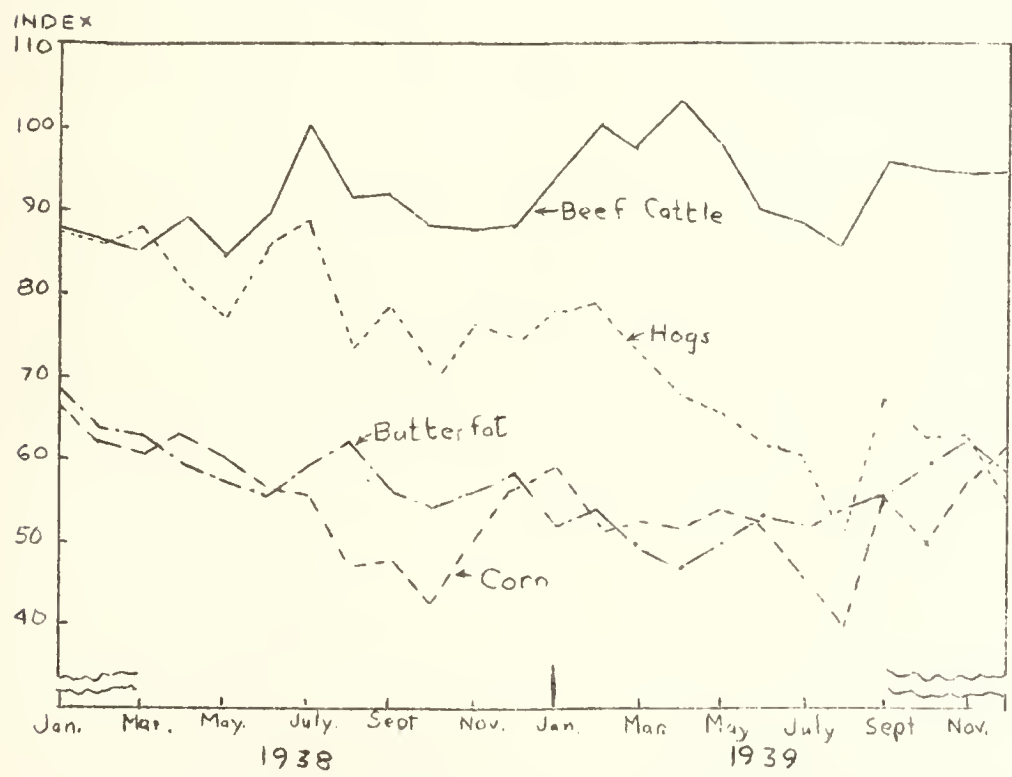


Fig. 2.--Monthly price indices of the average farm prices of corn, hogs, beef cattle, and butterfat, 1938 and 1939. (1924-1929 = 100)

Farm earnings are influenced by the average price received for farm products during the year as well as by the values at inventory time. Although nearly all commodities were higher in price at the end of the year than at the beginning, prices received for the following commodities averaged lower in 1939 than in 1938 by these amounts: corn, 2 cents per bushel; wheat and soybeans, 1 cent per bushel; hogs, \$1.50 per hundred; butterfat, 2 cents per pound; eggs, 3 cents per dozen; and chickens, 2 cents per pound. The prices for other commodities averaged higher in 1939 than in 1938 by the following amounts: oats, 4 cents per bushel; beef cattle, 50 cents per hundred; lambs, 42 cents per hundred; wool, 4 cents per pound; and apples, 12 cents per bushel.

Variation in earnings between the various type-of-farming areas is influenced by the relative prices of grains, livestock, and livestock products. In 1939 as in 1938 livestock had a price advantage over grain, but the advantage was not as marked as it was in 1938. The prices for meat animals dropped from 116 to 110 percent of the 1910-14 average, grains from 74 to 72 percent, chickens and eggs from 106 to 94 percent, and dairy products from 106 to 104 percent.

The corn-hog ratio also narrowed during the year to the disadvantage of the hog enterprise. The amount of corn equal in value to 100 pounds of hogs dropped from 19 bushels in February to 11 bushels in December (based on farm prices). Unfavorable feeding ratios will discourage expansion in hog numbers in 1940.

Crop Yields in Illinois, 1939

Crop yields in Illinois in 1939, as in 1938 and 1937, were unusually high. The weighted average yield of corn, oats, wheat, and soybeans was 133 percent of the 10-year average, 1929-1938. Corn contributed more than did any other crop to the high average yields. The yields of the various crops expressed in percentages of the 1929-1938 averages were: corn, 150; soybeans, 129; wheat, 121; and oats, 97.

Crop yields in all counties except Massac were above the 10-year average (1929-1938 = 100), but wide variations in yields occurred between individual counties and groups of counties. Four counties along the Ohio River had crop-yield indices under 105. In contrast to these counties, 31 were over 136. Many of the counties with the highest yields were in two groups, those located in southwestern and east north central Illinois. Crop-yield indices were adversely affected in southeastern Illinois by the wheat crop and in northern Illinois by low oat yields. Fifty-five counties, which were well-distributed over the state, had crop-yield indices from 121 to 135.

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FARM BUSINESS REPORT . . . 1939



FARMING-TYPE AREA EIGHT Wabash Valley Grain and Livestock Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

Annual Farm Business Report

ON SIXTY-THREE FARMS IN FARMING-TYPE AREA 8, 1939

By P. E. Johnston, J. B. Cunningham, and E. N. Searls^{1/}

Farm earnings of accounting farms in Farming-Type Area 8 were higher in 1939 than in 1938. The net earnings per acre averaged \$6.14 in 1939, \$4.55 in 1938, \$6.12 in 1937, and \$7.47 in 1936. The items considered in calculating the net earnings included inventory changes, cash receipts, cash expenses, the value of the farm products used in the household (in 1938 and 1939 only), and unpaid family labor (Table 1).



Farming-Type Area 8
Grain and Livestock

Since the value of farm products used in the household was not included in the records prior to 1938, the earnings for 1938 and 1939 are not strictly comparable to those for other years. The value per acre of farm products used was \$1.24 in 1938 and \$1.10 in 1939.

The accounting farms were larger than average, crop yields were above average, and the farms as a whole were operated with efficiency which was greater than average. Therefore, the figures contained in this report represent conditions which are better than average for this area. This fact is borne out by survey records taken in various areas of the state.

Moderately high crop yields and larger AAA receipts, accompanied by increased industrial activity and improved demand for farm products, especially during the latter half of the year, were the principal factors producing higher earnings in 1939 (Figs. 1, 2, and 3).

^{1/} R. J. Mutti supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm accounts project was conducted in cooperation with the farm bureaus in the following counties and was supervised by the farm advisers indicated:

W. D. Murphy, Edwards County
Thurman Wright, White County
H. C. Wheeler, Lawrence County

H. H. Lett, Wabash County
R. H. Roll, Gallatin County
H. C. Neville, Saline County

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 8, 1936-1939

Items	Your farm	Average of all farms in area			
		1939	1938	1937	1936
Number of farms- - - - -	--	63	69	43	34
Inventory Changes					
Farm improvements- - - - -	\$ _____	\$ 47	\$ 26	\$ 52	\$ 39
Livestock- - - - -	_____	136	129	82	46
Feed and grain - - - - -	_____	-43	-97	171	365
Machinery and equipment ^{1/} - - - - -	_____	42	84	152	170
Automobile (farm share)- - - - -	_____	3	-2	--	--
Totals - - - - -	\$ _____	\$ 185	\$ 140	\$ 457	\$ 620
Cash Receipts					
Farm improvements- - - - -	\$ _____	\$ 4	\$ 14	\$ 7	\$ 2
Horses - - - - -	_____	50	39	65	49
Productive livestock: Cattle - - - - -	_____	558	572	660	556
Dairy sales- - - - -	_____	149	199	225	272
Hogs - - - - -	_____	681	778	767	807
Sheep- - - - -	_____	65	54	106	61
Poultry- - - - -	_____	83	82	76	88
Egg sales- - - - -	_____	195	186	278	271
Total productive livestock - - - - -	()	(1,731)	(1,871)	(2,112)	(2,055)
Feed and grain - - - - -	_____	1,111	826	1,331	1,054
Machinery and equipment ^{1/} - - - - -	_____	132	118	168	69
Automobile (farm share)- - - - -	_____	34	21	--	--
Labor off farm - - - - -	_____	31	32	74	68
Miscellaneous- - - - -	_____	13	2	19	3
AAA payments - - - - -	_____	338	85	174	149
Totals - - - - -	\$ _____	\$3,444	\$3,008	\$3,950	\$3,449
Cash Expenses-					
Farm improvements- - - - -	\$ _____	\$ 164	\$ 177	\$ 191	\$ 132
Horses - - - - -	_____	27	28	46	63
Productive livestock: Cattle - - - - -	_____	330	288	223	166
Hogs - - - - -	_____	68	61	42	69
Sheep- - - - -	_____	19	3	31	8
Poultry- - - - -	_____	26	24	24	37
Total productive livestock - - - - -	()	(443)	(376)	(320)	(280)
Feed and grain - - - - -	_____	264	252	572	554
Machinery and equipment ^{1/} - - - - -	_____	466	496	573	458
Automobile (farm share)- - - - -	_____	119	100	--	--
Hired labor- - - - -	_____	172	210	291	201
Miscellaneous- - - - -	_____	20	20	21	23
Crop expense - - - - -	_____	96	107	240	153
Livestock expense- - - - -	_____	22	23	21	20
Taxes- - - - -	_____	181	171	181	158
Totals - - - - -	\$ _____	\$1,974	\$1,960	\$2,456	\$2,042
Summary					
Cash balance - - - - -	\$ _____	\$1,470	\$1,048	\$1,494	\$1,407
Farm products used in household ^{2/} - - - - -	_____	239	252	--	--
Total inventory change - - - - -	_____	185	140	457	620
Receipts less expenses - - - - -	_____	1,894	1,440	1,951	2,027
Total unpaid labor - - - - -	_____	558	512	557	517
Net earnings per farm- - - - -	\$ _____	\$1,336	\$ 928	\$1,394	\$1,510
Net earnings per acre- - - - -	\$ _____	\$ 6.14	4.55	6.12	7.47

^{1/} Includes farm share of automobile for 1936 and 1937.

^{2/} Not included as income for 1936 and 1937.

Inventory Changes, Cash Receipts, Cash Expenses, and Earnings

Inventory changes.--The year 1939 was the fourth consecutive year of increasing inventories, the increases averaging \$185 in 1939, \$140 in 1938, \$457 in 1937, and \$620 in 1936 (Table 1). The largest increase in 1939 was in live-stock; feed and grain, on the other hand, decreased in value despite higher prices at the end of the year as compared with those at the beginning (page i). The average amounts of grain on hand in Area 8 at the two inventory periods follow:

	<u>Beginning of year (bushels)</u>	<u>End of year (bushels)</u>
Corn	1467	1172
Oats	135	150
Wheat	100	66
Soybeans	67	57

Cash receipts.--Cash receipts averaged \$3,444 in 1939 (Table 1). Feed and grain and AAA receipts were larger in 1939 than in 1938, but total productive livestock sales were smaller. The larger AAA receipts were mainly due to a doubling-up in payments, many farmers receiving payments in 1939 for participation in both the 1938 and 1939 programs.

Cash expenses.--Cash expenses were slightly larger in 1939 than in 1938, but they were smaller in 1939 than in either 1937 or 1936. Less money was spent for total productive livestock, machinery, and labor in 1939 than in 1938, although slightly more was spent for feed and grain, automobile, and taxes.

Earnings. Cash receipts exceeded cash expenses in 1939 by \$1,470, or by a larger margin than that for any other year during the past four years except 1937. Cash balance, the difference between these receipts and expenses, is the average amount of money available for family living expenses, interest, debt payments, and savings.

The amounts deducted for operator's and family labor remained rather uniform during the 4-year period, a difference of only \$46 occurring between the low year, 1938, and the high year, 1939. The uniformity in valuation was due to the fact that approximately the same amount of family labor was available each year and to the fact that the same rate (\$40 per month) was charged for the physical labor of the operator and other mature members of the family.

The net earnings per farm averaged \$1,336 in 1939 as contrasted with \$928 for 1938. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding the value of farm products used in the household and the inventory increases to the cash balance and by subtracting the value of unpaid labor from the resulting total. Therefore, this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

TABLE 2.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 8, 1939

Items	Your farm	Average of all farms	Land area tillable	
			90 percent or more	Less than 90 percent
Number of farms - - - - -	--	63	30	33
<u>Capital Investments</u>				
Land- - - - -	\$	\$ 9,979	\$12,035	\$ 8,110
Farm improvements - - - - -		1,896	1,900	1,893
Horses - - - - -		401	408	395
Productive livestock: Cattle- - - - -		639	555	716
Hogs- - - - -		296	295	297
Sheep - - - - -		72	34	107
Poultry - - - - -		127	114	137
<u>Total productive livestock- - - - -</u>	()	(1,134)	(998)	(1,257)
Feed and grain - - - - -		1,228	1,396	1,075
Machinery and equipment - - - - -		1,197	1,391	1,022
Automobile (farm share) - - - - -		126	129	122
Totals- - - - -	\$	\$15,961	\$18,257	\$13,874
<u>Receipts and Net Increases</u>				
Horses - - - - -	\$	\$ --	\$ --	\$ --
Productive livestock: Cattle- - - - -		420	383	453
Dairy sales - - - - -		149	136	162
Hogs- - - - -		582	649	520
Sheep - - - - -		49	33	64
Poultry - - - - -		58	70	48
Egg sales - - - - -		195	199	190
<u>Total productive livestock- - - - -</u>	()	(1,453)	(1,470)	(1,437)
Farm products used in household - - - - -		239	225	251
Feed and grain - - - - -		804	1,294	358
Labor off farm - - - - -		31	41	23
Miscellaneous - - - - -		13	5	21
AAA payments - - - - -		338	418	266
Totals- - - - -	\$	\$ 2,878	\$ 3,453	\$ 2,356
<u>Expenses and Net Decreases</u>				
Farm improvements - - - - -	\$	\$ 113	\$ 105	\$ 119
Horses - - - - -		6	7	4
Productive livestock- - - - -		--	--	--
Feed and grain- - - - -		--	--	--
Machinery and equipment - - - - -		292	312	276
Automobile (farm share) - - - - -		82	80	83
Hired labor - - - - -		172	231	120
Miscellaneous - - - - -		20	20	20
Crop expense - - - - -		96	103	89
Livestock expense - - - - -		22	24	22
Taxes - - - - -		181	212	152
Totals- - - - -	\$	\$ 984	\$ 1,094	\$ 885
Receipts less expenses- - - - -	\$	\$ 1,894	\$ 2,359	\$ 1,471
Family labor- - - - -		137	104	167
Returns for labor, capital, mgt.- - - - -		1,757	2,255	1,304
Operator's labor- - - - -		421	424	418
Returns for capital and mgt.- - - - -		1,336	1,831	886
<u>Rate Earned on Investment - - - - -</u>	%	8.4%	10.0%	6.4%
Interest on investment- - - - -	\$	\$ 798	\$ 913	\$ 693
Labor and Management Earnings - - - - -		959	1,342	611
Nonfarm income - - - - -	\$	\$ 63	\$ 71	\$ 55

Variation in farm earnings.--A wide variation was found in earnings on the farms in Area 8; for example, 18 farms earned less than 5 percent on the investment, with an average rate earned of 2.3 percent, but in contrast 12 farms earned 11 percent or more, with an average rate earned of 14.4 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had \$167 for labor and management earnings as contrasted with a gain of \$2,136 for the latter group. By studying the reasons for these variations, farm operators can improve their chances of financial success. The variation in earnings and in size of farm for all records in the areas was as follows:

Rate earned on investment (percent)	Number of farms	Average rate earned	Acres per farm	Capital invested per farm	Gross earnings per farm	Net earnings per farm	Labor and management earnings
Less than 5	18	2.3	184	\$10,612	\$1,674	\$ 249	\$ 167
5 to 11	33	8.1	226	18,152	3,209	1,475	963
11 or more	12	14.4	246	17,961	4,320	2,584	2,136

Comparison of Farms According to Quality of Land

The 63 farms were divided into two groups according to the percent of land area tillable. Of this total number of farms, 30 had 90 percent or more of land area tillable, and 33 had less than 90 percent tillable. The average percent tillable was 94.6 for the former group and 78.1 for the latter group.

This grouping of farms gives each farmer an opportunity to compare his farm with the average of other farms having a similar quality of land as well as with the average of all accounting farms (Tables 2 and 3).

The capital investment averaged \$18,257, or \$78 per acre, for the group of farms having the larger percent of land area tillable, as compared with a capital investment averaging \$13,874, or \$68 per acre, for the group of farms having the smaller percent of land area tillable.

The receipts and net increases were \$1,097 larger and expenses and net decreases \$209 larger on farms of higher-quality land than on those of lower quality land. Cattle and dairy sales were smaller for the farms with the larger percent of land area tillable; whereas feed and grain, AAA, and hog receipts were larger. The rate earned on investment was 10.0 percent and 6.4 percent and the labor and management earnings were \$1,342 and \$611, respectively, for the two groups of farms.

The farms on higher-quality land were 29 acres larger and had 58 acres more land in crops than did those on lower-quality land. The farms with the higher quality land also had a larger percent of tillable land in grain crops but a smaller percent in hay and pasture. However, the amount of livestock per farm was larger on that group of farms having the smaller percent of land area tillable, as indicated by the value of feed fed to productive livestock and the capital invested in productive livestock (Tables 2 and 3).

TABLE 3.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 8, 1939

Items	Your farm	Average of all farms	Land area tillable	
			90 percent or more	Less than 90 percent
Rate earned on investment- - - - -	_____ %	8.4%	10.0%	6.4%
Acres in farm- - - - -	_____	218	233	204
Acres in crops - - - - -	_____	142	172	114
Gross earnings per acre- - - - -	\$ _____	\$ 13.23	\$ 14.84	\$ 11.57
Total expenses per acre ^{2/} - - - - -	_____	7.09	6.97	7.22
Net earnings per acre - - - - -	_____	6.14	7.87	4.35
<u>Investments</u>				
Value of land per acre - - - - -	\$ _____	\$ 46	\$ 52	\$ 40
Value of improvements per acre - - -	_____	9	8	9
Total investment per acre- - - - -	_____	73	78	68
<u>Land Use</u>				
Percent of land area tillable- - - -	_____	86.5	94.6	78.1
Percent of tillable land in:				
Corn - - - - -	_____	24.1	25.6	22.3
Oats - - - - -	_____	6.7	5.9	7.8
Wheat- - - - -	_____	20.5	21.8	18.9
Soybeans - - - - -	_____	2.8	3.5	1.9
Other crops- - - - -	_____	15.5	18.9	11.1
Legume hay and pasture - - - - -	_____	20.7	16.5	26.0
Nonlegume hay and pasture- - - - -	_____	9.7	7.8	12.0
<u>Crop Yields</u>				
Corn - - - - -	_____	43.5	43.7	43.1
Oats - - - - -	_____	22.9	22.0	23.7
Wheat- - - - -	_____	17.4	18.9	15.1
<u>Livestock Factors</u>				
Value of feed fed to prod. L. S. - -	\$ _____	\$ 989	\$ 951	\$1,024
Feed fed per acre to prod. L. S. - -	_____	4.55	4.09	5.03
Returns per acre from prod. L. S.- -	_____	7.48	7.03	7.94
Returns per \$100 worth of feed fed -	_____	165	172	158
Returns per \$100 invested in cattle-	_____	88	90	86
Poultry returns per hen- - - - -	_____	2.23	2.45	2.07
Number of litters farrowed - - - - -	_____	8.7	8.4	9.0
Number of pigs weaned per litter - -	_____	6.4	6.8	6.1
Returns per litter farrowed- - - - -	\$ _____	\$ 76	\$ 83	\$ 69
Average number of cows milked- - - -	_____	3.6	3.5	3.7
Dairy returns per cow milked - - - -	\$ _____	\$ 60	\$ 57	\$ 64
<u>Expense Factors</u>				
Machinery cost per crop acre ^{1/} - - -	\$ _____	\$ 2.64	\$ 2.28	\$ 3.16
Horse and machinery cost per crop A.	_____	3.39	2.95	4.00
Labor cost per crop acre ^{2/} - - - - -	_____	4.94	4.27	6.00
Labor cost per \$100 gross earnings ^{2/}	_____	24	21	29
Number of work horses- - - - -	_____	3.6	3.6	3.5
Value of feed fed to horses- - - - -	\$ _____	\$ 100	\$ 109	\$ 92
Improvement cost per acre- - - - -	_____	.52	.45	.58
Taxes per acre - - - - -	_____	.83	.91	.75

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS,
FARMS WITH MORE THAN 90 PERCENT OF THE LAND AREA TILLABLE

Accounting Farms in Farming-Type Area 8, 1939

The numbers above the lines across the middle of the page are the averages for the 30 farms included in this group for the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings									Factors that affect expenses			
			Percent tillable land in legume hay and pasture	Crop yields			Feed fed per acre to prod. L. S.	Returns per \$100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked	Total expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Labor cost per \$100 gross earnings
				Corn, bu.	Oats, bu.	Wheat, bu.									
20	383	25	31	64	37	29	9	247	3.95	133	107	--	.45	--	--
18	353	23	28	60	34	27	8	232	3.65	123	97	--	.95	--	1
16	323	21	25	56	31	25	7	217	3.35	113	87	1	1.45	1	6
14	293	19	22	52	28	23	6	202	3.05	103	77	3	1.95	2	11
12	263	17	19	48	25	21	5	187	2.75	93	67	5	2.45	3	16
10.0	233	14.84	16.5	43.7	22.0	18.9	4.09	172	2.45	83	57	6.97	2.95	4.27	21
8	203	13	13	40	19	17	3	157	2.15	73	47	9	3.45	5	26
6	173	11	10	36	16	15	2	142	1.85	63	37	11	3.95	6	31
4	143	9	7	32	13	13	1	127	1.55	53	27	13	4.45	7	36
2	113	7	4	28	10	11	--	112	1.25	43	17	15	4.95	8	41
0	83	5	1	24	7	9	--	97	.95	33	7	17	5.45	9	46

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 8, 1939

Items	Source of income		
	Grain 40%+	General farms	
		L.S. 60%-	L.S. 60%+
Number of farms - - - - -	13	25	25
Percent income from productive L. S.- - - - -	28.5	47.1	79.5
Percent income from crops - - - - -	54.4	26.3	--
<u>Investments</u>			
Total per farm- - - - -	\$26,050	\$15,258	\$11,418
Total per acre- - - - -	78	73	69
Land per acre - - - - -	55	45	38
Improvements per acre - - - - -	8	8	10
Machinery per acre ^{1/} - - - - -	5.82	6.65	5.65
<u>Earnings</u>			
Per farm			
Gross earnings - - - - -	\$ 4,689	\$ 2,706	\$ 2,128
Gross expenses ^{2/} - - - - -	2,139	1,462	1,331
Net earnings- - - - -	2,550	1,244	797
Per acre			
Gross earnings- - - - -	\$ 14.05	\$ 13.01	\$ 12.77
Gross expenses ^{2/} - - - - -	6.41	7.03	7.99
Net earnings- - - - -	7.64	5.98	4.78
Rate earned on investment - - - - -	9.8%	8.2%	7.0%
Labor and management earnings - - - - -	\$ 1,635	\$ 884	\$ 682
<u>Size and Intensity</u>			
Acres per farm - - - - -	334	208	167
Percent land area tillable- - - - -	91.1	83.2	85.7
Percent tillable land in grain- - - - -	62.0	55.8	49.7
Percent in hay and pasture- - - - -	19.3	33.4	39.1
Feed fed per acre to productive L. S. - - - - -	\$ 2.43	\$ 4.56	\$ 6.74
Months of labor per 100 crop acres- - - - -	8.9	13.6	16.0
Total months of labor - - - - -	22.2	17.6	15.5
<u>Crop Yields Per Acre</u>			
Corn, bu. - - - - -	47.6	44.3	36.6
Wheat, bu.- - - - -	17.3	17.8	16.9
<u>Livestock Returns</u>			
Per \$100 feed fed - - - - -	\$ 186	\$ 155	\$ 165
Hog returns per litter- - - - -	66	80	78
Dairy returns per cow - - - - -	66	58	58
<u>Expense Factors</u>			
Labor cost ^{2/}			
Per crop acre - - - - -	\$ 3.53	\$ 5.28	\$ 6.37
Per \$100 gross earnings - - - - -	19	25	29
Horse and machinery cost			
per crop acre ^{1/} - - - - -	2.98	3.30	4.07
Improvement cost per acre - - - - -	.40	.51	.65
Land tax per acre - - - - -	.82	.75	.63

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

Crop yields per acre for the two major grain crops were larger on the farms with the larger percent of land area tillable, the difference amounting to .6 bushel of corn and 3.8 bushels of wheat. Yields of oats, however, averaged 1.7 bushels lower on this group of farms than on the farms with the smaller percent of land area tillable.

The operating expenses per acre averaged \$6.97 on the farms with the most tillable land and \$7.22 on the farms with the least tillable land. The combined cost per crop acre for labor, machinery, and horses was \$2.78 smaller on the farms with the larger percent of tillable land, and the combined cost per acre for improvements and taxes was practically the same for the two groups of farms.

The farms with the higher percent of land area tillable had larger average poultry returns per hen and larger returns per litter of pigs farrowed but smaller dairy returns per cow.

Source of Income

The 63 farms were divided into 3 groups according to source of income (Table 4). The items in this table, for the most part, were made to correspond with the items given in Table 3; therefore, a farmer may compare the data in the "Your farm" column of Table 3 with the "Source of income" column in Table 4, which corresponds to the classification for his own farm.

In a comparison of the groups of farms the fact that conditions affecting production and price relationships vary from year to year should be kept in mind. Therefore, the average differences in earnings in 1939 are not necessarily typical of the variations that may be expected over a long period of years. The following items, for example, indicate that generally the grain farms were located on the better land: high value of land per acre, large percent of land area tillable, large percent of land in grain, high yield of corn per acre, and land tax per acre.

The returns per \$100 feed that are necessary to pay for feed (including pasture) and other costs, according to 5-year averages of complete cost studies (1933-1937), are as follows: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117. There is little wonder, therefore, that the 3 groups of accounting farms with different classes and proportions of livestock varied widely in their returns per \$100 worth of feed fed. The amount of feed fed per acre to productive livestock averaged \$6.74 on the general farms with the most livestock but only \$2.43 on the grain farms.

Differences in expenses are significant for the 3 groups of farms. Labor cost per crop acre was highest on the general farms with the most livestock and lowest on the grain farms. Horse and machinery cost per crop acre averaged \$4.07 on the general farms with the most livestock, \$3.30 on the general farms with the least livestock, and only \$2.98 on the grain farms. Improvement cost per acre ranged from \$.65 on the farms with 60 percent or more of the income from livestock to \$.40 on the grain farms, and land taxes ranged from \$.63 on the former group of farms to \$.82 on the latter.

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 8, 1939

Items	Total acres in farm		
	61 to 180	181 to 300	301 or more
Number of farms - - - - -	32	19	12
Acres per farm- - - - -	136	234	409
<u>Investments</u>			
Total per farm - - - - -	\$10,057	\$16,445	\$30,939
Total per acre - - - - -	74	70	76
Land per acre - - - - -	43	42	52
Improvements per acre - - - - -	10	8	8
Machinery per acre ^{1/} - - - - -	6.13	6.51	5.66
<u>Earnings</u>			
Per farm			
Gross earnings- - - - -	\$ 1,810	\$ 3,081	\$ 5,423
Gross expenses ^{2/} - - - - -	1,168	1,584	2,492
Net earnings - - - - -	642	1,497	2,931
Per acre			
Gross earnings- - - - -	\$ 13.33	\$ 13.17	\$ 13.25
Gross expenses ^{2/} - - - - -	8.60	6.77	6.09
Net earnings - - - - -	4.73	6.40	7.16
Rate earned on investment - - - - -	6.4%	9.1%	9.5%
Labor and management earnings - - - - -	\$ 597	\$ 1,070	\$ 1,748
<u>Size and Intensity</u>			
Percent land area tillable- - - - -	86.3	85.3	87.7
Percent tillable land in grain - - - - -	53.3	54.5	59.8
Percent in hay and pasture- - - - -	35.7	32.8	23.7
Feed fed per acre to productive L. S. - - - - -	\$ 5.88	\$ 4.52	\$ 3.40
Percent of income from productive L. S. - - - - -	66.1	48.9	37.8
Percent of income from grain- - - - -	9.3	27.9	44.4
Months of labor per 100 crop acres- - - - -	16.9	13.3	8.5
Total months of labor - - - - -	14.1	19.3	24.9
<u>Crop Yields Per Acre</u>			
Corn, bu. - - - - -	40.3	43.3	46.0
Wheat, bu.- - - - -	17.1	18.1	16.9
<u>Livestock Returns</u>			
Per \$100 feed fed - - - - -	\$ 169	\$ 162	\$ 161
Hog returns per litter- - - - -	79	69	83
Dairy returns per cow - - - - -	59	69	47
<u>Expense Factors</u>			
Labor cost per crop acre ^{2/} - - - - -	\$ 6.80	\$ 5.20	\$ 3.31
Labor cost per \$100 gross earnings- - - - -	31	25	18
Horse and machinery cost per crop A. ^{1/} - - - - -	3.96	3.23	3.09
Improvement cost per acre - - - - -	.71	.42	.44
Land tax per acre - - - - -	.79	.66	.72

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

Size of Farm As Related to Earnings

The farm records in Farming-Type Area 8, when sorted according to the total acres in the farm, indicate that the larger farms had a greater total investment in land, improvements, and equipment than did the smaller farms. The operators on the larger farms took in more money during the year than did the operators on the smaller farms; and after deductions were made for farm business expenditures and interest on the investment, the 12 largest farms had labor and management earnings which averaged \$1748 as contrasted with \$597 for the 32 smallest farms. The earnings, as measured by the rate earned on the investment, were also larger for the 12 largest farms. In years when the average rate earned on investment for groups of farms exceeds the capitalization rate (5 percent), the average labor and management earnings are higher on the larger farms than on the smaller ones, but these earnings are lower when the rate earned averages less than the capitalization rate.

The smaller farms were operated more intensively than were the larger farms. This variation was indicated by the higher gross earnings per acre, by the larger amount of feed fed per acre to productive livestock, and by the months of labor per 100 crop acres.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Farm Organization and Farm Earnings by Counties and Groups of Counties

Farming-type areas are formed by grouping together counties which are similar with respect to physical, economic, and biological characteristics. Although a classification of this kind is very useful for many purposes, no two counties within an area are exactly alike. A tabulation of farm account records by counties and groups of counties indicates some of these differences which are due to variations in quality of land, topography, amount of erosion, market outlets, weather conditions, and disease hazards. The effects of variations in these factors are indicated in the account records by differences in value of land per acre, taxes per acre, percent of land area tillable, size of farm, total acres in crops, percent of tillable land in important crops, crop yields, amount of feed fed to productive livestock, and the source of farm income (Tables 6 and 7).

In this report an average was calculated for Edwards county from which 30 records were received. In any tabulation containing a small number of records, part of the variation from county to county is due to the fact that the averages do not represent a cross section of the county.

The tabulations by counties and by groups of counties may be used by extension specialists, farm advisers, and county program-building committees to represent the type of farm organization and the level of operating efficiency attained by a selected group of progressive farmers in the various parts of a farming-type area. Since the personnel of the accounting group changes slowly, comparisons may be made from county to county and from year to year even though these records are from farms with efficiency which is higher than average.

TABLE 6.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 8, 1939

Items	Edwards ^{1/}	White, Lawrence, Wabash, Gallatin and Saline
Number of farms - - - - -	29	34
<u>Capital Investments</u>		
Land- - - - -	\$6,590	\$12,869
Farm improvements - - - - -	1,496	2,238
Horses- - - - -	342	452
Productive livestock: Cattle- - - - -	589	682
Hogs- - - - -	288	303
Sheep - - - - -	68	76
Poultry - - - - -	131	122
<u>Total productive livestock-</u> - - - - -	(1,076)	(1,183)
Feed and grain- - - - -	937	1,476
Machinery and equipment - - - - -	874	1,473
Automobile (farm share) - - - - -	104	144
<u>Totals-</u> - - - - -	<u>\$11,419</u>	<u>\$19,835</u>
<u>Receipts and Net Increases</u>		
Horses - - - - -	\$ --	\$ 5
Productive livestock: Cattle- - - - -	387	447
Dairy sales - - - - -	111	182
Hogs- - - - -	568	593
Sheep - - - - -	44	53
Poultry - - - - -	57	60
Egg sales - - - - -	236	160
<u>Total productive livestock-</u> - - - - -	(1,403)	(1,495)
Farm products used in household - - - - -	239	238
Feed and grain - - - - -	319	1,218
Labor off farm - - - - -	31	32
Miscellaneous - - - - -	9	18
AAA payments- - - - -	318	355
<u>Totals-</u> - - - - -	<u>\$ 2,319</u>	<u>\$ 3,361</u>
<u>Expenses and Net Decreases</u>		
Farm improvements - - - - -	\$ 97	\$ 126
Horses- - - - -	19	--
Productive livestock- - - - -	--	--
Feed and grain- - - - -	--	--
Machinery and equipment - - - - -	171	397
Automobile (farm share) - - - - -	84	80
Hired labor - - - - -	106	229
Miscellaneous - - - - -	19	21
Crop expense- - - - -	89	101
Livestock expense - - - - -	22	23
Taxes - - - - -	153	205
<u>Totals-</u> - - - - -	<u>\$ 760</u>	<u>\$ 1,182</u>
Receipts less expenses- - - - -	\$ 1,559	\$ 2,179
Family labor- - - - -	101	167
Returns for labor, capital, management- - - - -	1,458	2,012
Operator's labor- - - - -	440	404
Returns for capital and management- - - - -	1,018	1,608
<u>Rate Earned on Investment</u> - - - - -	8.9%	8.1%
Interest on investment- - - - -	\$ 571	\$ 992
Labor and Management Earnings - - - - -	887	1,020
Nonfarm income - - - - -	\$ 53	\$ 71

^{1/} Thirty or more records were completed, but certain ones were not used in the report because they were incomplete or not typical.

TABLE 7.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 8, 1939

Items	Edwards	White, Lawrence, Wabash, Gallatin, and Saline
Rate earned on investment- - - - -	8.9%	8.1%
Acres in farm- - - - -	174	254
Acres in crops - - - - -	106	171
Gross earnings per acre- - - - -	\$ 13.33	\$ 13.21
Total expenses per acre ^{2/} - - - - -	7.48	6.89
Net earnings per acre- - - - -	5.85	6.32
<u>Investments</u>		
Value of land per acre - - - - -	\$ 38	\$ 51
Value of improvements per acre - - - - -	9	9
Total investment per acre- - - - -	66	78
<u>Land Use</u>		
Percent of land area tillable- - - - -	85.1	87.3
Percent of tillable land in:		
Corn - - - - -	22.2	25.2
Oats - - - - -	7.9	6.0
Wheat- - - - -	18.0	21.9
Soybeans - - - - -	1.4	3.6
Other crops- - - - -	15.9	15.2
Legume hay and pasture - - - - -	21.6	20.2
Nonlegume hay and pasture- - - - -	13.0	7.9
<u>Crop Yields</u>		
Corn - - - - -	39.6	45.3
Oats - - - - -	26.1	20.6
Wheat- - - - -	18.3	17.0
Soybeans - - - - -	15.7	11.6
<u>Livestock Factors</u>		
Value of feed fed to productive L. S.- - - - -	\$955	\$1,019
Feed fed per acre to productive L. S.- - - - -	5.49	4.00
Returns per acre from productive L. S. - - - - -	9.03	6.58
Returns per \$100 worth of feed fed - - - - -	165	164
Returns per \$100 invested in cattle- - - - -	89	87
Poultry returns per hen- - - - -	2.07	2.47
Number of litters farrowed - - - - -	8.3	9.0
Number of pigs weaned per litter - - - - -	6.3	6.7
Returns per litter farrowed--- - - - -	\$ 78	\$ 75
Average number of cows milked- - - - -	3.1	4.0
Dairy returns per cow milked - - - - -	\$ 55	\$ 64
<u>Expense Factors</u>		
Machinery cost per crop acre ^{1/} - - - - -	\$ 2.10	\$ 2.78
Horses and machinery cost per crop acre ^{1/} - - - - -	3.44	3.38
Labor cost per crop acre ^{2/} - - - - -	5.78	4.48
Labor cost per \$100 gross earnings ^{2/} - - - - -	27	23
Number of work horses- - - - -	3.5	3.7
Value of feed fed to horses- - - - -	\$ 92	\$ 107
Improvement cost per acre- - - - -	.56	.50
Taxes per acre - - - - -	.88	.81

^{1/} Includes farm share of automobile.
^{2/} Includes operator's and family labor.

Influence of Price Changes on Illinois Farm Incomes

All feed and grain, livestock, and other farm property on accounting farms must be valued at both the beginning and the end of the year. Prices at inventory time, therefore, have a marked influence on farm earnings. The influence is greatest where large stocks or supplies are on hand at inventory time; for example, a much larger supply of farm products was found on Illinois farms December 31, 1939, than a year earlier. In fact, grain and livestock inventories have been increasing on Illinois farms since the drouth of 1936 as a result of three years of exceptionally high crop yields and the influence of Agricultural Adjustment Programs which have caused farmers to grow more hay and pasture and to store corn on farms under seal. According to estimates made by the Bureau of Agricultural Economics, U.S.D.A., 356 million bushels of corn were on Illinois farms January 1, 1940, as compared with 325 million bushels January 1, 1939.

Livestock numbers on Illinois farms increased sharply in 1939 even though 62 million bushels of 1937 and 1938 corn were placed under seal at the end of the year and 83 million bushels of 1939 corn were sealed by March 31, 1940. The following data indicate the percentage increase in livestock numbers on 2520 accounting farms in Illinois from the beginning to the end of 1939: dairy cows, 2 percent; beef cows, 21 percent; feeder cattle, 17 percent; feeder lambs, 24 percent; brood sows, 4 percent; spring pigs, 38 percent; summer pigs, 23 percent; and fall pigs, 28 percent. Hog numbers have been increasing since 1935 and have now attained record levels; for example, 13.5 sows farrowed per farm on accounting farms in 1939 as contrasted with 9.9 sows farrowed per farm in 1938. The increase in beef cattle numbers is a part of the general up-swing taking place over the entire United States, and it may be expected to continue for several years.

These data indicate that supplies of both feed and livestock were great at the time the 1939 closing inventory was taken than at any other inventory period in several years, and price changes, therefore, are important in interpreting farm earnings for the state and for farming-type areas in 1939.

Prices of important farm products.--Prices for all crops as well as for beef cattle and sheep were higher at the end of 1939 than they were at the beginning, whereas prices for horses, hogs, and poultry were lower. Most of these price increases occurred during the last four months of the year.

December 15, Illinois Farm Prices

	<u>1938</u>	<u>1939</u>	<u>Increase</u>	<u>Decrease</u>
Corn, bu.	\$.42	\$.47	\$.05	\$ --
Oats, bu.	.24	.35	.11	--
Wheat, bu.	.57	.88	.31	--
Soybeans, bu.	.65	.95	.30	--
Hay, tons	6.20	6.50	.30	--
Horses, hd.	88.00	85.00	--	3.00
Hogs, cwt.	7.00	5.10	--	1.90
Beef cattle, cwt.	7.70	8.30	.60	--
Sheep, cwt.	3.45	3.60	.15	--
Chickens, lb.	.13	.11	--	.02

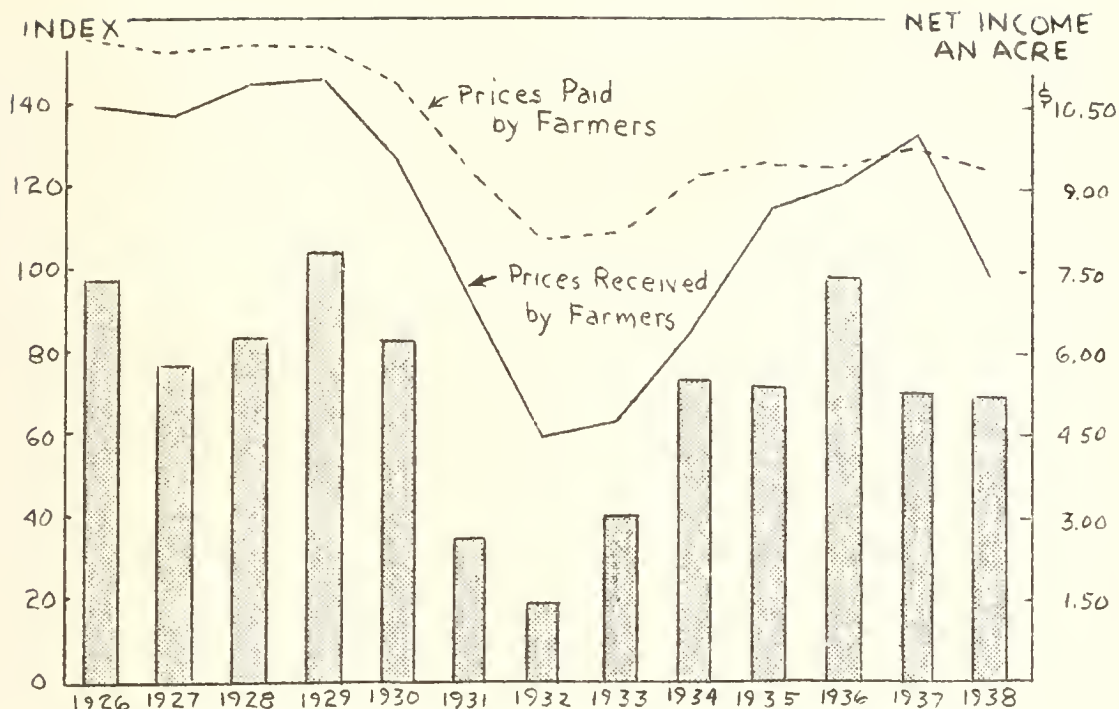


Fig. 1.--Average net cash income an acre (unpaid labor deducted) on Illinois accounting farms, prices paid by farmers in the United States, and prices received by Illinois farmers, 1926-1938.

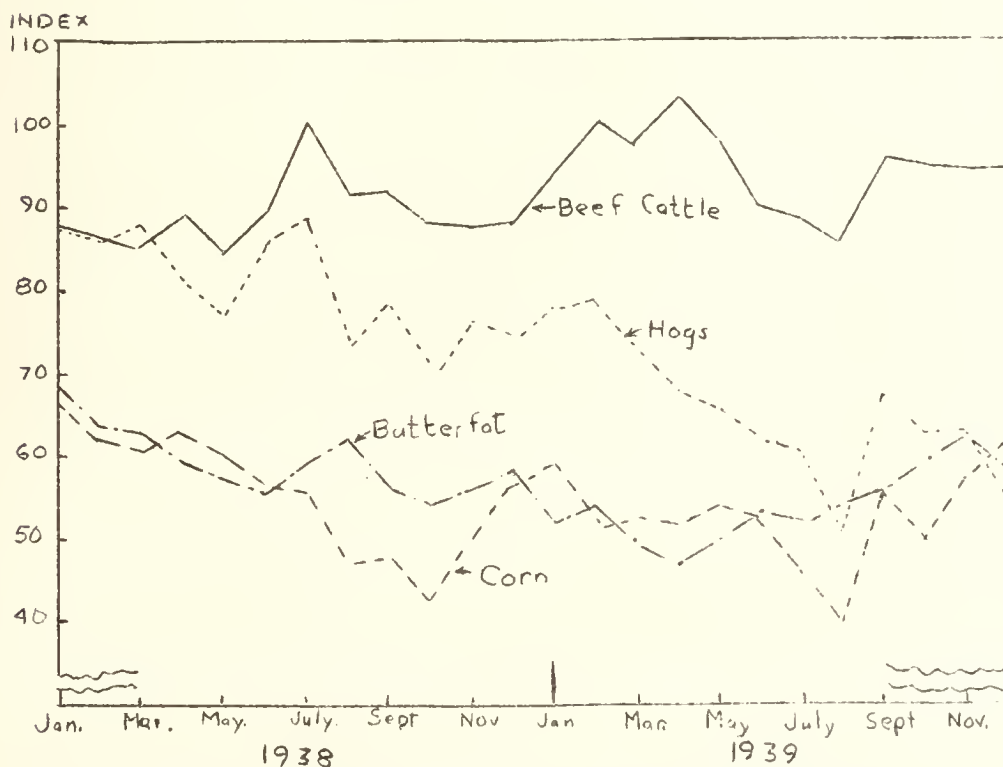


Fig. 2.--Monthly price indices of the average farm prices of corn, hogs, beef cattle, and butterfat, 1938 and 1939. (1924-1929 = 100)

Farm earnings are influenced by the average price received for farm products during the year as well as by the values at inventory time. Although nearly all commodities were higher in price at the end of the year than at the beginning, prices received for the following commodities averaged lower in 1939 than in 1938 by these amounts: corn, 2 cents per bushel; wheat and soybeans, 1 cent per bushel; hogs, \$1.50 per hundred; butterfat, 2 cents per pound; eggs, 3 cents per dozen; and chickens, 2 cents per pound. The prices for other commodities averaged higher in 1939 than in 1938 by the following amounts: oats, 4 cents per bushel; beef cattle, 50 cents per hundred; lambs, 42 cents per hundred; wool, 4 cents per pound; and apples, 12 cents per bushel.

Variation in earnings between the various type-of-farming areas is influenced by the relative prices of grains, livestock, and livestock products. In 1939 as in 1938 livestock had a price advantage over grain, but the advantage was not as marked as it was in 1938. The prices for meat animals dropped from 116 to 110 percent of the 1910-14 average, grains from 74 to 72 percent, chickens and eggs from 106 to 94 percent, and dairy products from 106 to 104 percent.

The corn-hog ratio also narrowed during the year to the disadvantage of the hog enterprise. The amount of corn equal in value to 100 pounds of hogs dropped from 19 bushels in February to 11 bushels in December (based on farm prices). Unfavorable feeding ratios will discourage expansion in hog numbers in 1940.

Crop Yields in Illinois, 1939

Crop yields in Illinois in 1939, as in 1938 and 1937, were unusually high. The weighted average yield of corn, oats, wheat, and soybeans was 133 percent of the 10-year average, 1929-1938. Corn contributed more than did any other crop to the high average yields. The yields of the various crops expressed in percentages of the 1929-1938 averages were: corn, 150; soybeans, 129; wheat, 121; and oats, 97.

Crop yields in all counties except Massac were above the 10-year average (1929-1938 = 100), but wide variations in yields occurred between individual counties and groups of counties. Four counties along the Ohio River had crop-yield indices under 105. In contrast to these counties, 31 were over 136. Many of the counties with the highest yields were in two groups, those located in southwestern and east north central Illinois. Crop-yield indices were adversely affected in southeastern Illinois by the wheat crop and in northern Illinois by low oat yields. Fifty-five counties, which were well-distributed over the state, had crop-yield indices from 121 to 135.



Fig. 3.--Crop yields for 1939, compared with 10-year average yields (1929-1938) for the same county. The indices are based on county yields of corn, oats, wheat, and soybeans. (Data from Illinois Cooperative Crop Reporting Service.)

UNIVERSITY OF ALBANY

FARM BUSINESS REPORT . . . 1939



FARMING-TYPE AREA NINE Southern Fruit and Vegetable Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

Annual Farm Business Report

ON FIFTY-SIX FARMS IN FARMING-TYPE AREA 9, 1939

By P. E. Johnston, J. B. Cunningham, and E. N. Searls^{1/}

Farm earnings of accounting farms in Farming-Type Area 9 were higher in 1939 than in 1938. The net earnings per acre averaged \$3.31 in 1939, \$2.73 in 1938, and \$3.41 in 1937. The items considered in calculating the net earnings included inventory changes, cash receipts, cash expenses, the value of the farm products used in the household (in 1938 and 1939 only), and unpaid family labor (Table 1).



▨ Farming-Type Area 9
Fruit and Vegetable

Since the value of farm products used in the household was not included in the records prior to 1938, the earnings for 1938 and 1939 are not strictly comparable to those for other years. The value per acre of farm products used was \$1.27 in 1938 and \$1.23 in 1939.

The accounting farms were larger than average, crop yields were above average, and the farms as a whole were operated with efficiency which was greater than average. Therefore, the figures contained in this report represent conditions which are better than average for this area. This fact is borne out by survey records taken in various areas of the state.

High crop yields, accompanied by increased industrial activity and improved demand for farm products especially during the latter half of the year, were the principal factors producing higher earnings in 1939 (Figs. 1, 2, and 3).

General farms, on which considerable grain and livestock was produced, predominated among the accounting farms even tho Farming-Type Area 9 is the Fruit and Vegetable Area of the state (Table 4).

^{1/} R. J. Mutti supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm accounts project was conducted in cooperation with the farm bureaus in the following counties and was supervised by the farm advisers indicated:

W. C. Anderson, Johnson County
J. R. Strubinger, Massac County
E. A. Bierbaum, Union County

J. G. McCall, Jackson-Perry Counties
A. A. Pease, Pulaski-Alexander Counties
G. C. Smith, Pope-Hardin Counties

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 9, 1936-1939

Items	Your farm	Average of all farms in area		
		1939	1938	1937
Number of farms- - - - -	--	56	37	30
<u>Inventory Changes</u>				
Farm improvements ^{1/} - - - - -	\$ _____	\$ -79	\$ -18	\$ -66
Livestock- - - - -	_____	16	44	3
Feed and grain - - - - -	_____	61	-122	198
Machinery and equipment ^{2/} - - - - -	_____	9	134	190
Automobile (farm share)- - - - -	_____	5	13	--
Totals - - - - -	\$ _____	\$ 12	\$ 51	\$ 325
<u>Cash Receipts</u>				
Farm improvements- - - - -	\$ _____	\$ 20	\$ --	\$ 1
Horses - - - - -	_____	58	99	78
Productive livestock: Cattle - - - - -	_____	294	290	235
Dairy sales- - - - -	_____	298	312	264
Hogs - - - - -	_____	360	667	636
Sheep- - - - -	_____	40	12	13
Poultry- - - - -	_____	60	65	95
Egg sales- - - - -	_____	124	176	206
Total productive livestock - - - - -	(_____)	(1,176)	(1,522)	(1,449)
Feed and grain ^{2/} - - - - -	_____	1,169	504	766
Machinery and equipment ^{2/} - - - - -	_____	100	93	200
Automobile (farm share)- - - - -	_____	13	24	--
Labor off farm - - - - -	_____	21	24	120
Miscellaneous- - - - -	_____	15	3	1
AAA payments - - - - -	_____	259	145	188
Totals - - - - -	\$ _____	\$2,831	\$2,414	\$2,803
<u>Cash Expenses</u>				
Farm improvements ^{1/} - - - - -	\$ _____	\$ 168	\$ 127	\$ 115
Horses - - - - -	_____	46	56	74
Productive livestock: Cattle - - - - -	_____	94	149	39
Hogs - - - - -	_____	25	48	35
Sheep- - - - -	_____	3	4	5
Poultry- - - - -	_____	13	14	21
Total productive livestock - - - - -	(_____)	(135)	(215)	(100)
Feed and grain - - - - -	_____	451	219	302
Machinery and equipment ^{2/} - - - - -	_____	373	444	708
Automobile (farm share)- - - - -	_____	92	117	--
Hired labor- - - - -	_____	411	195	187
Miscellaneous- - - - -	_____	25	16	18
Crop expense - - - - -	_____	75	72	159
Livestock expense- - - - -	_____	24	13	19
Taxes- - - - -	_____	135	141	140
Totals - - - - -	\$ _____	\$1,935	\$1,615	\$1,622
<u>Summary</u>				
Cash balance - - - - -	\$ _____	\$ 896	\$ 799	\$ 981
Farm products used in household ^{4/} - - - - -	_____	229	234	--
Total inventory change - - - - -	_____	12	51	325
Receipts less expenses - - - - -	_____	1,137	1,134	1,306
Total unpaid labor - - - - -	_____	522	521	605
Net earnings per farm- - - - -	\$ _____	\$ 615	\$ 613	\$ 701
Net earnings per acre- - - - -	\$ _____	\$ 3.31	\$ 2.73	\$ 3.41

1/ Includes trees and plants on fruit and truck farms for 1939.

2/ Includes farm share of automobile for 1937.

3/ Includes income from fruit and vegetables for 1939.

4/ Not included as income for 1937.

Inventory Changes, Cash Receipts, Cash Expenses, and Earnings

Inventory changes.--The year 1939 was the third consecutive year of increasing inventories, the increases averaging \$12 in 1939, \$51 in 1938, and \$325 in 1937 (Table 1). These increases were made despite decreases in value of improvements. The largest increases in 1939 were in feed and grain. The increased value of feed and grain represented higher prices at the end of the year as there were only slight changes in the quantities of grain on hand (Page 1 and Fig. 2). The average amounts of grain on hand in Area 9 at the two inventory periods follow:

	<u>Beginning of year (bushels)</u>	<u>End of year (bushels)</u>
Corn	699	707
Oats	73	51
Wheat	43	56

Cash receipts.--Cash receipts reached the highest level in three years, averaging \$2,831 in 1939 (Table 1). AAA receipts and sales of feed and grain (including fruit and vegetables) were larger in 1939 than in 1938, but livestock sales were smaller. The larger AAA receipts were mainly due to a doubling-up in payments, many farmers receiving payments in 1939 for participation in both the 1938 and 1939 programs.

Cash expenses.--Cash expenses were larger in 1939 than in either 1938 or 1937. Less money was spent for productive livestock and machinery in 1939 than in 1938, although more was spent for improvements, feed and grain, and labor.

Earnings.--Cash receipts exceeded cash expenses in 1939 by \$896, or by a larger margin than for 1938 but by a smaller margin than for 1937. Cash balance, the difference between these receipts and expenses, is the average amount of money available for family living expenses, interest, debt payments, and savings.

The amounts deducted for operator's and family labor remained rather uniform during the 4-year period, a difference of only \$84 occurring between the low year, 1938, and the high year, 1937. The uniformity in valuation was due to the fact that approximately the same amount of family labor was available each year and to the fact that the same rate (\$40 per month) was charged for the physical labor of the operator and other mature members of the family.

The net earnings per farm averaged \$615 in 1939 as compared with \$613 for 1938. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding the value of farm products used in the household and the inventory increases to the cash balance and by subtracting the value of unpaid labor from the resulting total. Therefore, this figure indicates the earning power of the business and determines the real value of the farm and its equipment.

TABLE 2.--INVESTMENTS, RECEIPTS, EXPENSES, AND EARNINGS
Accounting Farms in Farming-Type Area 9, 1939

Items	Your farm	Average of all farms	Land area tillable	
			85 percent or more	Less than 85 percent
Number of farms - - - - -	--	56	31	25
<u>Capital Investments</u>				
Land- - - - -	\$ _____	\$ 5,157	\$ 5,299	\$ 4,981
Farm improvements - - - - -	_____	3,315	4,023	2,438
Horses - - - - -	_____	392	377	410
Productive livestock: Cattle- - - - -	_____	550	516	594
Hogs- - - - -	_____	235	259	205
Sheep - - - - -	_____	62	47	79
Poultry - - - - -	_____	91	80	105
<u>Total productive livestock- - - - -</u>	(_____)	(938)	(902)	(983)
Feed and grain - - - - -	_____	768	746	797
Machinery and equipment - - - - -	_____	995	1,065	907
Automobile (farm share) - - - - -	_____	124	141	102
<u>Totals- - - - -</u>	\$ _____	\$11,689	\$12,553	\$10,618
<u>Receipts and Net Increases</u>				
Horses - - - - -	\$ _____	\$ 9	\$ 11	\$ 9
Productive livestock: Cattle- - - - -	_____	266	244	294
Dairy sales - - - - -	_____	298	320	271
Hogs- - - - -	_____	306	312	297
Sheep - - - - -	_____	25	16	37
Poultry - - - - -	_____	41	29	55
Egg sales - - - - -	_____	124	121	128
<u>Total productive livestock- - - - -</u>	(_____)	(1,060)	(1,042)	(1,082)
Farm products used in household - - - - -	_____	229	203	262
Feed and grain - - - - -	_____	779	948	569
Labor off farm - - - - -	_____	21	22	19
Miscellaneous - - - - -	_____	15	7	24
AAA payments- - - - -	_____	259	239	285
<u>Totals- - - - -</u>	\$ _____	\$ 2,372	\$ 2,472	\$ 2,250
<u>Expenses and Net Decreases</u>				
Farm improvements - - - - -	\$ _____	\$ 227	\$ 271	\$ 173
Horses - - - - -	_____	--	--	--
Productive livestock- - - - -	_____	--	--	--
Feed and grain- - - - -	_____	--	--	--
Machinery and equipment - - - - -	_____	264	324	190
Automobile (farm share) - - - - -	_____	74	71	79
Hired labor - - - - -	_____	411	584	196
Miscellaneous - - - - -	_____	25	32	16
Crop expense- - - - -	_____	75	92	54
Livestock expense - - - - -	_____	24	25	24
Taxes - - - - -	_____	135	142	125
<u>Totals- - - - -</u>	\$ _____	\$ 1,235	\$ 1,541	\$ 857
Receipts less expenses- - - - -	\$ _____	\$ 1,137	\$ 931	\$ 1,393
Family labor- - - - -	_____	120	125	116
Returns for labor, capital, mgt.- - - - -	_____	1,017	806	1,277
Operator's labor- - - - -	_____	402	387	420
Returns for capital and mgt.- - - - -	_____	615	419	857
<u>Rate Earned on Investment - - - - -</u>	_____ %	5.3%	3.3%	8.1%
Interest on investment- - - - -	\$ _____	\$ 585	\$ 628	\$ 531
Labor and Management Earnings - - - - -	_____	432	178	746
<u>Nonfarm income- - - - -</u>	\$ _____	\$ 147	\$ 181	\$ 105

Variation in farm earnings.---A wide variation was found in earnings on the farms in Area 9; for example, 17 farms earned less than 3 percent on the investment, with an average loss of 5.4 percent, but in contrast 22 farms earned 9 percent or more, with an average rate earned of 12.6 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had a loss of \$933 for labor and management earnings as contrasted with a gain of \$1,458 for the latter group. By studying the reasons for these variations, farm operators can improve their chances of financial success. The variation in earnings and in size of farm for all records in the areas was as follows:

Rate earned on investment (percent)	Number of farms	Average rate earned (percent)	Acres per farm	Capital in-vested per farm	Gross earnings per farm	Net earnings per farm	Labor and management earnings
Less than 3	17	-5.4	184	\$12,671	\$2,108	\$ -686	\$ -933
3 to 9	17	5.9	162	8,298	1,687	493	470
9 or more	22	12.6	205	13,551	4,123	1,714	1,458

Comparison of Farms According to Percent of Land Area Tillable

The 56 farms were divided into two groups according to the percent of land area tillable. Of this total number of farms, 31 had 85 percent or more of land area tillable, and 25 had less than 85 percent tillable. The average percent tillable was 91.2 for the former group and 68.8 for the latter group.

There was a tendency for the farms with the larger percent of land area tillable to have low-producing gray prairie soil and for the farms with the smaller percent of land area tillable to have rough land associated with small areas of high-producing bottomland.

This grouping of farms gives each farmer an opportunity to compare his farm with the average of other farms having a similar percent of land area tillable as well as with the average of all accounting farms (Tables 2 and 3).

The capital investment averaged \$12,553, or \$74 per acre, for the group of farms having the larger percent of land area tillable, as compared with a capital investment averaging \$10,618, or \$51 per acre, for the group of farms having the smaller percent of land area tillable.

The receipts and net increases averaged \$222 larger and expenses and net decreases \$684 larger on farms having the larger percent of land area tillable than on the farms having the smaller percent of land area tillable. The livestock receipts were \$40 smaller for the farms with the larger percent of land area tillable, whereas the grain receipts were \$379 larger. The rate earned on investment was 3.3 percent and 8.1 percent and the labor and management earnings were \$178 and \$746, respectively, for the two groups of farms.

The farms with the larger percent of land area tillable were 38 acres smaller than were those with the smaller percent of land area tillable; yet the former had 10 acres more land in crops. The amount of livestock per farm was practically the same for both groups of farms, as indicated by the value of feed fed to productive livestock and the capital invested in productive livestock (Tables 2 and 3).

TABLE 3.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 9, 1939

Items	Your farm	Average of all farms	Land area tillable	
			85 percent or more	Less than 85 percent
Rate earned on investment- - - - -	%	5.3%	3.3%	8.1%
Acres in farm- - - - -		186	169	207
Acres in crops - - - - -		98	102	92
Gross earnings per acre- - - - -	\$	\$ 12.77	\$ 14.66	\$ 10.86
Total expenses per acre ^{2/} - - - - -		9.46	12.18	6.72
Net earnings per acre- - - - -		3.31	2.48	4.14
<u>Investments</u>				
Value of land per acre - - - - -	\$	\$ 28	\$ 31	\$ 24
Value of improvements per acre - - - - -		18	24	12
Total investment per acre- - - - -		63	74	51
<u>Land Use</u>				
Percent of land area tillable- - - - -		80.0	91.2	68.8
Percent of tillable land in:				
Corn - - - - -		16.8	16.3	17.6
Oats - - - - -		2.8	3.2	2.1
Wheat- - - - -		9.1	7.9	10.7
Soybeans - - - - -		.9	.9	1.0
Other crops- - - - -		21.5	23.1	19.3
Legume hay and pasture - - - - -		29.0	29.2	28.6
Nonlegume hay and pasture- - - - -		19.9	19.4	20.7
<u>Crop Yields</u>				
Corn - - - - -		39.0	36.8	41.6
Wheat- - - - -		16.8	16.4	17.4
<u>Livestock Factors</u>				
Value of feed fed to prod. L. S. - - - - -	\$	\$706	\$692	\$723
Feed fed per acre to prod. L. S. - - - - -		3.80	4.10	3.49
Returns per acre from prod. L. S.- - - - -		6.58	7.06	6.10
Returns per \$100 worth of feed fed - - - - -		173	162	175
Returns per \$100 invested in cattle- - - - -		108	112	103
Poultry returns per hen- - - - -		2.31	2.18	2.45
Number of litters farrowed - - - - -		8.9	10.2	7.5
Number of pigs weaned per litter - - - - -		5.3	5.1	5.3
Returns per litter farrowed- - - - -	\$	\$ 55	\$ 50	\$ 63
Average number of cows milked- - - - -		5.1	5.0	5.2
Dairy returns per cow milked - - - - -	\$	\$ 69	\$111	\$ 64
<u>Expense Factors</u>				
Machinery cost per crop acre ^{1/} - - - - -	\$	\$ 3.46	\$ 3.86	\$ 2.92
Horse and machinery cost per crop A. - - - - -		4.45	4.76	4.00
Labor cost per crop acre ^{2/} - - - - -		9.33	10.51	7.73
Labor cost per \$100 gross earnings ^{2/} - - - - -		38	43	32
Number of work horses- - - - -		3.4	3.5	3.3
Value of feed fed to horses- - - - -	\$	\$106	\$102	\$109
Improvement cost per acre- - - - -		1.22	1.61	.84
Taxes per acre - - - - -		.73	.84	.60

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS,
FARMS WITH LESS THAN 85 PERCENT OF THE LAND AREA TILLABLE

Accounting Farms in Farming-Type Area 9, 1939

The numbers above the lines across the middle of the page are the averages for the 25 farms included in this group for the factors named at the top of the page. By drawing a line across each column at the number measuring the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings								Factors that affect expenses			
			Percent tillable land in legume hay and pasture	Crop yields		Feed fed per acre to prod. L. S.	Returns per \$100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked	Total expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Labor cost per \$100 gross earnings
				Corn, bu.	Wheat, bu.									
18	357	21	44	62	27	8	225	3.95	113	114	--	1.00	3	12
16	327	19	41	58	25	7	215	3.65	103	104	--	1.60	4	16
14	297	17	38	54	23	6	205	3.35	93	94	1	2.20	5	20
12	267	15	35	50	21	5	195	3.05	83	84	3	2.80	6	24
10	237	13	32	46	19	4	185	2.75	73	74	5	3.40	7	28
8.1	207	10.86	28.6	41.6	17.4	3.49	175	2.45	63	64	6.72	4.00	7.73	32
6	177	9	26	38	15	2	165	2.15	53	54	9	4.60	9	36
4	147	7	23	34	13	1	155	1.85	43	44	11	5.20	10	40
2	117	5	20	30	11	--	145	1.55	33	34	13	5.80	11	44
0	87	3	17	26	9	--	135	1.25	23	24	15	6.40	12	48
-2	57	1	14	22	7	--	125	.95	13	14	17	7.00	13	52

TABLE 4.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 9, 1939

Items	Source of income			
	Grain 40%	Fruit and truck	General farms	
			L.S. 60%-	L.S. 60% +
Number of farms - - - - -	5	12	21	18
Percent income from prod. L. S. - - -	24.2	22.5	48.2	75.7
Percent income from crops - - - - -	53.1	67.5	18.7	--
<u>Investments</u>				
Total per farm- - - - -	\$11,723	\$15,788	\$11,171	\$ 9,552
Total per acre- - - - -	57	97	52	60
Land per acre - - - - -	34	30	25	28
Improvements per acre - - - - -	5	49	10	13
Machinery per acre ^{1/} - - - - -	5.96	8.20	5.19	5.87
<u>Earnings</u>				
Per farm				
Gross earnings- - - - -	\$ 2,517	\$ 3,549	\$ 2,157	\$ 1,825
Gross expenses ^{2/} - - - - -	1,425	3,214	1,465	1,246
Net earnings- - - - -	1,092	335	692	579
Per acre				
Gross earnings- - - - -	\$ 12.19	\$ 21.85	\$ 9.96	\$ 11.41
Gross expenses ^{2/} - - - - -	6.90	19.79	6.76	7.79
Net earnings- - - - -	5.29	2.06	3.20	3.62
Rate earned on investment - - - - -	9.3%	2.1%	6.2%	6.1%
Labor and mgt. earnings - - - - -	\$ 858	\$ -69	\$ 552	\$ 507
<u>Size and Intensity</u>				
Acres per farm - - - - -	206	162	216	160
Percent land area tillable- - - - -	85.6	79.4	78.2	81.3
Percent tillable land in grain- - - - -	44.2	18.4	37.5	25.7
Percent in hay and pasture- - - - -	32.2	37.7	47.3	65.2
Feed fed per acre to prod. L. S.- - - - -	\$ 2.16	\$ 3.09	\$ 3.45	\$ 5.42
Months of labor per 100 crop A. - - - - -	12.6	37.8	16.1	24.3
Total months of labor - - - - -	18.5	36.7	18.2	16.3
<u>Crop Yields Per Acre</u>				
Corn, bu. - - - - -	36.5	34.6	40.0	41.1
Wheat, bu.- - - - -	18.3	21.6	15.3	18.8
<u>Livestock Returns</u>				
Per \$100 feed fed - - - - -	\$ 167	\$ 181	\$ 169	\$ 175
Hog returns per litter- - - - -	41	32	71	55
Dairy returns per cow - - - - -	51	72	63	78
<u>Expense Factors</u>				
Labor cost ^{2/}				
Per crop acre - - - - -	\$ 4.76	\$ 18.78	\$ 6.19	\$ 9.17
Per \$100 gross earnings - - - - -	28	51	32	34
Horse and machinery cost				
per crop acre ^{1/} - - - - -	3.17	6.31	3.86	4.55
Improvement cost per acre - - - - -	.35	3.15	.85	.82
Land tax per acre - - - - -	.96	.56	.58	.74

1/ Includes farm share of automobile.

2/ Includes operator's and family labor.

Since much of the productive bottomland on the accounting farms was associated with untillable land on which the farmsteads were located and since much of the tillable prairie land was relatively unproductive, no apparent relationship existed between the percent of land area tillable and land use or between land area tillable and crop yields.

Larger crop yields, amounting to 4.8 bushels of corn and 1.0 bushel of wheat, were secured on the farms with the smaller percent of land area tillable.

Livestock efficiency, as measured by returns per \$100 worth of feed fed, poultry returns per hen, and returns per litter farrowed, was lower on that group of farms with the larger percent of tillable land than on that group with the smaller percent of tillable land, but the efficiency, as measured in terms of dairy returns per cow, was larger on the former group of farms.

The operating expenses per acre averaged \$12.18 on the farms with the most tillable land and \$6.72 on the farms with the least tillable land. The combined cost per crop acre for labor, machinery, and horses was \$3.54 larger on the farms with the larger percent of tillable land, but the combined cost per acre for improvements and taxes was \$1.01 smaller.

Source of Income

The 56 farms were divided into 4 groups according to source of income (Table 4). The items in this table, for the most part, were made to correspond with the items given in Table 3; therefore, a farmer may compare the data in the "Your farm" column of Table 3 with the "Source of income" column in Table 4, which corresponds to the classification for his own farm.

In a comparison of the groups of farms the fact that conditions affecting production and price relationships vary from year to year should be kept in mind. Therefore, the average differences in earnings in 1939 are not necessarily typical of the variations that may be expected over a long period of years. The following items, for example, indicate that generally the grain farms were located on the better land: high value of land per acre, large percent of land area tillable, large percent of land in grain, and land tax per acre.

The returns per \$100 feed that are necessary to pay for feed (including pasture) and other costs, according to 5-year averages of complete cost studies (1933-1937), are as follows: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117. There is little wonder, therefore, that the 4 groups of accounting farms with different classes and proportions of livestock varied widely in their returns per \$100 worth of feed fed. The amount of feed fed per acre to productive livestock averaged \$5.42 on the general farms with the most livestock but only \$2.16 on the grain farms.

Differences in expenses are significant for the 4 groups of farms. Labor input was highest on the fruit and truck farms, where 36.7 months of labor were used, and lowest on the grain farms, where 18.5 months of labor were used; horse and machinery cost per crop acre averaged \$6.31 on the fruit and truck farms, \$4.55 on the general farms with the most livestock, \$3.86 on the general farms with the least livestock, and only \$3.17 on the grain farms; improvement costs per acre ranged from \$.35 on the grain farms to \$3.15 on the fruit and truck farms; and land taxes ranged from \$.56 on the fruit and truck farms to \$.96 on the grain farms.

TABLE 5.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 9, 1939

Items	Total acres in farm		
	51 to 130	131 to 210	211 or more
Number of farms - - - - -	13	24	19
Acres per farm - - - - -	90	169	273
<u>Investments</u>			
Total per farm- - - - -	\$5,856	\$11,714	\$15,648
Total per acre- - - - -	65	69	57
Land per acre - - - - -	30	28	27
Improvements per acre - - - - -	14	24	14
Machinery per acre ^{1/} - - - - -	4.89	6.48	5.92
<u>Earnings</u>			
Per farm			
Gross earnings- - - - -	\$1,296	\$ 2,556	\$ 2,879
Gross expenses ^{2/} - - - - -	1,000	2,116	1,825
Net earnings - - - - -	296	440	1,054
Per acre			
Gross earnings- - - - -	\$ 14.41	\$ 15.16	\$ 10.54
Gross expenses ^{2/} - - - - -	11.12	12.55	6.68
Net earnings - - - - -	3.29	2.61	3.86
Rate earned on investment - - - - -	5.1%	3.8%	6.7%
Labor and management earnings - - - - -	\$ 382	\$ 235	\$ 715
<u>Size and Intensity</u>			
Percent land area tillable- - - - -	83.9	85.7	74.8
Percent tillable land in grain- - - - -	29.0	25.2	37.5
Percent in hay and pasture- - - - -	55.7	51.0	45.4
Feed fed per acre to prod. L. S.- - - - -	\$ 5.46	\$ 3.49	\$ 3.67
Percent of income from prod. L. S.- - - - -	65.5	35.1	48.9
Percent of income from grain- - - - -	11.9	47.2	23.1
Months of labor per 100 crop acres- - - - -	30.2	26.5	16.3
Total months of labor - - - - -	14.4	24.9	22.3
<u>Crop Yields Per Acre</u>			
Corn, bu. - - - - -	37.8	36.4	41.4
Wheat, bu.- - - - -	19.8	17.0	16.3
<u>Livestock Returns</u>			
Per \$100 feed fed - - - - -	\$ 196	\$ 180	\$ 161
Hog returns per litter- - - - -	68	65	47
Dairy returns per cow - - - - -	76	63	70
<u>Expense Factors</u>			
Labor cost per crop acre ^{2/} - - - - -	\$ 11.79	\$ 12.28	\$ 6.19
Labor cost per \$100 gross earnings- - - - -	43	45	29
Horse and machinery cost per crop acre ^{1/} - - - - -	4.93	5.17	3.70
Improvement cost per acre - - - - -	1.23	1.66	.87
Land tax per acre - - - - -	.72	.67	.61

^{1/} Includes farm share of automobile.

^{2/} Includes operator's and family labor.

Size of Farm As Related to Earnings

The farm records in Farming-Type Area 9, when sorted according to the total acres in the farm, indicate that the larger farms had a greater total investment in land, improvements, and equipment than did the smaller farms. The operators on the larger farms took in more money during the year than did the operators on the smaller farms; and after deductions were made for farm business expenditures and interest on the investment, the 19 largest farms had labor and management earnings which averaged \$715 as contrasted with \$382 for the 13 smallest farms. The earnings, as measured by the rate earned on the investment, were also higher for the 19 largest farms. In years when the average rate earned on investment for groups of farms exceeds the capitalization rate (5 percent), the average labor and management earnings are higher on the larger farms than on the smaller ones, but these earnings are lower when the rate earned averages less than the capitalization rate.

The smallest farms were operated more intensively than were the largest farms. This variation was indicated by the higher gross earnings per acre, by the larger proportion of total land tillable, by the higher land values, by the larger amount of feed fed per acre to productive livestock, and by more months of labor per 100 crop acres.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Farm Organization and Farm Earnings by Counties and Groups of Counties

Farming-type areas are formed by grouping together counties which are similar with respect to physical, economic, and biological characteristics. Although a classification of this kind is very useful for many purposes, no two counties within an area are exactly alike. Averages are calculated for each county in the state from which 30 or more records are received. Such tabulations of farm account records by counties and groups of counties indicate some of these differences which are due to variations in quality of land, topography, amount of erosion, market outlets, weather conditions, and disease hazards. The effects of variations in these factors are indicated in the account records by differences in value of land per acre, taxes per acre, percent of land area tillable, size of farm, total acres in crops, percent of tillable land in important crops, crop yields, amount of feed fed to productive livestock, and the source of farm income.

The tabulations by counties and by groups of counties may be used by extension specialists, farm advisers, and county program-building committees to represent the type of farm organization and the level of operating efficiency attained by a selected group of progressive farmers in the various parts of a farming-type area. Since the personnel of the accounting group changes slowly, comparisons may be made from county to county and from year to year even though these records are from farms with efficiency which is higher than average.

Influence of Price Changes on Illinois Farm Incomes

All feed and grain, livestock, and other farm property on accounting farms must be valued at both the beginning and the end of the year. Prices at inventory time, therefore, have a marked influence on farm earnings. The influence is greatest where large stocks or supplies are on hand at inventory time; for example, a much larger supply of farm products was found on Illinois farms December 31, 1939, than a year earlier. In fact, grain and livestock inventories have been increasing on Illinois farms since the drouth of 1936 as a result of three years of exceptionally high crop yields and the influence of Agricultural Adjustment Programs which have caused farmers to grow more hay and pasture and to store corn on farms under seal. According to estimates made by the Bureau of Agricultural Economics, U.S.D.A., 356 million bushels of corn were on Illinois farms January 1, 1940, as compared with 325 million bushels January 1, 1939.

Livestock numbers on Illinois farms increased sharply in 1939 even though 62 million bushels of 1937 and 1938 corn were placed under seal at the end of the year and 83 million bushels of 1939 corn were sealed by March 31, 1940. The following data indicate the percentage increase in livestock numbers on 2520 accounting farms in Illinois from the beginning to the end of 1939; dairy cows, 2 percent; beef cows, 21 percent; feeder cattle, 17 percent; feeder lambs, 24 percent; brood sows, 4 percent; spring pigs, 38 percent; summer pigs, 23 percent; and fall pigs, 28 percent. Hog numbers have been increasing since 1935 and have now attained record levels; for example, 13.5 sows farrowed per farm on accounting farms in 1939 as contrasted with 9.9 sows farrowed per farm in 1938. The increase in beef cattle numbers is a part of the general up-swing taking place over the entire United States, and it may be expected to continue for several years.

These data indicate that supplies of both feed and livestock were greater at the time the 1939 closing inventory was taken than at any other inventory period in several years, and price changes, therefore, are important in interpreting farm earnings for the state and for farming-type areas in 1939.

Prices of important farm products.--Prices for all crops as well as for beef cattle and sheep were higher at the end of 1939 than they were at the beginning, whereas prices for horses, hogs, and poultry were lower. Most of these price increases occurred during the last four months of the year.

December 15, Illinois Farm Prices

	<u>1938</u>	<u>1939</u>	<u>Increase</u>	<u>Decrease</u>
Corn, bu.	\$.42	\$.47	\$.05	\$ --
Oats, bu.	.24	.35	.11	--
Wheat, bu.	.57	.88	.31	--
Soybeans, bu.	.65	.95	.30	--
Hay, tons	6.20	6.50	.30	--
Horses, hd.	88.00	85.00	--	3.00
Hogs, cwt.	7.00	5.10	--	1.90
Beef cattle, cwt.	7.70	8.30	.60	--
Sheep, cwt.	3.45	3.60	.15	--
Chickens, lb.	.13	.11	--	.02

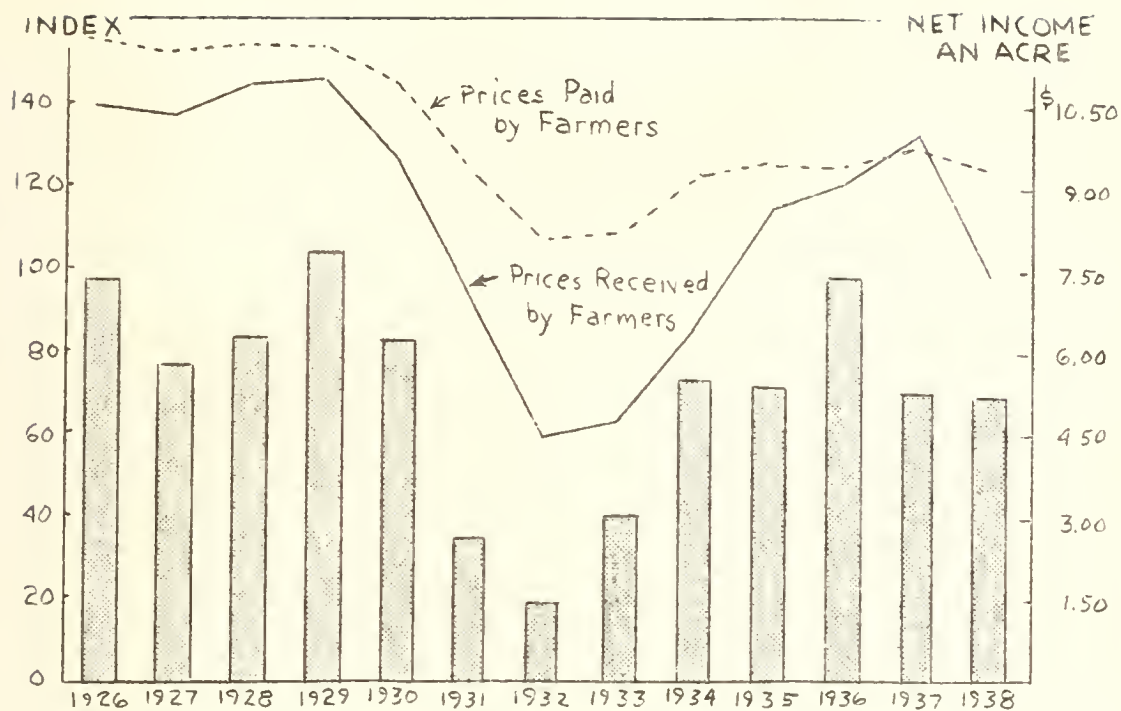


Fig. 1.--Average net cash income an acre (unpaid labor deducted) on Illinois accounting farms, prices paid by farmers in the United States, and prices received by Illinois farmers, 1926-1938.

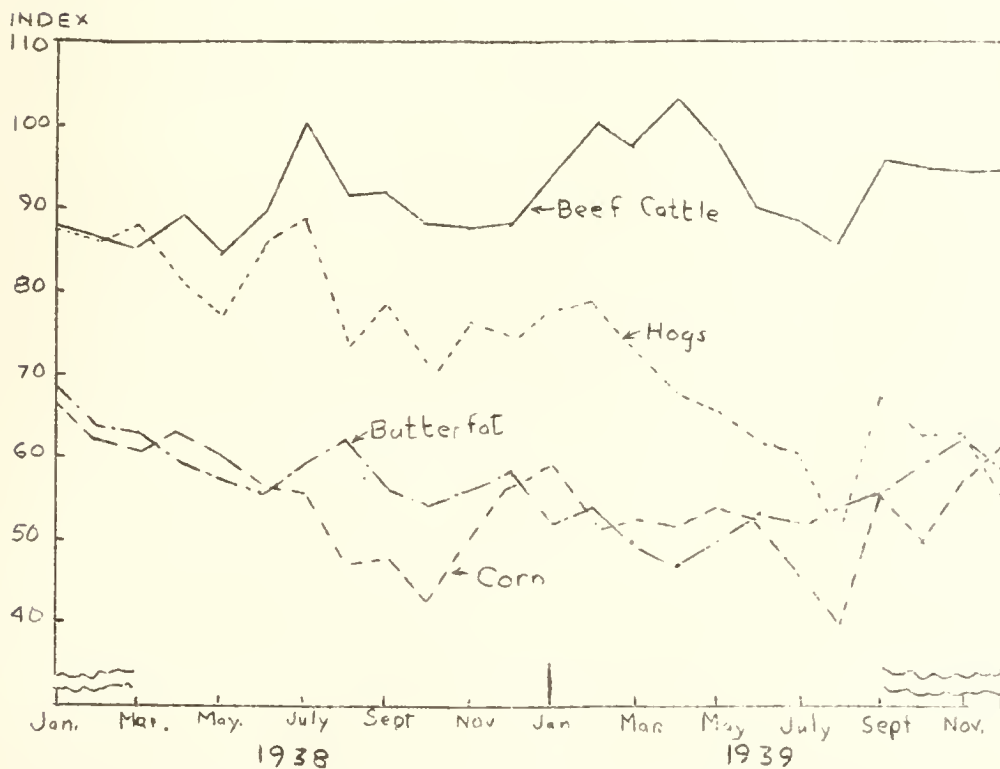


Fig. 2.--Monthly price indices of the average farm prices of corn, hogs, beef cattle, and butterfat, 1938 and 1939. (1924-1929 = 100)

Farm earnings are influenced by the average price received for farm products during the year as well as by the values at inventory time. Although nearly all commodities were higher in price at the end of the year than at the beginning, prices received for the following commodities averaged lower in 1939 than in 1938 by these amounts: corn, 2 cents per bushel; wheat and soybeans, 1 cent per bushel; hogs, \$1.50 per hundred; butterfat, 2 cents per pound; eggs, 3 cents per dozen; and chickens, 2 cents per pound. The prices for other commodities averaged higher in 1939 than in 1938 by the following amounts: oats, 4 cents per bushel; beef cattle, 50 cents per hundred; lambs, 42 cents per hundred; wool, 4 cents per pound; and apples, 12 cents per bushel.

Variation in earnings between the various type-of-farming areas is influenced by the relative prices of grains, livestock, and livestock products. In 1939 as in 1938 livestock had a price advantage over grain, but the advantage was not as marked as it was in 1938. The prices for meat animals dropped from 116 to 110 percent of the 1910-14 average, grains from 74 to 72 percent, chickens and eggs from 106 to 94 percent, and dairy products from 106 to 104 percent.

The corn-hog ratio also narrowed during the year to the disadvantage of the hog enterprise. The amount of corn equal in value to 100 pounds of hogs dropped from 19 bushels in February to 11 bushels in December (based on farm prices). Unfavorable feeding ratios will discourage expansion in hog numbers in 1940.

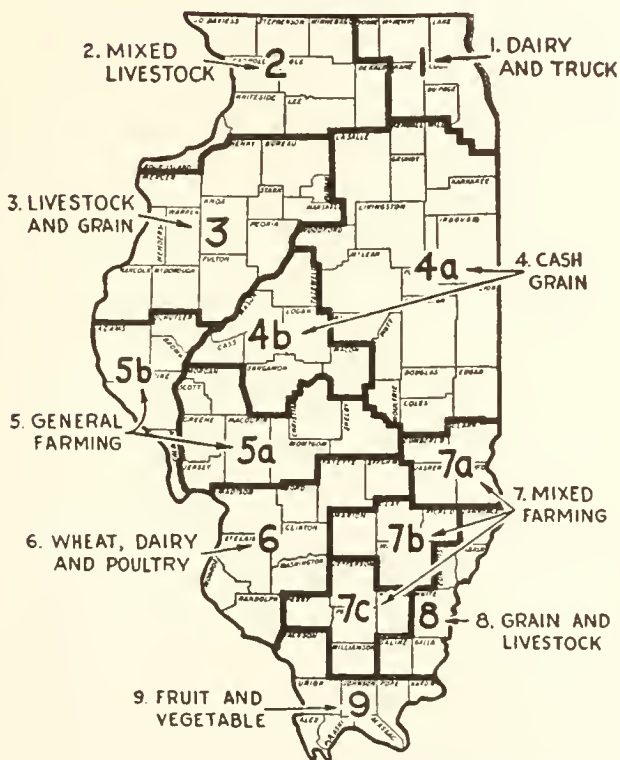
Crop Yields in Illinois, 1939

Crop yields in Illinois in 1939, as in 1938 and 1937, were unusually high. The weighted average yield of corn, oats, wheat, and soybeans was 133 percent of the 10-year average, 1929-1938. Corn contributed more than did any other crop to the high average yields. The yields of the various crops expressed in percentages of the 1929-1938 averages were: corn, 150; soybeans, 129; wheat, 121; and oats, 97.

Crop yields in all counties except Massac were above the 10-year average (1929-1938 = 100), but wide variations in yields occurred between individual counties and groups of counties. Four counties along the Ohio River had crop-yield indices under 105. In contrast to these counties, 31 were over 136. Many of the counties with the highest yields were in two groups, those located in southwestern and east north central Illinois. Crop-yield indices were adversely affected in southeastern Illinois by the wheat crop and in northern Illinois by low oat yields. Fifty-five counties, which were well-distributed over the state, had crop-yield indices from 121 to 135.

Summary of Annual Farm Business Reports on 2,713 Illinois Farms

For the Year 1939



THE NINE MAJOR TYPE-OF-FARMING
AREAS IN ILLINOIS

Department of Agricultural Economics
College of Agriculture and Extension Service in Agriculture
and Home Economics
University of Illinois, Urbana
June, 1940

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SUMMARY OF FARM BUSINESS REPORTS

ON

TWO THOUSAND SEVEN HUNDRED THIRTEEN FARMS IN ILLINOIS

FOR 1939

P. E. Johnston, J. B. Cunningham, and M. L. Mosher

The following summary is a record of income, expenditures, and earnings on Illinois accounting farms for 1939 and also a record of comparisons of selected items with similar records for other years. The data contained in this report represent Illinois farm conditions which are better than average because the accounting farms are larger than average, the crop yields are above average, and the farms on the whole are operated with efficiency which is greater than average. Records of this type are useful for showing variations in income from year to year and for demonstrating differences between farming-type areas. The variation in income from farm to farm within the groups is shown in Table 3.

The average net cash income an acre for Illinois accounting farms was practically the same for the years 1934, 1935, 1937, 1938, and 1939 (Fig. 1).

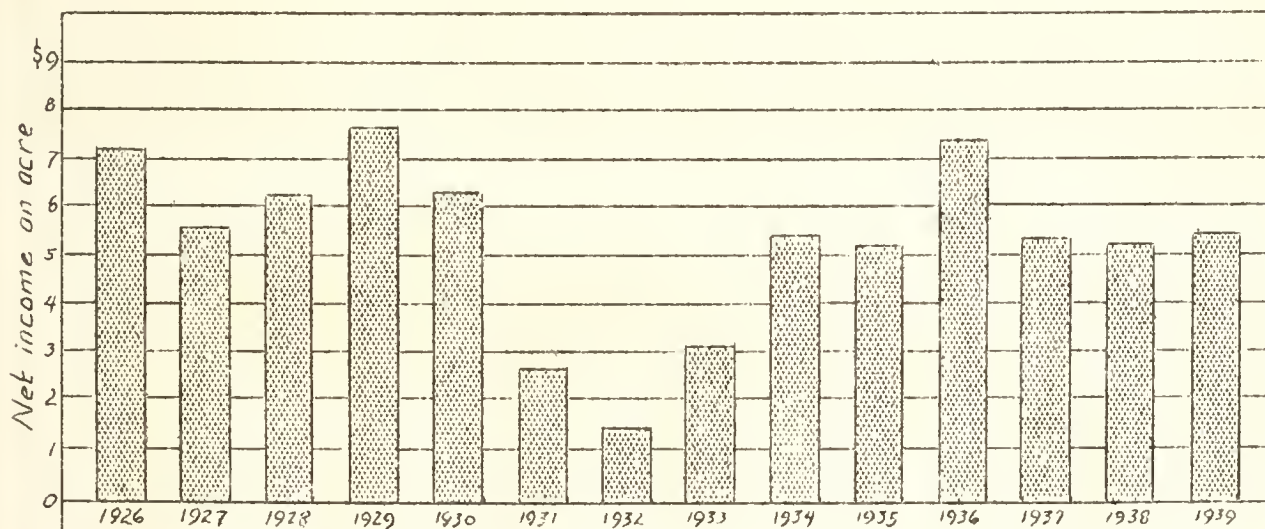


Fig. 1.--Net cash income an acre (unpaid labor deducted), average for Illinois accounting farms, 1926-1939.

The net cash income an acre was computed by subtracting the value of unpaid labor from the cash balance for the year and then by dividing that difference by the number of acres in the farm. Farming-type-area averages were weighted by the number of acres in the farms in each farming-type area in order to calculate the state averages.

The weighted average^{1/} net cash income an acre for Illinois accounting farms was as follows:

1926	\$7.30	1931	\$2.69	1936	\$7.40
1927	5.74	1932	1.47	1937	5.33
1928	6.22	1933	3.00	1938	5.25
1929	7.78	1934	5.40	1939	5.40
1930	6.22	1935	5.14		

These returns do not include the inventory changes or the money value of food, fuel, and other items of living, all of which are secured from the farm. Net cash income an acre is one of the best measures for comparing incomes of groups of farms over a period of years or for contrasting the level of income for different type-of-farming areas, because the net cash income is not influenced by changes in the inventory of land. During any period of years, earnings fluctuate more widely from year to year when inventory changes are included. On the inventory basis, earnings are lower in the low-income years and higher in the high-income years, because there are usually inventory losses when prices are declining but inventory increases when prices are rising.

In the farm business reports published in 1938 and 1939 and in the printed tables at the back of this report, the value of farm products used in the household was included as a source of income. In comparing the 1938 and the 1939 records with those for other years, the value of farm products used in the household has been omitted because the data are not available for years prior to 1938. The average value of farm products used in the household was \$272 per farm, or \$1.19 an acre, for all accounting farms in Illinois for 1938 and \$252 per farm, or \$1.09 an acre, for 1939. The averages for the various farming-type areas are as follows:

	Value of farm products used in household, 1938 and 1939			
	Per farm		Per acre	
	1938	1939	1938	1939
Area 1	\$267	\$241	\$1.43	\$1.41
Area 2	265	250	1.28	1.20
Area 3	278	260	1.12	1.05
Area 4	265	251	1.01	.94
Area 5	279	256	1.15	.98
Area 6	290	264	1.40	1.31
Area 7	268	254	1.24	1.12
Area 8	252	239	1.24	1.10
Area 9	284	229	1.27	1.23
State average	\$272	\$252	\$1.19	\$1.09

^{1/} The average is weighted by the acres of land in farms in each farming-type area as reported by the census.

Cash income per farm.--The average cash income per farm, the cash expenditures per farm, and the cash balance per farm were all larger in 1939 than in 1938 (Table 1). According to farm account records, both cash income per farm and cash expenditures per farm were larger in 1939 than in any other year since 1926.^{1/} The cash balance was larger in 1939 than in any other year since 1930 with the exception of 1936. When inventory changes are included, the average net farm income was larger in 1939 than in any other year since 1926 with the exception of 1936. A part of the larger income for 1939 was due to an increase in the size of farm--in 1939 the farms averaged 5 acres larger than in 1938 and 38 acres larger than in 1926.

Table 1.--Selected Items of Income and Expense on Accounting Farms in Illinois, 1934-1939^{a/}

Item	1934	1935	1936	1937	1938	1939
Acres per farm	223	216	227	227	232	237
Cash income per farm	\$3 692	\$4 342	\$5 374	\$5 309	\$5 285	\$5 920
Cash expenditures per farm	1 865	2 605	3 034	3 424	3 421	4 001
Cash balance	\$1 827	\$1 737	\$2 340	\$1 885	\$1 864	\$1 919
Inventory increase	530	779	802	727	428	1 117
Cash balance plus inventory increase	\$2 357	\$2 516	\$3 142	\$2 612	\$2 292	\$3 036
Unpaid labor	670	668	740	733	698	696
Net farm income	\$1 687	\$1 848	\$2 402	\$1 879	\$1 594	\$2 340
Gross receipts per acre ^{b/}	\$15.28	\$17.14	\$19.55	\$18.00	\$16.66	\$19.89
Total expense per acre ^{c/}	7.81	8.68	9.06	9.86	9.95	10.26
Net receipts per acre ^{b/}	7.47	8.46	10.49	8.14	6.71	9.63
Net receipts per acre (cash basis)	5.40	5.14	7.40	5.33	5.25	5.40

a/ In this table and in succeeding tables where data are on a farm basis rather than on an acre basis, state averages were obtained by weighting area averages by the number of farms in each area.

b/ Gross receipts include inventory changes.

c/ Total expense includes unpaid labor.

Inventory increases.--The average inventory increase was larger in 1939 than in any other year for which averages have been calculated from farm account records, this increase being $2\frac{1}{2}$ times as large as it was in 1938. There have been inventory increases for each of the last 6 years, and these increases have ranged from \$428 per farm in 1938 to \$1,117 per farm in 1939. An inventory increase means that the combined value of livestock, grain, improvements, and machinery was larger at the end of the year than at the beginning. Therefore, this series of inventory increases for a period of 6 years reflects an increase in the price level and an accumulation of grain and livestock following the drouth of 1934. Enough money has been spent for machinery and improvements so that the value per farm has increased even though deductions have been made for normal

^{1/} No data for the years prior to 1934 are presented in this report.

depreciation. Earnings are larger during the last 6 years if inventory changes are included than if calculations are made on a cash basis. On the other hand, inventory losses averaged \$866 a year for the 3 years 1930-1932. The cash basis more nearly reflects the ability of the farmer to pay his interest, to buy the things that the family needs, and to add something to the savings than does the method of accounting which includes inventory changes.

Cash farm business expenditures,--Illinois accounting farmers spent more money to run their farms in 1939 than in any other year since 1926. Expenditures averaged 17 percent larger in 1939 than in 1938 (Table 2). More money was spent in 1939 than in 1938 for improvements, feed, labor, taxes, and livestock, but slightly less was spent for machinery and crop expense. The higher expenditures for feed and livestock indicate the rate at which livestock production was expanding on Illinois farms. This expansion was primarily for hogs, feeder cattle and beef-cow herds.

Table 2.--Cash Farm Business Expenditures, Illinois Accounting Farms, 1934-1939

Nature of expenditures	Average per farm						Percent 1939 is of 1938
	1934	1935	1936	1937	1938	1939	
Farm improvements	\$ 127	\$ 185	\$ 212	\$ 274	\$ 314	\$ 368	117
Machinery and equipment	401	683	841	956	969	961	99
Feed and grain	413	488	612	656	471	634	135
Crop expense	144	174	205	276	148	144	97
Hired labor	180	236	261	306	348	371	107
Taxes	214	206	231	234	256	272	106
Livestock and miscellaneous	386	633	672	722	915	1 251	137
Total cash expenses	\$1 865	\$2 605	\$3 034	\$3 424	\$3 421	\$4 001	117

Cash expenditures for improvements were 17 percent larger in 1939 than in 1938 and were almost 3 times as large in 1939 as in 1934. Expenditures for machinery, although slightly smaller in 1939 than in 1938, were over twice as large in 1939 as in 1934. Taxes were slightly higher in 1939 than in 1938, partly because the farms were larger but also because tax rates advanced, as is indicated by higher tax returns an acre for practically all sections of the state.

Variations in earnings from farm to farm.--State averages and earnings for the farms included in the area vary widely. Much of the farm-to-farm variation is due to the managerial ability of the operators and to the manner in which the farms are organized and operated. The records were grouped for this study into high-, medium-, and low-income farms on the basis of the rate earned on investment. The value of farm products used in the household was included as a farm receipt in this tabulation. The records for LaSalle, Livingston, McLean, Tazewell, and Woodford counties were omitted from the averages for Area 4. The wide variation in rate earned on investment, net receipts per farm, and labor and management earnings indicates the opportunities which some farmers have for improving the income from their farms, because these variations are largely due to factors over which the operator has some control (Table 3).

Table 3.--Variation in Earnings From Farm to Farm,
by Farming-Type Areas, 1939

Level of earnings	Area 1	Area 2	Area 3	Area 4 ^{a/}	Area 5	Area 6	Area 7	Area 8	Area 9
Number of farms									
Low	30	126	175	196	100	85	37	18	17
Medium	33	154	196	213	121	101	32	33	17
High	24	174	140	150	94	85	34	12	22
Rate earned on investment (percent)									
Low	1.9	4.0	5.7	5.2	4.5	4.0	2.1	2.3	-5.4
Medium	7.1	7.5	9.4	8.4	8.8	8.9	6.9	8.1	5.9
High	12.0	11.0	13.1	11.9	14.1	14.7	13.2	14.4	12.6
Net earnings per farm									
Low	\$ 434	\$1 214	\$1 952	\$1 972	\$1 223	\$ 661	\$ 276	\$ 249	\$ -686
Medium	2 087	2 601	3 862	3 640	2 679	1 649	1 142	1 475	493
High	3 179	3 719	4 932	4 816	3 806	2 499	1 581	2 584	1 714
Labor and management earnings									
Low	\$ -246	\$ 232	\$ 747	\$ 589	\$ 383	\$ 271	\$ 61	\$ 167	\$ -933
Medium	1 146	1 422	2 343	1 999	1 683	1 149	714	963	470
High	2 402	2 589	3 565	3 335	2 984	2 083	1 416	2 136	1 458

a/ Area 4 does not include records from the Farm Bureau Farm Management Service.

Influence of Price Changes on Illinois Farm Incomes

All feed and grain, livestock, and other farm property on accounting farms must be valued at both the beginning and the end of the year. Prices at inventory time, therefore, have a marked influence on farm earnings. The influence is greatest where large stocks or supplies are on hand at inventory time; for example, a much larger supply of farm products was found on Illinois farms on December 31, 1939, than a year earlier. In fact, grain and livestock inventories have been increasing on Illinois farms since the drouth of 1936 as a result of 3 years of exceptionally high crop yields and the influence of Agricultural Adjustment Programs, which have caused farmers to grow more hay and pasture and to store corn on farms under seal. According to estimates made by the Bureau of Agricultural Economics, U.S.D.A., 356 million bushels of corn were found on Illinois farms on January 1, 1940, as compared with 325 million bushels on January 1, 1939.

Livestock numbers on Illinois farms increased sharply in 1939 even though 62 million bushels of 1937 and 1938 corn were placed under seal at the end of the year and 83 million bushels of 1939 corn were sealed by March 31, 1940. The following data indicate the percentage increase in livestock numbers on 2,520 accounting farms in Illinois from the beginning to the end of 1939: dairy cows, 2 percent; beef cows, 21 percent; feeder cattle, 17 percent; feeder lambs, 24 percent; brood sows, 4 percent; spring pigs, 38 percent; summer pigs, 23 percent; and fall pigs, 28 percent. Hog numbers have been increasing since 1935 and have now attained record levels; for example, 13.5 sows per farm farrowed on accounting farms in 1939 as contrasted with 9.9 sows per farm in 1938. The increase in beef-cattle numbers is a part of the general upswing taking place over the entire United States, and it may be expected to continue for several years.

These data indicate that supplies of both feed and livestock were greater at the time the 1939 closing inventory was taken than at any other inventory period in several years; and price changes, therefore, are important in interpreting farm earnings for the state and for farming-type areas in 1939.

Prices of important farm products.--Prices for all crops as well as for beef cattle and sheep were higher at the end of 1939 than at the beginning, whereas prices for horses, hogs, and poultry were lower. Most of these price increases occurred during the last four months of the year.

December 15, Illinois Farm Prices

	<u>1938</u>	<u>1939</u>	<u>Increase</u>	<u>Decrease</u>
Corn, bu.	\$.42	\$.47	\$.05	\$ --
Oats, bu.	.24	.35	.11	--
Wheat, bu.	.57	.88	.31	--
Soybeans, bu.	.65	.95	.30	--
Hay, tons	6.20	6.50	.30	--
Horses, hd.	88.00	85.00	--	3.00
Hogs, cwt.	7.00	5.10	--	1.90
Beef cattle, cwt.	7.70	8.30	.60	--
Sheep, cwt.	3.45	3.60	.15	--
Chickens, lb.	.13	.11	--	.02

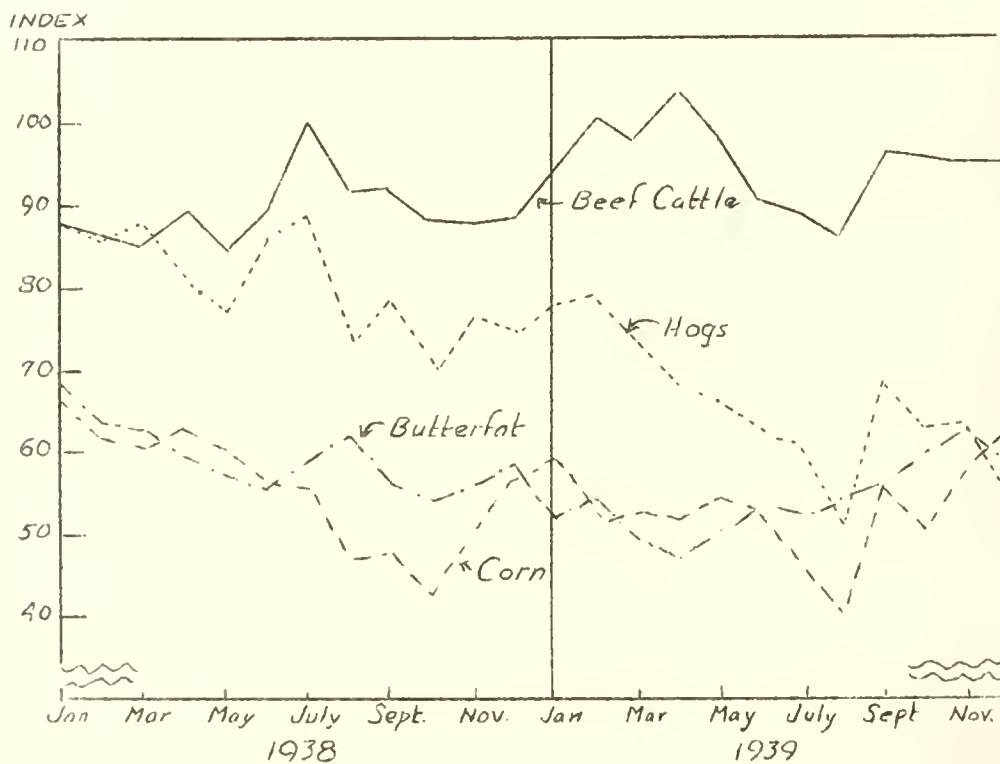


Fig. 2.--Monthly price indices of the average farm prices of corn, hogs, beef cattle, and butterfat, 1938 and 1939. (1924-1929 = 100)

Farm earnings are influenced by the average price received for farm products during the year as well as by the values at inventory time. Although nearly all commodities were higher in price at the end of the year than at the beginning, prices received for the following commodities averaged lower in 1939 than in 1938 by these amounts: corn, 2 cents a bushel; wheat and soybeans, 1 cent a bushel; hogs, \$1.50 a hundred; butterfat, 2 cents a pound; eggs, 3 cents a dozen; and chickens, 2 cents a pound. The prices for other commodities averaged higher in 1939 than in 1938 by the following amounts: oats, 4 cents a bushel; beef cattle, 50 cents a hundred; lambs, 42 cents a hundred; wool, 4 cents a pound; and apples, 12 cents a bushel (Fig. 2).

Variation in earnings between the various type-of-farming areas is influenced by the relative prices of grains, livestock, and livestock products. In 1939, as in 1938, livestock had a price advantage over grain, but the advantage was not as marked as it was in 1938. The prices for meat animals dropped from 116 to 110 percent of the 1910-14 average; grains, from 74 to 72 percent; chickens and eggs, from 106 to 94 percent; and dairy products, from 106 to 104 percent.

The corn-hog ratio also narrowed during the year to the disadvantage of the hog enterprise. The amount of corn equal in value to 100 pounds of hogs dropped from 19 bushels in February to 11 bushels in December (based on farm prices). Unfavorable feeding ratios will discourage expansion in hog numbers in 1940.

Crop Yields in Illinois, 1939

Crop yields in Illinois in 1939, as in 1938 and 1937, were unusually high. The weighted average yield of corn, oats, wheat, and soybeans was 133 percent of the 10-year average 1929-1938. Corn contributed more than did any other crop to the high average yields. The acre yields of the various crops expressed in percentages of the 1929-1938 averages were: corn, 150; soybeans, 129; wheat, 121; and oats, 97.

Crop yields in all counties except Massac were above the 10-year average (1929-1938 = 100), but wide variations in yields occurred between individual counties and groups of counties. Four counties along the Ohio River had crop yield indices under 105. In contrast to these counties, 31 had indices over 136. Many of the counties with the highest yields were in two groups, those located in southwestern and east north-central Illinois. Crop yield indices were adversely affected in southeastern Illinois by the wheat crop and in northern Illinois by low oat yields. Fifty-five counties, which were well distributed over the state, had crop yield indices from 121 to 135.

Variations in Earnings by Farming-Type Areas

Farm incomes vary widely among different sections of the state. Much of the sectional difference is normal from year to year because the productivity of the soil varies widely in different parts of Illinois. Other important factors are: (1) differences in crop yields due to weather, disease, and insect damage and (2) variations in the relative price levels of major products sold in the different areas.

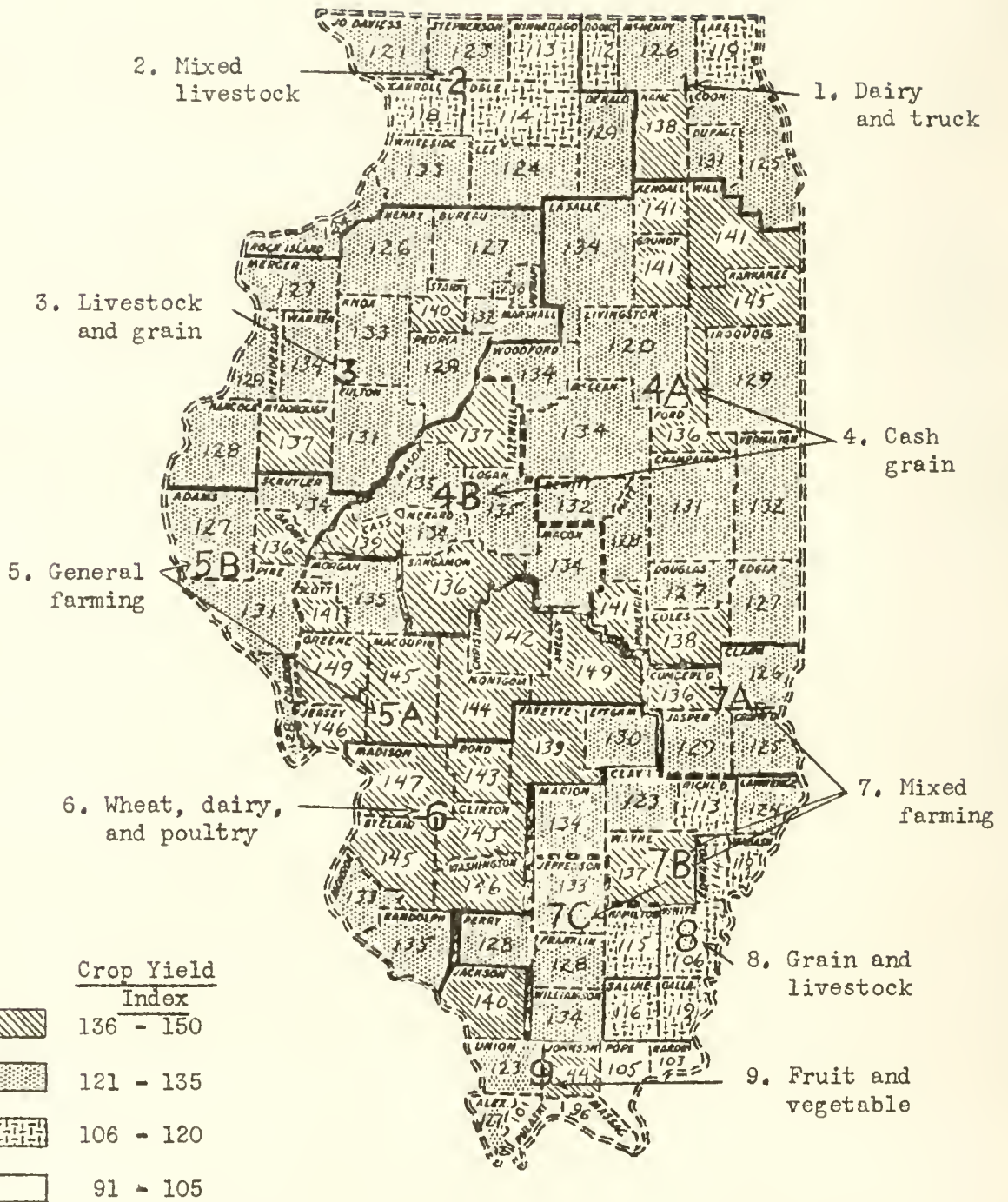


Fig. 2.--Crop yields for 1939, compared with 10-year average yields (1929-1938) for the same county. The indices are based on county yields of corn, oats, wheat, and soybeans. (Data from Illinois Cooperative Crop Reporting Service.)

Variations in net cash income an acre.--The average net cash income an acre for Illinois accounting farms in 1939 varied from \$1.39 in Area 7 to \$7.08 in Area 4 (Table 4). Cash incomes were higher in 1939 than in 1938 for Areas 4, 6, and 8, but they were lower for Areas 1, 2, 3, 5, and 7. Cash incomes were higher in Areas 4, 6, and 8 because grain prices increased and because crop yields were abnormally high in Area 6 and better than average in Area 4. In Area 1, crop yields for 1939 were above the 10-year average; but in several other areas in the state, they were below the 10-year level. This comparative rating accounts for the fact that the Chicago Dairy Area had a lower income in 1939 than in 1938 and for the fact that the St. Louis Dairy and Wheat Area had a higher income in 1939 than in 1938. Cash incomes in the livestock areas were reduced by the sharp decline in hog prices in 1939.

Table 4.--Net Cash Income an Acre for Illinois Accounting Farms by Farming-Type Areas for the Periods 1925-1929 and 1930-1934 and for 1936, 1937, 1938, and 1939

Farming-type areas	1925- 1930--		1936	1937	1938	1939
	1929	1934				
Area 1, Chicago Dairy	\$9.59	\$5.25	\$7.95	\$7.76	\$4.97	\$4.04
Area 2, Northwestern Mixed Livestock	7.94	4.92	9.31	7.30	6.16 ^{a/}	5.76 ^{a/}
Area 3, Western Livestock and Grain	9.05	4.86	9.11	6.12	6.88 ^{a/}	6.83 ^{a/}
Area 4, East-Central Cash Grain	8.91	4.46	9.88	6.26	6.69 ^{a/}	7.08 ^{a/}
Area 5, West-Central General Farming	6.35	3.23	4.98	4.72	4.64	4.55
Area 6, St. Louis Dairy and Wheat	3.26	2.03	3.39	3.29	2.84	3.69
Area 7, South-Central Mixed Farming	2.21	.91	2.73	1.28	1.41	1.39
Area 8, Wabash Valley Grain and Livestock	4.57	1.73	4.41	4.11	2.63	4.19
State Average (weighted by acres in area)	\$7.13	\$3.74	\$7.40	\$5.33	\$5.25	\$5.40

^{a/} These areas include records from the Farm Bureau Farm Management Service for 1938 and 1939 only: in 1938, 67 records for Area 2, 227 records for Area 3, and 293 records for Area 4; in 1939, 88 records for Area 2, 215 records for Area 3, and 294 records for Area 4. Incomes for Area 4 are slightly higher for the service records than for those from the state-wide extension project.

Inventory changes by farming-type areas.--There was an average inventory increase of \$1,117 per farm in 1939, and this amount included inventory increases for all major items for all areas except improvements in Area 1 and feed and grain in Area 8 (Table 5). Farmers in Area 1 did not spend enough on improvements in 1939 to offset the depreciation; their cash income an acre was lower in 1939 than in any other year since 1935. Crop yields in Area 8 were above average, but they were lower than those for other sections of the state,

Over half of the average inventory increase was for grains, and this increase reflects the effects of abnormally high crop yields in 1939, higher prices at the end of the year than at the beginning, and the grain sealing program. Sealed grains were carried in the accounts as an inventory rather than as a sale. The increase of \$247 per farm for livestock resulted from a large increase in numbers rather than from an increase in price, because prices for horses, hogs, and chickens were lower at the end of the year than at the beginning.

Table 5.--Inventory Increases by Farming-Type Areas, 1939

Farming-type areas	Live- stock	Feed		Improve- ments	Total
		and grain	Machinery		
Area 1, Chicago Dairy	\$430	\$ 374	\$ 87	\$ -4	\$ 887
Area 2, Northwestern Mixed Livestock	483	521	83	104	1 191
Area 3, Western Livestock and Grain	249	960	144	187	1 540
Area 4, East-Central Cash Grain	225	1 163	92	211	1 691
Area 5, West-Central General Farming	298	590	121	99	1 108
Area 6, St. Louis Dairy and Wheat	142	332	69	54	597
Area 7, South-Central Mixed Farming	121	138	92	56	407
Area 8, Wabash Valley Grain and Livestock	136	-43	45	47	185
Weighted Average	\$247	\$ 651	\$ 97	\$122	\$1 117

The increase in inventory of \$97 per farm for machinery and \$122 per farm for improvements indicates that farmers are still replacing equipment that should have been replaced during the depression period. The inventory increase for machinery was less in 1939 than in 1938, but the increase for improvements was larger.

On January 1, 1940, the average accounting farm had 3,274 bushels of corn and 537 bushels of oats on hand as contrasted with 2,789 bushels of corn and 640 bushels of oats on hand on January 1, 1939 (Table 6). The amount of corn on the accounting farms increased in all of the areas except Area 8. The decrease in the amount of oats on the accounting farms was confined to the northern two-thirds of the state, because the inventory for Areas 6, 7, and 8 showed an increase. A record carryover of corn is anticipated for October 1940.

Table 6.--Bushels of Corn and Oats in Inventories on Accounting Farms by Farming-Type Areas, January 1, 1939 and 1940

Farming-type areas	Corn		Oats	
	Jan. 1, 1939	Jan. 1, 1940	Jan. 1, 1939	Jan. 1, 1940
	(bushels)			
Area 1, Chicago Dairy	1 540	1 795	710	581
Area 2, Northwestern Mixed Livestock	2 958	3 407	1 034	828
Area 3, Western Livestock and Grain	4 298	5 257	834	716
Area 4, East-Central Cash Grain	4 230	4 987	1 001	799
Area 5, West-Central General Farming	2 609	3 033	436	353
Area 6, St. Louis Dairy and Wheat	940	1 217	271	274
Area 7, South-Central Mixed Farming	1 140	1 260	147	180
Area 8, Wabash Valley Grain and Livestock	1 467	1 172	135	150
Weighted Average	2 789	3 274	640	537

Variations in net income an acre with inventory changes included.--When inventory changes are included, the average net income an acre on Illinois accounting farms was 45 percent higher in 1939 than in 1938; when calculations are made on the cash basis, however, the increase was only 3 percent. The average net

income of \$10.33 an acre was larger in 1939 than in any other year since 1925 with the exception of 1936 (Table 7). Incomes have been larger on the inventory basis than on the cash basis for all years since 1925 with the exception of 1930, 1931, and 1936.

Table 7.--Net Income an Acre (Inventory Basis) for Illinois Accounting Farms by Farming-Type Areas for the Periods 1925-1929 and 1930-1934, and for 1936, 1937, 1938, and 1939

Farming-type areas	1925- 1930-		1936	1937	1938	1939
	1929	1934				
Area 1, Chicago Dairy	\$11.04	\$2.64	\$14.35	\$ 8.69	\$8.12	\$ 9.23
Area 2, Northwestern Mixed Livestock	15.11	2.70	16.43	8.46	8.34 ^{a/}	11.45 ^{a/}
Area 3, Western Livestock and Grain	10.24	2.84	13.14	10.83	9.24 ^{a/}	13.01 ^{a/}
Area 4, East-Central Cash Grain	10.30	2.76	13.15	10.30	8.66 ^{a/}	13.42 ^{a/}
Area 5, West-Central General Farming	7.69	1.99	7.72	8.21	6.78	8.79
Area 6, St. Louis Dairy and Wheat	5.41	.92	5.84	6.17	3.71	6.65
Area 7, South-Central Mixed Farming	3.34	.55	4.97	3.48	2.47	3.18
Area 8, Wabash Valley Grain and Livestock	5.34	1.20	7.47	6.12	3.31	5.04
State Average (weighted by acres in area)	\$ 8.59	\$2.20	\$11.06	\$ 8.58	\$7.14	\$10.33

a/ For these areas records from the Farm Bureau Farm Management Service are included.

Income From Agricultural Conservation Payments

Cash farm incomes of accounting farmers in 1939 included agricultural conservation payments which were received during the accounting year for participation in both the 1938 and 1939 programs. On many farms both payments were received in 1939; this doubling-up of payments accounts for a high average payment of \$531 per farm for cooperating farms as compared with \$267 for cooperating farms in 1938. Ninety percent of the accounting farmers in Area 6 cooperated in the program in 1939, and the percents in other areas range up to 96 percent, which is the percent for Area 3 (Table 8). The payment an acre ranged from \$.85 in Area 7 to \$3.25 in Area 3, and payments in all areas were much higher than were taxes; they were over twice as high as taxes in Areas 2, 3, 4, 8, and 9.

Source of Income

The 1,837 farms in Areas 2, 3, 4, and 5 were divided into 6 groups according to their source of income (Table 9). Similar tables for other areas can be found in the various area reports which are available.

In a comparison of the groups of farms, the fact that conditions affecting production and price relationships vary from year to year should be kept in mind. Therefore, the average differences in earnings in 1939 are not necessarily typical of the variations that may be expected over a long period of years. The following items, for example, indicate that the grain farms were generally located on the better land: high value of land an acre, large percent of land area tillable, large percent of land in grain, and high taxes an acre.

Table 8.--Percent of Illinois Accounting Farmers Receiving Agricultural Conservation Payments in 1939 and the Payments Per Farm and Per Acre, by Farming-Type Areas

Area	Number of farms	Acres per farm	Percent of farms receiving payments	Payments per farm, all farms	Payments per farm, cooperat- ing farms	Payments per acre, cooperat- ing farms	Taxes per acre, all farms
Area 1	87	171	91	\$311	\$343	\$2.01	\$1.43
Area 2	454	209	93	576	616	2.95	1.27
Area 3	511	249	96	782	810	3.25	1.29
Area 4	853	267	95	771	810	3.04	1.45
Area 5	315	261	94	454	483	1.85	1.11
Area 6	271	202	90	229	255	1.26	.81
Area 7	103	227	93	179	192	.85	.58
Area 8	63	218	91	338	374	1.72	.83
Area 9	56	186	95	259	274	1.47	.73

According to the 5-year average (1933-1937) of complete cost studies, the necessary returns per \$100 worth of feed fed are as follows: poultry, \$195; dairy cattle, \$157; hogs, \$127; and feeder cattle, \$117. These returns are necessary to pay for feed (including pasture) and other costs. There is little wonder, therefore, that the 6 groups of accounting farms with different classes and proportions of livestock varied widely in their returns per \$100 worth of feed fed. In 1939, the average return per \$100 worth of feed fed (excluding pasture) was \$198 for dairy farms and \$144 for cattle farms. The amount of feed fed an acre to productive livestock averaged \$15.23 on the cattle farms but only \$4.50 on the grain farms.

Differences in expenses are significant for the 6 groups of farms. Although the total labor input of 28.1 months per farm was largest on the cattle farms and the labor input of 20.9 months per farm was smallest on the grain farms, the labor input of 26.9 months per 100 crop acres was approximately twice as large on the dairy farms as on the cattle farms, where it was 13.6 months. Although the total labor cost per crop acre was lowest (\$5.22) on the grain farms, the labor cost per day of productive work on crops and livestock, as calculated for the Farm Bureau Farm Management Service farms only, was highest (\$3.58) on the grain farms and lowest (\$2.87) on the hog farms.^{1/}

Horse and machinery costs per crop acre were highest (\$8.05) on the dairy farms and lowest (\$4.41) on the grain farms. However, on Farm Bureau Farm Management Service farms, horse and machinery costs per day of productive work on crops and livestock were lowest (\$2.01) on dairy farms and highest (\$3.21) on grain farms.

Improvement costs an acre ranged from \$.92 on the grain farms to \$1.33 on the dairy farms. Land taxes ranged from \$1.09 on the cattle farms to \$1.21 on the grain farms.

^{1/} The Fifteenth Annual Report of the Farm Bureau Farm Management Service for 1939, AE-1410, has references on the total labor cost.

Table 9.--Source of Income Related to Farm Earnings and Other Factors for Accounting Farms in Farming Type Areas 2, 3, 4, and 5, 1939

Items	Source of income					
	Grain 40%+	Dairy sales 40%+	Hogs 40%+	Cattle 40%+	General farms	
					L.S. 60%-	L.S. 60%+
Number of farms - - - - -	634	62	236	189	382	334
Percent of income from prod. L.S.	27.9	79.7	79.6	85.8	48.6	72.5
Percent of income from crops - - -	56.5	7.2	4.8	.8	32.0	10.9
<u>Investments</u>						
Total per farm - - - - -	\$38 617	\$25 899	\$31 614	\$50 451	\$51 664	\$33 291
Total per acre - - - - -	146	156	143	155	138	135
Land per acre - - - - -	103	85	90	93	90	84
Improvements per acre - - - - -	15	31	19	19	18	18
Machinery per acre ^a - - - - -	9	11	10	9	9	8
<u>Earnings</u>						
Per farm						
Gross earnings - - - - -	\$ 6 152	\$ 4 997	\$ 5 009	\$ 8 146	\$ 5 175	\$ 5 483
Gross expenses ^b - - - - -	2 720	2 769	2 556	3 703	2 467	2 755
Net earnings - - - - -	3 432	2 228	2 453	4 443	2 708	2 728
Per acre						
Gross earnings - - - - -	\$ 23.24	\$ 30.01	\$ 22.76	\$ 24.79	\$ 22.50	\$ 22.18
Gross expenses ^b - - - - -	10.25	16.90	11.69	11.27	10.73	11.15
Net earnings - - - - -	12.99	13.11	11.07	13.52	11.77	11.03
Rate earned on investment (pct.)	8.9	8.7	7.8	8.8	8.6	8.2
Labor and mgt. earnings - - - - -	\$ 2 026	\$ 1 497	\$ 1 391	\$ 2 433	\$ 1 666	\$ 1 591
<u>Size and Intensity</u>						
Acres per farm - - - - -	266	171	221	331	231	248
Percent of land area tillable -	89.2	80.4	80.7	80.7	85.7	80.1
Percent of t. land in grain - -	70.7	52.0	61.1	61.7	63.2	61.2
Percent in hay and pasture - - -	21.7	44.1	30.1	32.6	30.3	33.8
Feed fed per acre to prod. L.S.	\$ 4.50	\$ 12.58	\$ 12.38	\$ 15.23	\$ 7.38	\$ 10.99
Months of labor per 100 crop A.	10.5	26.9	15.5	13.7	13.5	15.5
Total months of labor - - - - -	20.9	25.0	21.2	28.1	21.1	23.5
<u>Crop Yields Per Acre</u>						
Corn, bu. - - - - -	65.1	66.9	67.2	69.6	62.6	65.0
Oats, bu. - - - - -	31.7	29.1	30.7	31.0	29.6	29.9
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 159	\$ 198	\$ 154	\$ 144	\$ 160	\$ 154
Hog returns per litter - - - - -	66	66	93	79	72	73
Dairy returns per cow - - - - -	72	137	60	65	82	82
<u>Expense Factors</u>						
<u>Labor cost^d</u>						
Per crop acre - - - - -	\$ 5.22	\$ 13.42	\$ 7.81	\$ 6.92	\$ 6.59	\$ 7.52
Per \$100 gross earnings - - -	17	25	22	18	20	21
Per day of productive work ^c -	3.58	3.14	2.87	3.26	3.23	3.08
<u>Horse and machinery cost</u>						
Per crop acre ^a - - - - -	4.41	8.05	5.23	5.12	4.65	5.36
Per day of productive work ^c -	3.21	2.01	2.16	2.81	2.59	2.14
Improvement cost per acre - - -	.92	1.33	1.21	1.14	1.01	1.15
Land tax per acre - - - - -	1.21	1.14	1.15	1.09	1.18	1.14

^a/ Machinery includes farm share of automobile.

^b/ Expenses include operator's and family labor.

^c/ Productive work includes Farm Bureau Farm Management Service farms only.

The rate earned on investment was highest on the grain farms and lowest on the hog farms. The general farms (with no single source of income as large as 40 percent of the total) had lower earnings than did the specialized farms, and the general farms with the most livestock had lower earnings than did the general farms with the least livestock. The data for 1939 are very similar to averages for the same areas for the 10-year period, 1926-1935 (Table 9).

Size of Farm

In 1939, the rate earned on investment was the same for the 4 groups containing farms larger than 200 acres, except for the group with 361 to 440 acres. Earnings were smallest for the farms containing from 41 to 120 acres. Labor and management earnings increased from \$853 per farm for the smallest farms to \$3,600 per farm for the largest farms. In years when average earnings are low, the large farms show the largest losses when these losses are measured by labor and management earnings.

The feed fed an acre to productive livestock decreased from \$10.38 on the small farms to \$7.75 on the large farms, and the labor cost per crop acre declined from \$10.00 to \$5.13. The months of labor per 100 crop acres were 20.8 on the small farms and 10.0 on the large ones. The 100-acre farms were man-and-a-half farms; the 320-acre farms were 2-man farms; and the 580-acre farms were 3-man farms. The horse and machinery cost per crop acre declined from \$5.60 on the small farms to \$4.48 on the large farms. The saving in machinery and power is much smaller than is the saving in labor because machinery is used on the large farms to replace labor.

Financial Statement and Selected Factors by Farming-Type Areas

Variations in investments, cash receipts, cash expenses, inventory changes, and other efficiency factors are shown by farming-type areas in Tables 11 and 12. These data indicate a wide range of farming conditions in Illinois and afford ample evidence for the need for grouping by farming-type areas.

The accounting farms ranged in size from 171 acres in Area 1 to 267 acres in Area 4, and the average investment per farm ranged from \$11,689 in Area 9 to \$44,371 in Area 4. The average value of land an acre was \$28 in Area 9 and \$116 in Area 4.

The relative proportions of the farm cash receipts that come from the sale of grain, hogs, cattle, dairy products, and poultry in the different areas indicate the reason for dividing the state into 9 type-of-farming areas as outlined on the map on the front cover.

The yields of crops vary from area to area with the productivity of the soil and weather conditions. The highest corn and oat yields were in Area 2, and the lowest were in Area 9. The map on page 9 gives a comparison of 1939 yields with the normal yields for each county.

Expenses per crop acre for labor and for horses and machinery vary with the size of farm, the amount and kind of livestock, the wages for labor, and the

Table 10.--Size of Farm Related to Farm Earnings and Other Factors for Accounting Farms in Farming-Type Areas 2, 3, 4, and 5, 1939

Items	Total acres in farm					
	41 to 120	121 to 200	201 to 280	281 to 360	361 to 440	441 or more
Number of farms - - - - -	204	643	464	276	113	139
Acres per farm- - - - -	101	167	242	319	397	580
<u>Investments</u>						
Total per farm- - - - -	\$15 409	\$24 846	\$35 209	\$47 170	\$53 813	\$77 598
Total per acre- - - - -	154	148	145	148	135	134
Land per acre - - - - -	91	96	97	100	89	91
Improvements per acre - - - - -	25	19	18	16	17	15
Machinery per acre ^a / - - - - -	12	10	9	9	8	7
<u>Earnings</u>						
Per farm						
Gross earnings- - - - -	\$ 2 593	\$ 4 020	\$ 5 715	\$ 7 394	\$ 8 244	\$12 284
Gross expenses ^b / - - - - -	1 475	2 014	2 600	3 242	3 810	5 320
Net earnings- - - - -	1 118	2 006	3 115	4 152	4 434	6 964
Per acre						
Gross earnings- - - - -	\$ 25.89	\$ 23.99	\$ 23.60	\$ 23.17	\$ 20.74	\$ 21.15
Gross expenses ^b / - - - - -	14.73	12.02	10.74	10.16	9.59	9.17
Net earnings- - - - -	11.16	11.97	12.86	13.01	11.15	11.98
Rate earned on investment (pct.)	7.3	8.0	8.9	8.9	8.3	8.9
Labor and management earnings -	\$ 853	\$ 1 308	\$ 1 885	\$ 2 326	\$ 2 251	\$ 3 600
<u>Size and Intensity</u>						
Percent of land area tillable -	88.1	87.0	85.5	86.0	80.3	82.2
Percent of t. land in grain - -	62.6	64.7	66.3	66.8	64.7	65.7
Percent in hay and pasture- - -	33.0	29.2	27.2	26.0	26.8	25.8
Feed fed per acre to prod. L.S.	\$ 10.38	\$ 8.42	\$ 7.81	\$ 8.07	\$ 8.39	\$ 7.75
Percent of income from prod.L.S.	59.9	53.3	50.5	49.6	55.0	51.0
Percent of income from grain- -	19.9	29.1	33.4	34.7	29.3	34.8
Months of labor per 100 crop A.	20.8	15.5	12.9	11.3	11.7	10.0
Total months of labor - - - - -	14.6	18.0	21.7	25.2	30.0	37.4
<u>Crop Yields Per Acre</u>						
Corn, bu. - - - - -	65.4	64.7	64.7	66.3	64.3	66.1
Oats, bu. - - - - -	28.4	31.2	31.2	32.1	30.6	29.9
<u>Livestock Returns</u>						
Per \$100 feed fed - - - - -	\$ 165	\$ 166	\$ 166	\$ 152	\$ 144	\$ 144
Hog returns per litter- - - - -	67	73	77	77	75	71
Dairy returns per cow - - - - -	78	79	83	79	70	81
<u>Expense Factors</u>						
Labor cost						
Per crop acre ^b / - - - - -	\$ 10.00	\$ 7.56	\$ 6.35	\$ 5.65	\$ 5.73	\$ 5.13
Per \$100 gross earnings - - -	27	22	19	17	19	16
Horse and mach. cost per crop A. ^a /	5.60	5.00	4.83	4.60	4.61	4.48
Improvement cost per acre - - -	1.46	1.10	1.01	.93	.96	.96
Land tax per acre - - - - -	1.23	1.20	1.14	1.14	1.07	1.15

a/ Machinery includes farm share of automobile.

b/ Expenses include operator's and family labor.

Table 11.--Investments, Cash Receipts, Cash Expenses, and Inventory Changes by Farming-Type Areas, 1939

Items	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8	Area 9
Capital Investment, Total	\$26 422	\$33 189	\$37 769	\$44 371	\$28 371	\$17 388	\$13 806	\$15 961	\$11 689
Land	13 252	19 274	23 904	30 913	18 253	9 851	7 681	9 979	5 157
Farm improvements	5 873	5 673	4 943	4 838	3 453	2 690	2 118	1 896	3 315
Machinery and equipment	2 058	2 219	2 355	2 531	1 948	1 651	1 197	1 323	1 119
Feed and grain	1 830	2 295	2 859	3 313	1 998	1 302	1 048	1 228	768
Livestock, total	3 409	3 728	3 708	2 776	2 719	1 894	1 762	1 535	1 330
Cash Receipts, Total	\$5 064	\$6 923	\$7 934	\$7 597	\$6 194	\$3 649	\$2 940	\$3 444	\$2 831
Feed and grain	414	842	1 378	2 529	1 387	852	495	1 111	1 169
AAA payments	311	576	782	771	454	229	179	338	259
Labor and miscellaneous	225	301	379	412	393	271	194	214	169
Livestock, total	4 114	5 204	5 395	3 885	3 960	2 297	2 072	1 781	1 234
Horses	35	44	55	60	53	45	65	50	58
Cattle	1 085	2 656	2 433	1 702	1 668	449	632	558	294
Hogs	492	1 392	2 144	1 140	1 482	584	694	681	360
Sheep	86	205	257	273	115	38	57	65	40
Poultry and eggs	286	238	193	279	210	340	308	278	184
Dairy sales	2 130	669	313	431	432	841	316	149	298
Cash Expenses, Total	\$3 634	\$4 987	\$5 552	\$5 021	\$4 236	\$2 216	\$1 971	\$1 974	\$1 935
Farm improvements	289	426	479	515	320	219	215	164	168
Machinery and equipment	831	908	1 169	1 246	1 033	684	597	585	465
Feed and grain	517	695	1 036	728	688	412	335	264	451
Crop expense	178	175	170	184	133	84	84	96	75
Hired labor	490	362	510	481	379	229	160	172	411
Taxes	244	266	321	386	289	163	132	181	135
Livestock and miscellaneous	1 085	2 155	1 867	1 481	1 394	425	448	512	230
Cash Balance	\$1 430	\$1 936	\$2 382	\$2 576	\$1 958	\$1 453	\$969	\$1 470	\$896
Increase in inventory	887	1 191	1 540	1 691	1 108	597	407	185	12
Total unpaid labor	740	732	681	689	769	688	654	558	522
Net farm income	\$1 577	\$2 395	\$3 241	\$3 578	\$2 297	\$1 342	\$722	\$1 097	\$386

Table 12. ---Factors Helping to Analyze the Farm Business
Averages for Farming-Type Areas, 1939

Items	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8	Area 9
Size of farm, acres - - - - -	171	209	249	267	261	202	227	218	186
Tillable land (percent) - - - - -	78	84	80	90	79	80	82	87	80
<u>Inventory Basis</u>									
Gross receipts per acre - - - - -	\$24.67	\$23.63	\$24.30	\$24.58	\$18.29	\$15.61	\$10.24	\$12.13	\$11.54
Total expenses per acre - - - - -	15.44	12.18	11.29	11.16	9.50	8.96	7.06	7.09	9.46
Net receipts per acre - - - - -	9.23	11.45	13.01	13.42	8.79	6.65	3.18	5.04	2.08
<u>Cash Basis</u>									
Gross cash income per acre - - - - -	\$29.63	\$33.11	\$31.85	\$28.50	\$23.69	\$18.09	\$12.95	\$15.83	\$15.24
Total cash expense per acre ^{a/} - - - - -	25.59	27.35	25.02	21.42	19.14	14.40	11.56	11.64	13.23
Net cash income per acre - - - - -	4.04	5.76	6.83	7.08	4.55	3.69	1.39	4.19	2.01
Acreage in: Corn - - - - -	44	60	74	84	58	31	40	45	25
Oats - - - - -	23	35	31	33	17	14	13	13	4
Wheat - - - - -	2	2	8	16	29	34	17	39	14
Soybeans - - - - -	4	5	14	31	20	4	4	5	1
Bushels per acre: Corn - - - - -	63	72	70	66	62	53	41	44	39
Oats - - - - -	38	40	38	37	32	28	22	23	22
Wheat - - - - -	20	21	23	24	25	25	19	17	17
Soybeans - - - - -	14	26	29	28	27	19	16	12	12
Value of feed fed to livestock - - - - -	\$2 320	\$2 633	\$2 620	\$1 805	\$1 958	\$1 268	\$1 164	\$ 989	\$ 706
Returns per \$100 feed fed - - - - -	162	145	157	163	161	179	168	165	173
Feed fed per acre to livestock - - - - -	13.58	12.59	10.52	6.77	7.49	6.29	5.13	4.55	3.80
Returns per acre from livestock - - - - -	21.95	18.27	16.47	11.02	12.07	11.23	8.59	7.48	6.58
Horse and machinery cost per crop acre - - - - -	\$ 6.19	\$ 5.17	\$ 5.21	\$ 4.79	\$ 4.55	\$ 4.68	\$ 3.68	\$ 3.39	\$ 4.45
Labor cost per crop acre - - - - -	10.26	7.44	7.06	5.73	7.08	7.39	6.26	4.94	9.33
Value of land per acre - - - - -	\$ 78	\$ 92	\$ 96	\$ 116	\$ 70	\$ 49	\$ 34	\$ 46	\$ 28
Value of improvements per acre - - - - -	34	27	20	18	13	13	9	9	18
Total investment per acre - - - - -	155	159	152	166	109	86	61	73	63
Number of farms included - - - - -	87	454	511	853	315	271	103	63	56

a/ Cash expense includes estimated value of unpaid labor.

type of equipment. The combined expense per crop acre for labor, horses, and machinery was lowest in Area 8, where the farms are fairly large, where the wages are low, and where there is but little livestock, and this combined expense was highest in Area 1, where the farms are smaller, where the wages are higher, and where the feed fed an acre is the largest and is mostly fed to dairy cattle.

Data for Counties and Groups of Counties

Averages were calculated for each county having 30 or more records and for groups of counties having less than 30 records (Table 13). The county averages are arranged according to farming-type areas with the averages for Area 1 at the front of the list and those for Area 9 at the end.

TABLE 13.—SUMMARY, BY COUNTIES AND GROUPS OF COUNTIES, OF BUSINESS RECORDS FROM 2,713 ILLINOIS FARMS, 1939

Accounting items	DuPage, Kane, Boone, Lake, Cook	McHenry	DeKalb	Jo Daviess	Lee	Ogle	Rock Island	Stephenson	Whiteside, Carroll
Capital investment, total.....	\$27 610	\$25 089	\$41 579	\$24 086	\$43 605	\$30 540	\$26 777	\$22 433	\$28 718
Land.....	14 757	11 564	25 255	13 000	28 963	16 963	15 286	10 635	15 991
Farm improvements.....	5 506	6 285	6 603	4 530	5 669	5 290	4 326	5 376	5 126
Horses.....	374	410	407	423	308	404	347	312	414
Cattle.....	2 439	2 783	2 773	2 211	2 162	2 157	1 600	1 942	2 276
Hogs.....	308	236	850	638	756	914	961	698	855
Sheep.....	30	17	191	75	210	111	83	19	38
Poultry.....	125	112	100	98	92	97	120	134	117
Feed and grain.....	2 021	1 616	2 829	1 402	2 876	2 385	1 958	1 560	2 004
Machinery and equipment*.....	2 050	2 066	2 571	1 709	2 569	2 219	2 096	1 757	1 897
Income, net increases, total.....	\$ 4 461	\$ 4 454	\$ 6 203	\$ 3 780	\$ 6 852	\$ 4 820	\$ 4 923	\$ 3 739	\$ 4 545
Cattle.....	832	615	2 090	988	1 730	1 421	1 091	776	1 507
Dairy sales.....	1 777	2 526	581	804	471	464	462	1 015	585
Hogs.....	496	358	1 209	1 181	1 081	1 276	1 319	1 083	1 342
Sheep.....	69	11	121	50	171	59	36	17	59
Poultry and eggs.....	263	246	209	172	159	170	272	263	206
Farm products used in household.....	240	242	235	260	249	250	310	252	234
Feed and grain.....	431	92	1 011	.....	1 956	648	837	.....	.....
AAA payments.....	301	323	693	306	949	479	539	301	577
Labor and miscellaneous.....	52	41	54	19	86	53	57	32	35
Expenses, net decreases, total.....	\$ 1 904	\$ 1 894	\$ 2 160	\$ 1 510	\$ 2 172	\$ 1 804	\$ 1 553	\$ 1 373	\$ 1 690
Farm improvements.....	268	316	342	221	333	300	222	218	274
Feed and grain.....	.....	.....	.....	37	.....	.....	.....	116	47
Machinery and equipment*.....	573	563	748	455	735	587	503	423	525
Hired labor.....	509	469	426	398	443	375	316	197	328
Crop expense.....	184	173	218	110	238	153	130	122	145
Taxes.....	249	238	302	188	316	279	283	198	228
Livestock and miscellaneous.....	121	135	124	101	107	110	99	99	143
Income less expenses.....	\$ 2 557	\$ 2 560	\$ 4 043	\$ 2 270	\$ 4 680	\$ 3 016	\$ 3 370	\$ 2 366	\$ 2 855
Unpaid labor.....	718	765	727	680	709	758	756	734	700
Net farm income.....	1 839	1 795	3 316	1 590	3 971	2 258	2 614	1 632	2 155
Rate earned on investment, percent.....	6.7	7.2	8.0	6.6	9.1	7.4	9.8	7.3	7.5
Labor and management earnings.....	\$ 967	\$ 1 064	\$ 1 805	\$ 923	\$ 2 350	\$ 1 278	\$ 1 815	\$ 1 074	\$ 1 237
Excess of sales over expenses.....	1 315	1 560	2 113	1 658	2 251	1 708	2 268	1 643	1 718
Increase in inventory.....	1 002	758	1 695	352	2 180	1 058	792	471	903
Number of farms included.....	46	41	138	32	53	47	41	63	50
Size of farm, acres.....	166	176	214	235	256	210	192	159	195
Gross receipts an acre.....	\$ 26.87	\$ 25.25	\$ 28.95	\$ 16.08	\$ 26.78	\$ 22.91	\$ 25.64	\$ 23.47	\$ 23.31
Total expenses an acre.....	15.79	15.07	13.47	9.32	11.26	12.18	12.03	13.23	12.26
Net receipts an acre.....	11.08	10.18	15.48	6.76	15.52	10.73	13.61	10.24	11.05
Value of land an acre.....	\$ 89	\$ 66	\$118	\$ 55	\$113	\$ 81	\$ 80	\$ 67	\$ 82
Value of improvements an acre.....	33	36	31	19	22	25	23	34	26
Total investment an acre.....	166	142	194	102	170	145	139	141	147
Percent of land area tillable.....	81.7	74.5	91.0	62.0	88.2	80.3	75.4	84.6	84.3
Percent of tillable land in—									
Corn.....	32.7	33.0	37.4	26.2	36.3	33.3	38.8	28.9	32.0
Oats.....	17.3	17.0	19.8	16.3	20.7	24.6	14.6	19.1	19.5
Wheat.....	1.7	1.3	1.2	.7	1.0	.7	1.0	.2	1.9
Soybeans for grain.....	2.9	2.9	4.6	.....	7.1	3.0	1.4	.2	.7
Other cultivated crops.....	11.1	7.8	9.3	6.9	8.6	5.4	9.5	6.8	4.6
Legume hay and pasture.....	22.6	21.8	17.2	20.4	16.4	20.5	22.7	27.6	21.3
Nonlegume hay and pasture.....	11.7	16.2	10.5	29.5	9.9	12.5	12.0	17.2	20.0
Bushels an acre: Corn.....	67.0	58.4	74.5	68.6	70.8	69.1	72.8	68.9	73.4
Oats.....	40.0	35.5	44.4	36.8	40.2	38.8	33.6	34.0	39.1
Wheat.....	22.4	12.5	23.3	18.9	22.6	16.7	21.4	13.3	24.1
Barley.....	26.8	29.0	29.6	33.8	23.8	25.3	21.0	30.2	28.0
Soybeans.....	20.3	7.6	25.4	.....	27.8	25.3	25.2	23.3	22.5
Feed fed an acre to livestock.....	\$ 14.56	\$ 12.53	\$ 14.51	\$ 9.00	\$ 9.55	\$ 12.05	\$ 10.67	\$ 14.65	\$ 14.44
Returns an acre from livestock.....	21.69	22.22	20.44	14.30	14.77	16.94	17.71	20.83	19.81
Returns for \$100 feed fed.....	149	177	141	159	155	141	166	142	137
Poultry returns per hen.....	2.74	2.75	2.15	1.90	2.42	2.37	2.64	2.31	2.05
Number of litters farrowed.....	11.1	7.5	19.3	17.4	18.2	17.7	18.6	15.9	20.9
Returns per litter.....	\$ 76	\$ 73	\$ 71	\$ 71	\$ 75	\$ 77	\$ 68	\$ 73	\$ 72
Dairy returns per cow.....	119	114	93	69	79	73	75	77	73
Horse and machinery cost a crop acre.....	\$ 6.05	\$ 6.37	\$ 5.21	\$ 5.67	\$ 4.43	\$ 5.26	\$ 5.37	\$ 5.35	\$ 5.61
Labor cost a crop acre.....	9.95	10.65	6.65	10.03	5.88	7.90	9.14	8.95	8.33
Labor cost for \$100 gross earnings.....	27	27	18	28	16	23	21	24	22
Improvement cost an acre.....	1.61	1.79	1.60	.94	1.30	1.43	1.16	1.37	1.41
Taxes an acre.....	1.50	1.35	1.41	.80	1.23	1.33	1.47	1.24	1.17

*Includes farm share of automobile.

(Table is continued on next page)

TABLE 13.—SUMMARY, BY COUNTIES AND GROUPS OF COUNTIES, OF BUSINESS RECORDS FROM 2,713 ILLINOIS FARMS, 1939—Continued

Accounting items	Winnebago	Bureau	Fulton	Hancock	Henderson	Henry	Knox	McDonough
Capital investment, total.....	\$28 860	\$38 048	\$30 031	\$28 485	\$34 668	\$39 304	\$37 564	\$40 329
Land.....	14 024	24 030	18 621	18 163	20 028	23 970	24 245	26 384
Farm improvements.....	6 607	5 536	4 262	3 992	4 214	5 552	5 122	4 710
Horses.....	419	314	299	345	16	359	299	381
Cattle.....	2 371	1 949	1 575	1 406	2 783	2 530	1 565	1 674
Hogs.....	921	1 038	852	703	1 358	1 198	839	1 446
Sheep.....	106	228	122	53	68	142	137	74
Poultry.....	98	94	73	82	72	92	75	89
Feed and grain.....	2 111	2 528	2 135	1 983	3 048	2 963	2 951	3 092
Machinery and equipment*.....	2 203	2 331	2 092	1 758	2 581	2 498	2 331	2 479
Income, net increases, total.....	\$ 4 546	\$ 6 046	\$ 5 028	\$ 4 592	\$ 6 932	\$ 6 390	\$ 6 042	\$ 7 230
Cattle.....	900	1 364	904	873	2 329	1 851	923	1 584
Dairy sales.....	1 297	358	240	350	143	344	448	198
Hogs.....	1 142	1 595	1 766	1 328	2 330	1 937	1 367	2 690
Sheep.....	87	144	117	44	59	90	75	40
Poultry and eggs.....	180	220	140	126	147	180	115	179
Farm products used in household.....	251	269	241	252	279	256	241	290
Feed and grain.....	199	1 220	963	1 160	678	815	2 188	1 352
AAA payments.....	442	817	609	415	879	866	612	831
Labor and miscellaneous.....	48	59	48	44	88	51	73	66
Expenses, net decreases, total.....	\$ 1 798	\$ 1 968	\$ 1 912	\$ 1 579	\$ 2 480	\$ 2 151	\$ 2 171	\$ 2 218
Farm improvements.....	308	300	276	184	294	288	258	286
Feed and grain.....	572	702	694	493	841	714	747	700
Machinery and equipment*.....	325	427	389	451	643	492	503	578
Hired labor.....	192	168	130	102	217	187	199	190
Crop expense.....	259	248	325	255	321	347	323	316
Taxes.....	142	123	98	94	164	123	141	148
Livestock and miscellaneous.....								
Income less expense.....	\$ 2 748	\$ 4 078	\$ 3 116	\$ 3 013	\$ 4 452	\$ 4 239	\$ 3 871	\$ 5 012
Unpaid labor.....	824	687	643	643	742	741	637	665
Net farm income.....	1 924	3 391	2 473	2 370	3 710	3 498	3 234	4 347
Rate earned on investment, percent.....	6.7	8.9	8.2	8.3	10.7	8.9	8.6	10.8
Labor and management earnings.....	\$ 1 051	\$ 1 997	\$ 1 489	\$ 1 421	\$ 2 536	\$ 2 047	\$ 1 872	\$ 2 855
Excess of sales over expenses.....	1 735	2 299	1 889	1 500	2 165	2 752	1 519	2 755
Increase in inventory.....	762	1 510	986	1 261	2 008	1 231	2 111	1 967
Number of farms included.....	30	57	40	30	33	78	48	51
Size of farm, acres.....	224	217	255	236	276	236	244	262
Gross receipts an acre.....	\$ 20.29	\$ 27.91	\$ 19.74	\$ 19.47	\$ 25.10	\$ 27.10	\$ 24.76	\$ 27.64
Total expenses an acre.....	11.70	12.26	10.03	9.42	11.67	12.27	11.51	11.02
Net receipts an acre.....	8.59	15.65	9.71	10.05	13.43	14.83	13.25	16.62
Value of land an acre.....	\$ 63	\$111	\$ 73	\$ 77	\$ 73	\$102	\$ 99	\$101
Value of improvements an acre.....	29	26	17	17	15	24	21	18
Total investment an acre.....	129	176	118	121	126	167	154	154
Percent of land area tillable.....	78.0	84.5	73.8	77.3	74.2	84.6	83.2	81.7
Percent of tillable land in—								
Corn.....	31.0	39.0	32.1	27.1	37.8	38.3	35.8	34.9
Oats.....	20.8	21.9	12.0	11.5	13.9	17.9	11.4	13.4
Wheat.....	7	1.2	10.7	8.8	5.8	1.0	2.6	8.4
Soybeans for grain.....	1.6	3.5	7.6	10.8	7.4	3.1	11.8	9.6
Other cultivated crops.....	8.6	6.9	7.8	9.5	7.8	4.8	7.6	6.2
Legume hay and pasture.....	25.5	17.5	18.8	17.9	16.7	22.1	15.8	18.0
Nonlegume hay and pasture.....	11.8	10.0	11.0	14.4	10.6	12.8	15.0	9.5
Busbels an acre: Corn.....	64.0	73.1	63.5	59.6	68.8	73.6	71.9	69.9
Oats.....	29.8	38.6	38.7	36.8	31.8	38.9	35.8	44.4
Wheat.....	14.4	19.5	19.5	19.8	23.8	24.1	24.3	27.2
Barley.....	24.1	21.5	40.0	7.7	27.7	27.7	22.9	20.0
Soybeans.....	17.8	26.9	28.1	26.1	26.3	29.3	30.7	31.2
Feed fed an acre to livestock.....	\$ 11.59	\$ 11.57	\$ 8.62	\$ 7.49	\$ 12.10	\$ 13.28	\$ 7.87	\$ 11.59
Returns an acre from livestock.....	16.84	17.90	13.17	12.30	18.91	19.49	12.74	18.78
Returns for \$100 feed fed.....	145	155	153	164	156	147	162	162
Poultry returns per hen.....	2.38	2.72	2.58	2.32	2.49	2.44	2.25	2.69
Number of litters farrowed.....	16.7	22.2	28.6	19.9	28.9	30.2	22.9	32.2
Returns per litter.....	\$ 73	\$ 81	\$ 70	\$ 75	\$ 74	\$ 71	\$ 67	\$ 82
Dairy returns per cow.....	88	68	61	61	62	78	81	71
Horse and machinery cost a crop acre.....	\$ 5.20	\$ 5.30	\$ 5.16	\$ 4.57	\$ 5.84	\$ 5.48	\$ 5.29	\$ 4.62
Labor cost a crop acre.....	7.94	6.92	6.48	7.77	7.97	7.80	6.59	6.86
Labor cost for \$100 gross earnings.....	25	18	20	23	19	19	18	17
Improvement cost an acre.....	1.37	1.39	1.08	.78	1.06	1.22	1.06	1.09
Taxes an acre.....	1.16	1.14	1.28	1.08	1.16	1.47	1.32	1.21

*Includes farm share of automobile.

(Table is continued on next page)

TABLE 13.—SUMMARY, BY COUNTIES AND GROUPS OF COUNTIES, OF BUSINESS RECORDS FROM 2,713 ILLINOIS FARMS, 1939—Continued

Accounting items	Marshall-Putnam	Mercer	Peoria	Stark	Warren	Champaign	DeWitt, Logan	Edgar, Coles, Douglas
Capital investment, total.....	\$49 528	\$39 157	\$34 723	\$36 103	\$43 335	\$41 820	\$41 433	\$43 988
Land.....	32 414	24 282	22 490	24 084	27 615	30 720	29 423	31 453
Farm improvements.....	6 101	4 874	4 530	3 917	5 358	3 920	3 899	4 135
Horses.....	388	485	370	223	483	396	377	350
Cattle.....	2 777	2 710	1 388	1 084	2 291	901	1 493	1 243
Hogs.....	1 279	1 349	954	1 128	1 261	329	571	692
Sheep.....	168	53	26	321	216	45	133	43
Poultry.....	108	98	110	82	79	93	95	110
Feed and grain.....	3 787	3 106	2 518	2 775	3 542	2 934	2 968	3 233
Machinery and equipment*.....	2 506	2 200	2 337	2 489	2 490	2 482	2 474	2 729
Income, net increases, total.....	\$ 8 000	\$ 6 373	\$ 5 830	\$ 5 976	\$ 7 345	\$ 5 587	\$ 6 240	\$ 6 428
Cattle.....	2 016	1 902	884	614	1 736	491	975	1 020
Dairy sales.....	317	329	428	250	234	346	317	197
Hogs.....	2 379	1 928	1 623	1 612	2 233	553	844	1 320
Sheep.....	148	51	76	221	95	35	55	32
Poultry and eggs.....	173	181	209	147	132	203	209	239
Farm products used in household.....	273	255	253	248	253	215	241	222
Feed and grain.....	1 519	895	1 553	2 150	1 596	3 208	2 841	2 681
AAA payments.....	1 098	783	725	672	1 002	484	682	631
Labor and miscellaneous.....	77	49	79	62	64	52	46	86
Expenses, net decreases, total.....	\$ 2 581	\$ 2 344	\$ 1 890	\$ 1 972	\$ 2 423	\$ 1 959	\$ 2 077	\$ 2 258
Farm improvements.....	365	286	258	221	341	272	259	261
Feed and grain.....	.....	.....	.....	.....	.....	.....	.....	.....
Machinery and equipment*.....	888	726	610	706	835	787	862	775
Hired labor.....	620	609	460	443	578	321	372	517
Crop expense.....	183	167	124	163	188	128	120	177
Taxes.....	391	395	298	315	323	370	373	397
Livestock and miscellaneous.....	134	161	140	124	158	81	91	131
Income less expenses.....	\$ 5 419	\$ 4 029	\$ 3 940	\$ 4 004	\$ 4 922	\$ 3 628	\$ 4 163	\$ 4 170
Unpaid labor.....	681	716	615	687	678	647	705	652
Net farm income.....	4 738	3 313	3 325	3 317	4 244	2 981	3 458	3 518
Rate earned on investment, percent.....	9.6	8.5	9.6	9.2	9.8	7.1	8.3	8.0
Labor and management earnings.....	\$ 2 798	\$ 1 904	\$ 2 071	\$ 2 061	\$ 2 591	\$ 1 417	\$ 1 917	\$ 1 832
Excess of sales over expenses.....	3 157	2 240	2 516	2 579	3 015	2 185	2 146	2 837
Increase in inventory.....	1 989	1 534	1 171	1 177	1 654	1 228	1 776	1 111
Number of farms included.....	34	37	45	28	30	48	43	57
Size of farm, acres.....	305	270	224	228	278	231	266	280
Gross receipts an acre.....	\$ 26.21	\$ 23.61	\$ 26.09	\$ 26.22	\$ 26.45	\$ 24.23	\$ 23.44	\$ 22.93
Total expenses an acre.....	10.69	11.34	11.21	11.67	11.17	11.30	10.45	10.38
Net receipts an acre.....	15.52	12.27	14.88	14.55	15.28	12.93	12.99	12.55
Value of land an acre.....	\$106	\$ 90	\$101	\$106	\$ 99	\$133	\$111	\$112
Value of improvements an acre.....	20	18	20	17	19	17	15	15
Total investment an acre.....	162	145	155	158	156	181	156	157
Percent of land area tillable.....	77.7	70.4	81.0	87.4	84.2	93.3	89.3	89.2
Percent of tillable land in—								
Corn.....	37.3	41.0	35.4	39.6	40.3	34.7	35.2	30.1
Oats.....	17.9	11.9	16.9	19.4	14.0	10.0	11.5	6.7
Wheat.....	5.9	.8	2.8	.8	3.1	4.6	9.3	6.9
Soybeans for grain.....	5.7	3.2	8.9	6.3	6.4	22.5	14.3	21.7
Other cultivated crops.....	8.9	9.7	8.2	7.7	6.4	7.5	8.8	9.0
Legume hay and pasture.....	18.0	19.3	20.3	18.8	19.3	11.9	12.7	13.4
Nonlegume hay and pasture.....	6.3	14.1	7.5	7.4	10.5	8.8	8.2	12.2
Bushels an acre: Corn.....	68.2	72.2	69.8	71.3	71.3	62.9	64.7	64.8
Oats.....	37.1	33.3	36.5	37.9	36.9	30.1	34.1	27.7
Wheat.....	20.1	25.6	25.0	24.4	25.8	21.2	25.2	22.2
Barley.....	25.3	21.0	.....	.....	10.0	.....	.....	.....
Soybeans.....	31.6	29.2	28.7	27.1	28.1	30.1	28.0	29.9
Feed fed an acre to livestock.....	\$ 10.63	\$ 11.04	\$ 9.03	\$ 8.03	\$ 10.96	\$ 4.53	\$ 6.31	\$ 7.07
Returns an acre from livestock.....	17.14	16.95	15.21	13.33	16.63	7.75	9.82	10.61
Returns for \$100 feed fed.....	161	154	168	166	152	171	156	150
Poultry returns per hen.....	2.17	2.33	2.39	2.29	2.24	2.59	2.42	2.83
Number of litters farrowed.....	32.7	26.2	23.4	23.5	30.7	12.0	15.1	18.5
Returns per litter.....	\$ 83	\$ 69	\$ 79	\$ 71	\$ 77	\$ 64	\$ 70	\$ 81
Dairy returns per cow.....	76	76	96	63	59	79	87	66
Horse and machinery cost a crop acre.....	\$ 4.96	\$ 5.70	\$ 5.18	\$ 4.92	\$ 5.43	\$ 4.88	\$ 4.91	\$ 4.42
Labor cost a crop acre.....	6.07	8.44	6.85	6.67	6.53	5.18	5.27	5.60
Labor cost for \$100 gross earnings.....	16	20	18	18	17	17	17	18
Improvement cost an acre.....	1.20	1.06	1.15	.97	1.23	1.18	.97	.93
Taxes an acre.....	1.28	1.46	1.33	1.38	1.16	1.60	1.40	1.42

*Includes farm share of automobile.

(Table is continued on next page)

TABLE 13.—SUMMARY, BY COUNTIES AND GROUPS OF COUNTIES, OF BUSINESS RECORDS FROM 2,713 ILLINOIS FARMS, 1939—Continued

Accounting items	La Salle	Livingston	McLean	Tazewell	Woodford	Ford	Iroquois	Kankakee
Capital investment, total.....	\$53 437	\$47 901	\$61 558	\$47 273	\$49 649	\$44 392	\$40 036	\$36 987
Land.....	35 013	33 188	42 824	32 606	33 835	32 495	27 145	24 119
Farm improvements.....	7 002	5 500	6 763	5 734	5 586	3 861	4 777	4 746
Horses.....	329	414	394	361	432	495	466	337
Cattle.....	2 720	1 255	2 170	1 686	2 074	1 197	1 312	1 390
Hogs.....	723	382	1 192	630	859	335	350	180
Sheep.....	60	226	77	295	121	175	207	9
Poultry.....	120	152	82	102	181	107	119	101
Feed and grain.....	4 461	3 859	4 834	3 272	3 905	3 479	3 181	3 404
Machinery and equipment*.....	3 009	2 925	3 222	2 587	2 656	2 248	2 479	2 701
Income, net increases, total.....	\$ 8 582	\$ 6 990	\$ 9 468	\$ 7 644	\$ 8 397	\$ 5 963	\$ 6 043	\$ 6 015
Cattle.....	1 614	645	1 318	1 133	1 510	768	788	712
Dairy sales.....	704	450	480	644	414	232	413	667
Hogs.....	1 424	636	2 003	1 164	1 429	539	633	312
Sheep.....	91	68	150	327	288	53	85	6
Poultry and eggs.....	271	480	171	198	538	180	215	220
Farm products used in household.....	282	296	266	285	305	237	235	220
Feed and grain.....	3 095	3 430	3 986	3 090	2 666	3 260	2 835	3 119
AAA payments.....	1 011	911	1 015	734	1 173	650	763	676
Labor and miscellaneous.....	90	74	79	69	74	44	76	83
Expenses, net decreases, total.....	\$ 2 777	\$ 2 176	\$ 3 123	\$ 2 588	\$ 2 708	\$ 1 881	\$ 2 066	\$ 2 059
Farm improvements.....	385	289	365	352	387	214	266	256
Feed and grain.....	977	768	1 048	873	861	712	748	810
Machinery and equipment*.....	573	420	744	595	572	342	414	387
Hired labor.....	280	216	279	234	221	161	155	213
Taxes.....	387	342	511	399	471	349	374	276
Livestock and miscellaneous.....	175	141	176	135	196	103	109	117
Income less expenses.....	\$ 5 805	\$ 4 814	\$ 6 345	\$ 5 056	\$ 5 689	\$ 4 082	\$ 3 977	\$ 3 956
Unpaid labor.....	710	720	640	644	685	692	756	679
Net farm income.....	5 095	4 094	5 705	4 412	5 004	3 390	3 221	3 277
Rate earned on investment, percent.....	9.5	8.5	9.3	9.3	10.1	7.6	8.0	8.9
Labor and management earnings.....	\$ 2 928	\$ 2 223	\$ 3 154	\$ 2 558	\$ 3 033	\$ 1 726	\$ 1 779	\$ 1 936
Excess of sales over expenses.....	3 503	3 123	3 340	2 453	3 136	2 305	2 877	2 244
Increase in inventory.....	2 020	1 395	2 739	2 318	2 248	1 540	865	1 492
Number of farms included.....	50	57	53	53	47	60	41	38
Size of farm, acres.....	277	237	315	255	259	264	254	266
Gross receipts an acre.....	\$ 30.97	\$ 29.48	\$ 30.10	\$ 30.04	\$ 32.39	\$ 22.62	\$ 23.79	\$ 22.64
Total expenses an acre.....	12.58	12.21	11.96	12.70	13.09	9.76	11.11	10.31
Net receipts an acre.....	18.39	17.27	18.14	17.34	19.30	12.86	12.68	12.33
Value of land an acre.....	\$126	\$140	\$136	\$128	\$130	\$123	\$107	\$ 91
Value of improvements an acre.....	25	23	22	23	22	15	19	18
Total investment an acre.....	193	202	196	186	191	168	158	139
Percent of land area tillable.....	86.9	92.6	89.8	86.3	87.1	94.2	91.0	89.7
Percent of tillable land in—								
Corn.....	40.5	40.5	40.2	34.6	37.2	38.4	35.4	36.3
Oats.....	20.6	24.0	13.4	12.6	19.7	22.0	18.2	13.7
Wheat.....	1.7	1.5	3.6	8.3	1.7	1.3	1.6	6.2
Soybeans for grain.....	5.4	5.6	12.0	10.7	6.4	8.7	10.6	17.2
Other cultivated crops.....	9.6	4.6	7.6	9.5	10.2	5.9	7.7	7.1
Legume hay and pasture.....	18.7	21.6	18.1	19.5	21.6	17.7	18.7	9.4
Nonlegume hay and pasture.....	3.5	2.2	5.1	4.8	3.2	6.0	7.8	10.1
Bushels an acre: Corn.....	73.7	69.6	72.7	74.1	75.4	60.7	63.6	55.5
Oats.....	47.8	37.6	39.5	40.4	42.2	33.2	32.4	37.7
Wheat.....	28.3	26.9	21.4	23.1	21.0	22.1	25.0	18.2
Barley.....	21.4	22.0	22.0	.....	14.3	.....	23.7	.....
Soybeans.....	27.3	27.5	29.6	29.9	28.9	27.6	25.4	21.0
Feed fed an acre to livestock.....	\$ 8.91	\$ 6.05	\$ 8.54	\$ 7.82	\$ 9.58	\$ 4.80	\$ 5.75	\$ 4.94
Returns an acre from livestock.....	15.55	10.47	13.66	14.35	16.86	7.41	9.11	7.81
Returns for \$100 feed fed.....	175	173	160	183	176	154	158	158
Poultry returns per hen.....	2.74	3.31	2.42	2.82	2.80	2.18	2.36	3.05
Number of litters farrowed.....	17.3	8.7	22.9	13.8	17.6	10.1	9.8	8.4
Returns per litter.....	\$ 85	\$ 78	\$ 89	\$ 87	\$ 84	\$ 68	\$ 72	\$ 67
Dairy returns per cow.....	107	90	91	109	97	73	77	105
Horse and machinery cost a crop acre.....	\$ 5.32	\$ 4.96	\$ 5.08	\$ 5.55	\$ 5.46	\$ 4.11	\$ 4.79	\$ 4.52
Labor cost a crop acre.....	5.86	5.96	5.55	6.45	6.37	4.98	6.18	4.96
Labor cost for \$100 gross earnings.....	14	16	14	15	14	17	19	17
Improvement cost an acre.....	1.39	1.22	1.16	1.38	1.49	.81	1.05	.96
Taxes an acre.....	1.40	1.44	1.62	1.57	1.82	1.32	1.47	1.04

*Includes farm share of automobile.

(Table is continued on next page)

TABLE 13.—SUMMARY, BY COUNTIES AND GROUPS OF COUNTIES, OF BUSINESS RECORDS FROM 2,713 ILLINOIS FARMS, 1939—Continued

Accounting items	Kendall	Piatt, Moultrie	Vermilion	Will	Macon	Mason, Cass	Menard	Sangamon
Capital investment, total.....	\$45 826	\$51 004	\$43 498	\$30 102	\$45 460	\$31 630	\$30 772	\$40 900
Land.....	28 880	37 942	29 981	18 167	34 172	22 002	21 339	29 493
Farm improvements.....	6 887	4 629	5 134	4 650	3 728	3 281	3 017	3 820
Horses.....	387	432	389	309	420	499	397	442
Cattle.....	2 633	1 459	1 396	2 007	1 177	878	1 431	1 807
Hogs.....	890	324	474	389	379	593	584	965
Sheep.....	138	81	346	64	49	35	52	72
Poultry.....	141	92	89	113	124	88	101	88
Feed and grain.....	3 340	3 447	3 099	2 338	3 181	2 382	1 812	2 274
Machinery and equipment*.....	2 530	2 598	2 590	2 065	2 230	1 872	2 039	1 939
Income, net increases, total.....	\$ 6 829	\$ 7 632	\$ 7 075	\$ 4 736	\$ 6 832	\$ 5 659	\$ 4 941	\$ 6 254
Cattle.....	1 867	896	976	773	753	613	1 040	1 225
Dairy sales.....	673	447	405	973	325	170	201	341
Hogs.....	1 454	654	853	543	641	856	1 200	1 643
Sheep.....	140	50	128	12	27	33	40	55
Poultry and eggs.....	346	172	163	247	198	203	222	114
Farm products used in household.....	250	235	248	223	218	259	257	244
Feed and grain.....	1 253	4 443	3 399	1 440	3 722	2 613	1 461	1 855
AAA payments.....	809	681	826	475	901	852	481	710
Labor and miscellaneous.....	37	54	77	50	47	60	39	67
Expenses, net decreases, total.....	\$ 2 564	\$ 2 626	\$ 2 525	\$ 1 677	\$ 2 083	\$ 1 729	\$ 1 813	\$ 2 348
Farm improvements.....	457	337	266	214	227	186	209	310
Feed and grain.....	830	958	886	648	812	588	720	810
Machinery and equipment*.....	556	597	555	374	374	385	357	623
Hired labor.....	223	166	198	148	126	147	109	120
Crop expense.....	329	453	514	214	437	344	320	362
Taxes.....	169	115	106	100	107	79	98	123
Livestock and miscellaneous.....								
Income less expenses.....	\$ 4 265	\$ 5 006	\$ 4 550	\$ 3 059	\$ 4 749	\$ 3 930	\$ 3 128	\$ 3 906
Unpaid labor.....	656	649	724	716	743	745	781	567
Net farm income.....	3 609	4 357	3 826	2 343	4 006	3 185	2 347	3 339
Rate earned on investment, percent.....	7.9	8.5	8.8	7.8	8.8	10.1	7.6	8.2
Labor and management earnings.....	\$ 1 869	\$ 2 324	\$ 2 191	\$ 1 389	\$ 2 280	\$ 2 151	\$ 1 351	\$ 1 736
Excess of sales over expenses.....	1 205	2 884	2 691	1 750	3 014	2 466	1 356	2 103
Increase in inventory.....	2 810	1 887	1 611	1 086	1 517	1 205	1 515	1 559
Number of farms included.....	34	51	43	30	33	49	34	32
Size of farm, acres.....	240	310	303	183	256	303	247	273
Gross receipts an acre.....	\$ 28.43	\$ 24.62	\$ 23.37	\$ 25.82	\$ 26.68	\$ 18.67	\$ 19.98	\$ 22.93
Total expenses an acre.....	13.41	10.56	10.73	13.05	11.04	8.16	10.49	10.69
Net receipts an acre.....	15.02	14.06	12.64	12.77	15.64	10.51	9.49	12.24
Value of land an acre.....	\$120	\$122	\$ 99	\$ 99	\$133	\$ 73	\$ 86	\$108
Value of improvements an acre.....	29	15	17	25	15	11	12	14
Total investment an acre.....	191	165	144	164	178	104	124	150
Percent of land area tillable.....	88.3	91.9	92.7	91.2	95.7	86.1	86.1	88.8
Percent of tillable land in—								
Corn.....	36.9	30.3	32.1	32.8	32.5	29.7	30.4	29.6
Oats.....	20.7	7.5	7.9	14.0	6.4	9.2	10.5	9.2
Wheat.....	2.4	8.3	7.2	4.8	9.5	20.5	17.3	12.9
Soybeans for grain.....	5.2	25.2	20.1	10.7	22.4	5.5	7.1	11.8
Other cultivated crops.....	12.6	7.9	7.8	13.6	6.5	12.8	8.7	9.8
Legume hay and pasture.....	17.3	11.7	11.9	15.7	12.6	17.5	14.2	14.2
Nonlegume hay and pasture.....	4.9	9.1	13.0	8.4	10.1	4.8	11.8	12.5
Bushels an acre: Corn.....	68.4	68.1	61.8	63.1	66.8	57.2	61.5	60.5
Oats.....	46.1	33.4	26.0	40.7	28.7	30.3	36.1	37.6
Wheat.....	26.7	26.7	25.3	17.1	24.8	22.6	24.5	28.1
Barley.....	26.6	15.6		19.4				31.7
Soybeans.....	24.5	31.1	26.8	24.0	28.8	22.8	25.2	26.9
Feed fed an acre to livestock.....	\$ 13.13	\$ 4.46	\$ 5.45	\$ 9.96	\$ 4.91	\$ 4.46	\$ 7.55	\$ 8.47
Returns an acre from livestock.....	19.41	7.73	8.99	14.83	8.24	6.86	11.70	13.07
Returns for \$100 feed fed.....	148	173	165	149	168	154	155	154
Poultry returns per hen.....	2.73	2.60	2.84	2.79	2.47	2.55	2.54	1.86
Number of litters farrowed.....	18.4	11.7	13.5	10.6	10.7	11.7	18.3	21.1
Returns per litter.....	\$ 83	\$ 67	\$ 77	\$ 85	\$ 61	\$ 77	\$ 79	\$ 77
Dairy returns per cow.....	104	98	80	114	87	63	56	76
Horse and machinery cost a crop acre.....	\$ 5.25	\$ 4.58	\$ 4.49	\$ 5.27	\$ 4.63	\$ 3.53	\$ 5.09	\$ 4.90
Labor cost a crop acre.....	6.32	5.06	5.49	7.00	5.29	5.13	6.60	5.92
Labor cost for \$100 gross earnings.....	17	16	17	22	16	19	23	19
Improvement cost an acre.....	1.90	1.09	.88	1.17	.89	.61	.85	1.14
Taxes an acre.....	1.37	1.46	1.70	1.17	1.71	1.13	1.29	1.33

*Includes farm share of automobile.

(Table is continued on next page)

TABLE 13.—SUMMARY, BY COUNTIES AND GROUPS OF COUNTIES, OF BUSINESS RECORDS FROM 2,713 ILLINOIS FARMS, 1939—Continued

Accounting items	Christian	Greene	Macoupin	Montgomery, Jersey	Morgan	Scott, Brown, Pike, Schuyler	Shelby	Adams
Capital investment, total.....	\$35 132	\$30 150	\$25 435	\$24 761	\$37 077	\$29 734	\$24 165	\$21 864
Land.....	24 195	19 082	14 148	15 297	26 483	18 817	16 400	12 812
Farm improvements.....	3 817	3 939	4 087	3 176	3 339	3 570	2 494	3 448
Horses.....	369	417	388	460	374	444	343	423
Cattle.....	1 314	2 248	1 821	1 567	1 462	1 613	841	1 160
Hogs.....	708	566	466	657	695	877	229	651
Sheep.....	61	62	156	63	90	90	109	96
Poultry.....	113	85	169	101	96	68	125	83
Feed and grain.....	2 277	1 889	2 016	1 726	2 238	2 259	1 896	1 592
Machinery and equipment ^a	2 278	1 862	2 184	1 714	2 300	1 996	1 728	1 599
Income, net increases, total.....	\$ 5 685	\$ 5 646	\$ 5 310	\$ 4 704	\$ 6 054	\$ 5 034	\$ 4 409	\$ 3 833
Cattle.....	1 051	1 752	1 182	888	1 002	1 188	484	773
Dairy sales.....	226	559	994	589	417	119	497	256
Hogs.....	1 345	1 604	902	1 082	1 495	1 771	488	1 200
Sheep.....	64	34	118	60	125	66	91	60
Poultry and eggs.....	170	122	376	163	176	96	234	140
Farm products used in household.....	266	213	279	285	252	245	239	259
Feed and grain.....	2 089	845	873	1 065	1 973	977	1 972	704
AAA payments.....	409	473	500	449	551	518	333	359
Labor and miscellaneous.....	65	44	86	93	63	54	71	82
Expenses, net decreases, total.....	\$ 1 836	\$ 2 057	\$ 1 696	\$ 1 480	\$ 1 958	\$ 1 899	\$ 1 459	\$ 1 400
Farm improvements.....	231	238	190	206	193	226	183	208
Feed and grain.....	709	688	583	493	712	602	565	527
Machinery and equipment ^a	331	511	424	354	444	440	259	264
Hired labor.....	113	151	174	102	142	150	125	107
Crop expense.....	357	338	205	228	326	375	256	207
Taxes.....	95	131	120	97	141	106	71	87
Livestock and miscellaneous.....								
Income less expenses.....	\$ 3 849	\$ 3 589	\$ 3 614	\$ 3 224	\$ 4 096	\$ 3 135	\$ 2 950	\$ 2 433
Unpaid labor.....	791	692	936	793	710	699	749	813
Net farm income.....	3 058	2 897	2 678	2 431	3 386	2 436	2 201	1 620
Rate earned on investment, percent.....	8.7	9.6	10.5	9.8	9.1	8.2	9.1	7.4
Labor and management earnings.....	\$ 1 810	\$ 1 907	\$ 1 889	\$ 1 734	\$ 2 054	\$ 1 477	\$ 1 560	\$ 1 037
Excess of sales over expenses.....	2 375	1 484	2 102	2 164	2 412	1 921	1 776	1 332
Increase in inventory.....	1 208	1 892	1 233	775	1 432	969	935	842
Number of farms included.....	31	27	35	47	38	62	38	37
Size of farm, acres.....	242	298	265	232	271	305	238	225
Gross receipts an acre.....	\$ 23.47	\$ 18.91	\$ 20.01	\$ 20.23	\$ 22.33	\$ 16.52	\$ 18.56	\$ 17.04
Total expenses an acre.....	10.84	9.21	9.92	9.77	9.84	8.53	9.29	9.84
Net receipts an acre.....	12.63	9.70	10.09	10.46	12.49	7.99	9.27	7.20
Value of land an acre.....	\$100	\$ 64	\$ 53	\$ 66	\$ 98	\$ 62	\$ 69	\$ 57
Value of improvements an acre.....	16	13	15	14	12	12	10	15
Total investment an acre.....	145	101	96	106	137	98	102	97
Percent of land area tillable.....	91.7	68.0	76.0	82.1	85.4	70.3	85.9	77.5
Percent of tillable land in—								
Corn.....	25.0	35.2	24.8	25.6	32.7	30.4	28.9	23.2
Oats.....	5.3	3.8	10.5	7.5	9.2	9.9	5.9	14.1
Wheat.....	15.1	17.7	15.2	15.0	18.5	14.2	5.3	13.0
Soybeans for grain.....	26.5	2.9	5.5	8.2	9.8	3.0	17.5	5.6
Other cultivated crops.....	5.6	12.0	11.6	13.6	5.6	11.4	9.5	9.0
Legume hay and pasture.....	10.5	18.6	18.0	17.8	15.4	20.5	17.9	20.5
Nonlegume hay and pasture.....	12.0	9.8	14.4	12.3	8.8	10.6	15.0	14.6
Bushels an acre: Corn.....	63.1	64.8	61.6	61.8	65.2	61.6	55.8	56.1
Oats.....	32.2	29.6	29.5	29.9	38.4	33.2	26.9	34.4
Wheat.....	28.3	24.0	24.2	27.8	26.7	22.1	22.8	19.8
Barley.....		26.1	30.9	36.3	20.0	24.5	28.1	17.5
Soybeans.....	28.8	25.7	25.7	28.2	25.4	24.5	25.0	28.6
Feed fed an acre to livestock.....	\$ 8.45	\$ 8.72	\$ 8.27	\$ 8.03	\$ 7.81	\$ 7.21	\$ 4.54	\$ 7.30
Returns an acre from livestock.....	12.63	14.15	14.21	12.85	12.58	11.20	8.26	11.62
Returns for \$100 feed fed.....	149	162	172	160	161	155	182	159
Poultry returns per hen.....	2.15	2.11	2.27	2.20	2.30	1.96	2.34	2.26
Number of litters farrowed.....	16.4	20.9	15.0	13.9	21.4	26.4	7.8	20.2
Returns per litter.....	\$ 85	\$ 72	\$ 82	\$ 80	\$ 79	\$ 75	\$ 86	\$ 73
Dairy returns per cow.....	71	85	108	95	83	53	79	56
Horse and machinery cost a crop acre.....	\$ 4.38	\$ 5.34	\$ 4.53	\$ 4.44	\$ 4.32	\$ 4.57	\$ 4.21	\$ 5.15
Labor cost a crop acre.....	5.83	7.51	8.23	7.80	5.81	6.98	6.18	8.32
Labor cost for \$100 gross earnings.....	19	21	25	24	18	22	22	27
Improvement cost an acre.....		80	72	89		74	77	.92
Taxes an acre.....	1.47	1.13	.77	.98	1.20	1.23	1.08	.92

^aIncludes farm share of automobile.

(Table is continued on next page)

TABLE 13.—SUMMARY, BY COUNTIES AND GROUPS OF COUNTIES, OF BUSINESS RECORDS FROM 2,713 ILLINOIS FARMS, 1939—Continued

Accounting items	Bond	Clinton, Fayette, Washington	Effingham	Madison	Monroe	Randolph	St. Clair	Clark, Jasper, Crawford
Capital investment, total.....	\$19 397	\$17 279	\$13 824	\$16 779	\$19 178	\$15 892	\$21 103	\$19 149
Land.....	10 953	9 199	7 485	9 325	12 628	8 752	12 329	11 257
Farm improvements.....	3 150	2 684	2 338	2 592	2 199	2 685	3 400	2 855
Horses.....	280	484	415	441	426	506	601	353
Cattle.....	1 096	1 137	1 015	1 098	482	855	812	1 110
Hogs.....	620	217	159	238	240	208	409	504
Sheep.....	104	52	63	17	19	21	10	58
Poultry.....	109	218	168	143	170	113	157	150
Feed and grain.....	1 329	1 516	1 046	1 274	1 220	1 218	1 485	1 300
Machinery and equipment*.....	1 756	1 772	1 135	1 651	1 794	1 534	1 900	1 562
Income, net increases, total.....	\$ 4 062	\$ 3 588	\$ 2 653	\$ 3 318	\$ 3 517	\$ 2 962	\$ 4 062	\$ 3 277
Cattle.....	515	372	346	390	188	528	365	702
Dairy sales.....	916	1 027	643	1 086	486	547	689	252
Hogs.....	1 629	390	200	375	422	373	684	944
Sheep.....	86	30	62	13	20	29	14	48
Poultry and eggs.....	140	343	349	231	446	262	408	396
Farm products used in household.....	214	272	256	257	315	265	281	255
Feed and grain.....	186	843	507	798	1 171	599	1 262	435
AAA payments.....	227	261	224	109	436	276	276	194
Labor and miscellaneous.....	149	50	66	59	33	83	83	51
Expenses, net decreases, total.....	\$ 1 407	\$ 1 168	\$ 763	\$ 1 025	\$ 1 174	\$ 1 084	\$ 1 445	\$ 1 256
Farm improvements.....	265	147	128	129	139	177	172	172
Feed and grain.....	486	441	287	353	522	440	501	452
Machinery and equipment*.....	290	252	99	245	179	166	355	261
Hired labor.....	108	86	66	83	70	80	97	107
Crop expense.....	182	151	125	144	180	162	238	181
Taxes.....	76	91	58	71	84	59	82	83
Livestock and miscellaneous.....								
Income less expenses.....	\$ 2 655	\$ 2 420	\$ 1 890	\$ 2 293	\$ 2 343	\$ 1 878	\$ 2 617	\$ 2 021
Unpaid labor.....	702	585	707	681	806	696	708	627
Net farm income.....	1 953	1 835	1 183	1 612	1 537	1 182	1 909	1 394
Rate earned on investment, percent.....	10.1	10.6	8.6	9.6	8.0	7.4	9.1	7.3
Labor and management earnings.....	\$ 1 413	\$ 1 360	\$ 909	\$ 1 209	\$ 1 012	\$ 831	\$ 1 326	\$ 871
Excess of sales over expenses.....	1 646	1 558	1 187	1 456	1 441	907	1 831	1 259
Increase in inventory.....	795	590	447	580	587	706	505	507
Number of farms included.....	28	43	30	81	28	33	28	36
Size of farm, acres.....	264	190	217	163	240	218	194	258
Gross receipts an acre.....	\$ 15.36	\$ 18.88	\$ 12.25	\$ 20.30	\$ 14.67	\$ 13.56	\$ 20.92	\$ 12.70
Total expenses an acre.....	7.98	9.22	6.79	10.44	8.26	8.15	11.09	7.30
Net receipts an acre.....	7.38	9.66	5.46	9.86	6.41	5.41	9.83	5.40
Value of land an acre.....	\$ 41	\$ 48	\$ 35	\$ 57	\$ 53	\$ 40	\$ 63	\$ 44
Value of improvements an acre.....	12	14	11	16	9	12	18	11
Total investment an acre.....	73	91	64	103	80	73	109	74
Percent of land area tillable.....	76.6	81.3	79.4	80.0	70.1	83.9	85.4	80.3
Percent of tillable land in—								
Corn.....	18.9	21.2	19.2	21.9	16.8	13.7	19.5	25.3
Oats.....	8.7	12.6	10.0	6.7	5.2	8.8	10.6	6.8
Wheat.....	12.7	18.8	7.4	24.0	32.2	25.7	27.5	10.5
Soybeans for grain.....	3.5	3.5	3.9	.9		2.1	1.9	2.7
Other cultivated crops.....	15.0	9.3	10.4	13.1	13.0	10.6	12.5	15.0
Legume hay and pasture.....	25.5	20.1	19.6	21.5	27.3	30.5	20.8	20.8
Nonlegume hay and pasture.....	15.7	14.5	29.5	11.9	5.5	8.6	7.2	18.9
Bushels an acre: Corn.....	50.4	49.6	41.2	61.1	55.5	45.9	58.5	50.6
Oats.....	23.0	31.6	23.3	26.6	31.0	28.1	33.9	20.9
Wheat.....	22.3	28.1	23.8	25.0	24.6	20.8	27.3	18.3
Barley.....	22.7	27.4	32.5	30.7	31.9	27.1	29.1	21.0
Soybeans.....	16.1	22.8	14.0	22.5	20.0	20.0	19.7	22.5
Feed fed an acre to livestock.....	\$ 7.83	\$ 7.41	\$ 4.29	\$ 7.03	\$ 4.22	\$ 5.67	\$ 6.46	\$ 6.06
Returns an acre from livestock.....	12.95	12.41	8.21	13.89	7.40	8.80	12.19	9.80
Returns for \$100 feed fed.....	165	168	191	198	175	155	189	162
Poultry returns per hen.....	1.38	1.80	2.38	2.30	2.88	2.39	2.76	2.52
Number of litters farrowed.....	26.9	6.7	5.0	6.8	6.1	4.9	10.5	12.2
Returns per litter.....	\$ 86	\$ 86	\$ 66	\$ 73	\$ 81	\$ 91	\$ 78	\$ 77
Dairy returns per cow.....	100	110	83	108	98	90	102	68
Horse and machinery cost a crop acre.....	\$ 4.10	\$ 4.96	\$ 3.46	\$ 4.81	\$ 5.72	\$ 4.17	\$ 5.39	\$ 4.04
Labor cost a crop acre.....	6.58	6.54	6.56	8.57	8.02	6.47	7.81	6.19
Labor cost for \$100 gross earnings.....	23	22	29	27	27	28	25	26
Improvement cost an acre.....	1.00	.77	.59	.79	.58	.81	.89	.67
Taxes an acre.....	.69	.79	.58	.88	.75	.74	1.23	.70

*Includes farm share of automobile.

(Table is concluded on next page)

TABLE 13.—SUMMARY, BY COUNTIES AND GROUPS OF COUNTIES, OF BUSINESS RECORDS FROM 2,713 ILLINOIS FARMS, 1939—*Concluded*

Accounting items	Jefferson	Marion, Franklin, Hamilton, Richland, Williamson, Clay	Edwards	White, Lawrence, Wabash, Gallatin, Saline	Jackson-Perry, Johnson, Alexander- Pulaski, Massac, Union, Pope- Hardin
Capital investment, total.....	\$10 218	\$11 362	\$11 419	\$19 835	\$11 689
Land.....	5 506	5 911	6 590	12 869	5 157
Farm improvements.....	1 513	1 845	1 496	2 238	3 315
Horses.....	431	383	342	452	392
Cattle.....	583	830	589	682	550
Hogs.....	223	218	288	303	235
Sheep.....	73	63	68	76	62
Poultry.....	129	107	131	122	91
Feed and grain.....	873	937	937	1 476	768
Machinery and equipment*.....	887	1 068	978	1 617	1 119
Income, net increases, total.....	\$ 2 029	\$ 2 312	\$ 2 319	\$ 3 361	\$ 2 372
Cattle.....	438	438	387	447	266
Dairy sales.....	266	401	111	182	298
Hogs.....	451	448	568	593	306
Sheep.....	60	53	44	53	25
Poultry and eggs.....	252	216	293	220	165
Farm products used in household.....	270	243	239	238	229
Feed and grain.....	227	319	319	1 218	779
AAA payments.....	173	171	318	355	259
Labor and miscellaneous.....	52	119	40	55	45
Expenses, net decreases, total.....	\$ 717	\$ 829	\$ 760	\$ 1 182	\$ 1 235
Farm improvements.....	129	160	97	126	227
Feed and grain.....	.....	.....	.....	.....	.....
Machinery and equipment*.....	278	352	255	477	338
Hired labor.....	109	104	106	229	411
Crop expense.....	72	71	89	101	75
Taxes.....	95	113	153	205	135
Livestock and miscellaneous.....	34	29	60	44	49
Income less expenses.....	\$ 1 312	\$ 1 483	\$ 1 559	\$ 2 179	\$ 1 137
Unpaid labor.....	622	696	541	571	522
Net farm income.....	690	787	1 018	1 608	615
Rate earned on investment, percent.....	6.8	6.9	8.9	8.1	5.3
Labor and management earnings.....	\$ 618	\$ 630	\$ 887	\$ 1 020	\$ 432
Excess of sales over expenses.....	742	857	1 224	1 681	896
Increase in inventory.....	300	383	96	260	12
Number of farms included.....	25	42	29	34	56
Size of farm, acres.....	192	221	174	254	186
Gross receipts an acre.....	\$ 10 58	\$ 10 44	\$ 13 33	\$ 13 21	\$ 12 77
Total expenses an acre.....	6 98	6 88	7 48	6 89	9 46
Net receipts an acre.....	3 60	3 56	5 85	6 32	3 31
Value of land an acre.....	\$ 29	\$ 27	\$ 38	\$ 51	\$ 28
Value of improvements an acre.....	8	8	9	9	18
Total investment an acre.....	53	51	66	78	63
Percent of land area tillable.....	83.4	83.9	85.1	87.3	80.0
Percent of tillable land in—					
Corn.....	19.4	18.3	22.2	25.2	16.8
Oats.....	6.8	7.7	7.9	6.0	2.8
Wheat.....	10.5	6.9	18.0	21.9	9.1
Soybeans for grain.....	1.0	2.1	1.4	3.6	.9
Other cultivated crops.....	9.1	16.5	15.9	15.2	21.5
Legume hay and pasture.....	27.4	23.0	21.6	20.2	29.0
Nonlegume hay and pasture.....	25.8	25.5	13.0	7.9	19.9
Busbels an acre: Corn.....	34.6	31.0	39.6	45.3	39.0
Oats.....	23.9	22.6	26.1	20.6	21.5
Wheat.....	21.1	18.8	18.3	17.0	16.8
Barley.....	23.7	21.2	18.3	18.2	25.4
Soybeans.....	6.9	0.0	15.7	11.6	12.1
Feed fed an acre to livestock.....	\$ 4 91	\$ 4 31	\$ 5 49	\$ 4 00	\$ 3 80
Returns an acre from livestock.....	7 79	7 80	9 03	6 58	6 58
Returns for \$100 feed fed.....	159	181	165	164	173
Poultry returns per hen.....	2 19	2 28	2 07	2 47	2 31
Number of litters farrowed.....	7 0	6 4	8 3	9 0	8 9
Returns per litter.....	\$ 73	\$ 89	\$ 78	\$ 75	\$ 55
Dairy returns per cow.....	60	78	55	64	69
Horse and machinery cost a crop acre.....	\$ 3 72	\$ 3 32	\$ 3 44	\$ 3 38	\$ 4 45
Labor cost a crop acre.....	6 95	6 20	5 78	4 48	9 33
Labor cost for \$100 gross earnings.....	35	33	27	23	38
Improvement cost an acre.....	67	72	56	50	1 22
Taxes an acre.....	50	51	88	81	73

*Includes farm share of automobile.

1939

COMPLETE COSTS AND FARM BUSINESS ANALYSIS

ON 29 FARMS

IN CHAMPAIGN AND PIATT COUNTIES, ILLINOIS

(Grain-Farming Section)

Index

	Discussion page	Table page
Introduction		
The area studied in 1939	1	--
Farms in the study	1	--
The year 1939	1	--
Crop Production costs		
Corn (husked in field)	3	5
Oats (combined).	3	8
Oats (threshed).	3	10
Soybeans (combined).	3	12
Winter wheat (combined).	4	15
Alfalfa hay.	4	17
Clover hay	4	19
Soybean hay.	4	20
Miscellaneous crops.	--	23
Livestock Production Costs		
Hogs	24	27
Milk cattle.	24	30
Feeder cattle.	25	33
Beef herds	25	34
Poultry.	26	35
Sheep.	26	39
Labor and Power Costs		
Man labor costs.	40	40
Horse labor costs.	41	42
Tractor costs.	41	45
The Analysis of the Farm Business		
Factors helping to analyze the farm business	52	54
Farm efficiency chart.	60	61

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COMPLETE COSTS AND FARM BUSINESS ANALYSIS ON 29 FARMS
IN CHAMPAIGN AND PIATT COUNTIES, 1939

By

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INTRODUCTION

This report carries the results of the twenty-seventh year of a continuous farm cost study which began in Illinois in 1913. This study of farm costs was undertaken with the general object of discovering ways and means of securing greater economy in the production of farm products and of helping farmers to improve the organization of their farms through wiser choices of farm enterprises or through improved methods and practices in handling their enterprises.

The Area Studied in 1939

The cost study has been located in Champaign and Piatt counties since 1920. These counties lie in the east-central section of the state close to the Illinois-Indiana line. They are in the center of the cash-grain area of the state. The land is practically all tillable, and the soil is high in natural fertility. The results shown in this report are for 1939, with summary comparisons for 1937 and 1938. The results represent a group of farms in Champaign and Piatt counties only and are not typical of the state as a whole.

Farms in the Study

The farms included in this cost study are about 80 acres larger than are the average-sized farms in the area. The farmers who furnished cost figures secure somewhat higher yields and have better managed farms than do the average farmers in the two counties. These better-than-average farmers probably have somewhat lower costs than do many of their neighbors. On the average, these cooperators are somewhat more efficient as farmers than are others in the same localities. However, this fact offers no particular hindrance to the use of the data for measuring the importance of individual items of cost and their variation from year to year and farm to farm.

The Year 1939

Weather conditions in the early months of 1939 were favorable for winter wheat. In the early spring, however, rains and cool weather retarded field work and crop growth to some extent. Generally favorable growing weather prevailed during the summer and resulted in a rapid growth of most crops. Corn and soybeans produced excellent yields. The corn crop was one of the best on record. Unfavorable weather for oats at filling time resulted in the lowest oat yield since the poor crop year of 1934.

Table 1.--Distribution of Land in Cost Accounting Farms

Use of land	Acres per farm	
	1938	1939
Harvested crops	216.9	204.1
Rotation pasture	15.8	23.7
Soil-conserving crops (not harvested)	13.6	20.7
Bluegrass pasture	11.9	10.0
Farmstead	6.5	6.4
Idle land	.6	.7
Total acres in farm	265.3	265.6

There were about 12 less acres of harvested crops per farm in 1939 than in 1938. The acreage of both rotation pasture and soil-conserving crops (not harvested) increased markedly in 1939. Of course, the acreage in soil-conserving crops (not harvested) does not include all of the land that comes under the classification of soil-conserving crops on these farms. Some soil-conserving crops were also in rotation pasture, and a small acreage was among the harvested crops.

Table 2.--Distribution of Crop Area, Average Crop Yields, and Crop Costs on Cost Farms in Champaign and Piatt Counties

Crop	Percent of cropland		Average yield per acre		Average net cost per bushel or ton		Variation in cost per bushel or ton in 1939	
	1938	1939	1938	1939	1938	1939	High	Low
	Corn	39.09	38.11	61.2	62.5	\$.28	\$.29	\$.44	$ .21
Oats (combined)	9.35	5.82	34.8	25.2	.34	.49	.75	.29
Oats (threshed)	3.60	4.96	40.5	38.3	.30	.36	1.34	.28
Soybeans (combined)	27.35	27.76	32.6	31.8	.46	.48	.57	.37
Winter wheat (combined)	6.27	5.67	27.0	26.8	.53	.51	1.55	.38
Winter wheat (threshed)	1.69	--	--	--	--	--	--	--
Alfalfa hay	2.21	1.77	2.8	2.8	6.72	6.96	14.74	3.75
Clover hay	3.06	2.89	.9	1.0	13.12	12.63	18.65	8.82
Soybean hay	.94	1.51	1.7	2.2	11.62	10.21	20.15	6.33
Other crops	.84	2.41	--	--	--	--	--	--
Soil-conserving crops (not harvested)	5.60	9.10	--	--	--	--	--	--

The bushel costs of most grain crops were higher in 1939 than in 1938. The winter-wheat cost was an exception to the higher level of 1939 costs. The unit costs of the hays varied as the yields varied.

With the exception of soybeans for grain, the unit costs of every crop grown under the same climatic conditions and under comparable soil conditions on these Champaign and Piatt county farms were twice as much on some farms as on others (Table 2). The unit costs always vary from one farm to another, even in the

same area, largely because of differences in acre yields and in the amount of labor, power, and other expenses used in growing an acre.

CROP PRODUCTION COSTS

Corn

The year 1939 was the third consecutive year of unusually good corn yields. The yield of corn on the cost accounting farms in 1939 was 20 bushels above the 5-year average yield of 1932-1936 for farms in the accounting work. The net cost of producing an acre of corn in 1939 was \$17.89 as compared with \$16.24 in the earlier five years; but in 1939 the acre yield of 62.5 bushels resulted in an average bushel cost of 28.6 cents as compared with an average bushel cost of 38.7 cents for the years from 1932 through 1936.

The cost of growing corn up to the time of harvest was \$7.15. This amount represents the highest growing cost an acre since 1931, with the exception of 1936, when it was \$7.17 an acre. The harvesting cost was also slightly higher in 1939 than in any other year since 1929, with the exception of 1935. The net cost of producing a bushel of corn was about a cent higher in 1939 than in 1938. In 1939, 87 percent of the corn acreage was harvested with mechanical pickers.

Oats (combined)

The oat crop was combined on 55 percent of the oatland in 1939. This percentage was lower than that combined in 1938 and about double that combined in 1936 and 1937. The total cost of harvesting an acre of oats with the combine in 1939 was \$1.90 (Table 4) as compared with \$3.49 which was the binding and threshing cost an acre for the oats threshed (Table 5); but the yield of threshed oats was 13.1 bushels above the yield of combined oats. When oats were combined, the value of the straw saved for use by livestock was \$.05 an acre; but when oats were threshed, the value was \$.94 an acre.

Oats (threshed)

The oat crop was cut with the binder and threshed on 45 percent of the oatland in 1939. Threshed oats consistently gave higher yields an acre than did combined oats. One reason for this difference in yield is that the farmers in the cost work tend to combine the oatland that has the poorest stand and promises the lightest crop. There was also a relationship between the amount of livestock on these farms and the proportion of the oat acreage cut with the binder and threshed. The cost of producing an acre of oats harvested with the binder and threshed has been consistently higher than the cost of producing an acre of oats harvested with the combine. The yield of the threshed oats, however, has been consistently so much higher than the yield of the combined oats that the bushel cost of oats threshed has been lower than the bushel cost of oats combined.

Soybeans (combined)

On the farms in the study, all the soybean acreage sown for grain beans was harvested with the combine. In only one year (1938) since soybeans were grown for grain in east-central Illinois was the acre yield of the crop as high as it

4.

was in 1939. The average acre yield of soybeans was 31.8 bushels in 1939 as compared with 32.6 bushels in 1938 and 25.6 bushels in 1937. Soybean yields on individual farms in 1939 varied from a low of 23.7 bushels an acre to a high of 37.8 bushels an acre. Bushel costs varied from 37 cents on the farm with the lowest cost to 57 cents on the farm with the highest cost. The average cost of producing soybeans was 48 cents a bushel, or two cents above the lowest cost year (1938).

Winter Wheat (combined)

Sixteen of the 29 farmers who cooperated in this study included winter wheat in their cropping system. The acreage of wheat grown on the 16 farms in 1939 was the smallest since 1933. In the area studied, the crop was characterized by wide differences in yields an acre from farm to farm. In 1939, the acre-yield of wheat varied from 39.3 bushels an acre on the farm with the highest yield to 9.8 bushels an acre on the farm with the lowest yield. Since 1934, the acre cost of producing wheat has ranged between \$14.00 and \$15.00.

Alfalfa Hay

Alfalfa hay was grown on only 18 of the 29 cost accounting farms. The acreage of alfalfa hay per farm varied from 19.79 acres on the farm with the highest alfalfa acreage to 1.67 acres on the farm with the smallest alfalfa acreage. The average alfalfa hay yield an acre was 2.82 tons in 1939 and 2.76 tons in 1938 as compared with 1.96 tons, the 5-year average yield for 1933-1937. The good hay yield of 1939 resulted in a sharp drop in hay prices in the area as soon as farmers started cutting the 1939 crop. Alfalfa was the only important hay crop grown at a profit in the area in 1939.

The net acre cost of the alfalfa crop in 1939 was \$19.61, including taxes and interest on land values and after deducting a small credit for pasture and seed. This amount was about \$1.00 an acre above the 1938 acre cost and over \$2.00 above the 1937 acre cost. However, the cost per ton of alfalfa was about \$2.50 a ton lower in 1939 than in 1937. The pickup baler was used in the field to bale 32.2 percent of the alfalfa hay produced on the farms in the study. When the baler was used, the cost of baling was added to the cost of the crop, and the hay was credited at baled hay prices.

Clover Hay

Clover hay was grown on only 8 of the 29 farms in 1939 as compared with 10 farms in 1938 and 3 farms in 1937. Increased hay yields in 1938 and 1939 resulted in an average price of \$6.00 a ton for loose clover hay at the time of cutting. Clover hay which was baled in the field was valued at the loose clover hay price plus the cost of baling. The pickup baler was used in the field to bale 64.6 percent of the clover hay produced on the farms in the study. This high percentage of baled hay put the average value of all hay taken from the fields, loose and baled together, at \$7.46 a ton and the average cost at \$12.63 a ton.

Soybean Hay

Only 5 farmers cut more than two or three mower widths around their soybean grain fields and used these cuttings for hay. The average price of soybean hay in the fall of 1939 was \$5.00 a ton. Some credit, however, should be allowed for the fact that cutting borders of soybean fields is as much a method of opening up grain fields for the combine as it is a method of producing hay.

Table 3.--Cost of Production (acre basis) on 29 farms (2,340.21 acres; 146,223.20 bushels) Champaign-Piatt Counties--1939 (Farms ranked in order of net cost per bushel)

Items	Farm number										
	56	64	83	72	45	67	60	63	89	66	34
Acres in corn	112.44	86.25	45.09	126.71	143.88	38.89	64.91	113.83	89.33	63.47	95.22
Yield per acre (bu.)	83.22	68.52	62.36	68.82	67.42	63.00	73.16	64.86	69.23	74.59	62.96
Labor per acre											
Man hours	5.71	6.81	6.21	8.20	5.07	5.63	6.94	6.11	6.03	9.21	9.68
Horse hours	2.10	4.21	5.23	4.92	---	1.13	2.87	2.89	4.54	7.17	13.58
Tractor hours	4.12	4.02	4.57	5.11	4.04	4.70	4.03	4.89	4.09	3.79	2.65
Truck miles	---	---	---	3.10	1.40	1.41	---	---	.38	---	---
COST ITEMS PER ACRE											
Growing costs											
Man labor	\$.86	\$.94	\$.99	\$1.21	\$.63	\$.90	\$.90	\$.70	\$.95	\$1.15	\$.95
Horse labor	---	.26	.19	.22	---	---	1.02	---	.68	.17	.53
Tractor use	1.72	1.73	2.30	1.28	1.38	1.59	1.57	1.39	1.49	2.17	1.44
Truck use	---	---	---	.15	.11	---	---	---	---	---	---
Machinery	.99	.63	.91	.65	1.03	.66	.72	.73	.74	.99	.64
Seed	.65	.55	.80	.65	.83	.42	.83	.73	.78	.42	.60
Fertilizer	2.14	.51	.34	.62	.53	1.09	.73	.78	.73	1.57	.49
Hail insurance	---	---	---	.23	---	.16	---	.21	---	---	---
Gen'l farm expense	.82	.90	.93	1.48	1.13	1.33	1.00	1.25	1.91	1.27	1.59
Total growing cost	\$7.18	\$5.52	\$6.46	\$6.49	\$5.64	\$6.15	\$6.77	\$5.79	\$7.28	\$7.74	\$6.24
Harvesting costs											
Man labor	\$.63	\$.70	\$.50	\$.77	\$.64	\$.45	\$.86	\$.73	\$.50	\$2.20	\$1.56
Horse labor	.19	.37	.60	.35	---	.46	.68	.56	.43	.85	2.14
Tractor use	.62	.68	.57	.79	.83	.66	.67	.93	.47	.19	---
Picker	1.16	.82	1.16	.83	1.07	1.34	1.30	.78	1.05	.60	---
Truck use	---	---	---	.17	.05	.22	---	---	.03	---	---
Total harvesting cost	\$2.60	\$2.57	\$2.83	\$2.91	\$2.59	\$3.13	\$3.51	\$3.00	\$2.48	\$3.84	\$3.70
Cost of growing and harvesting	\$9.78	\$8.09	\$9.29	\$9.40	\$8.23	\$9.28	\$10.28	\$8.79	\$9.76	\$11.58	\$9.94
Taxes	1.43	1.36	.95	1.22	1.31	1.66	1.34	1.29	1.45	1.78	1.30
Interest on land	6.75	7.16	4.95	6.80	7.50	6.00	7.50	6.75	7.50	6.50	6.68
TOTAL COST	\$17.96	\$16.61	\$15.19	\$17.42	\$17.04	\$16.94	\$19.12	\$16.83	\$18.71	\$19.86	\$17.92
INCOME PER ACRE											
Grain	\$37.45	\$30.84	\$28.06	\$30.97	\$30.34	\$28.35	\$32.92	\$29.19	\$31.16	\$33.56	\$28.33
Pasture	.40	.75	.29	.66	---	1.01	.60	.37	.72	.49	1.24
TOTAL INCOME	\$37.85	\$31.59	\$28.35	\$31.63	\$30.34	\$29.36	\$33.52	\$29.56	\$31.88	\$34.05	\$29.57
NET PROFIT PER ACRE	\$19.89	\$14.98	\$13.16	\$14.21	\$13.30	\$12.42	\$14.40	\$12.73	\$13.17	\$14.19	\$11.65
NET COST PER BUSHEL	\$.211	\$.231	\$.239	\$.243	\$.253	\$.253	\$.253	\$.254	\$.260	\$.260	\$.265

CORN (HUSKED IN FIELD) (Cont'd)
 Table 3.--Cost of Production (acre basis) on 29 farms (2,340.21 acres; 146,223.20 bushels)
 Champaign-Platt Counties--1939 (Farms ranked in order of net cost per bushel)

Items	Farm number										
	86	80	92	79	15	84	88	74	73	18	75
Acre in corn	94.92	6.06	135.76	30.60	57.17	78.92	55.21	123.92	19.97	164.38	80.81
Yield per acre (bu.)	61.55	69.31	71.30	65.56	62.55	50.68	52.53	64.19	62.34	62.46	50.93
Labor per acre	6.68	10.81	9.40	8.83	8.93	5.78	5.30	10.13	7.51	9.22	10.06
Man hours	4.24	4.13	7.69	4.44	6.39	5.36	2.95	3.44	2.80	11.07	9.19
Horse hours	4.44	5.32	3.48	4.92	4.31	3.88	4.45	5.67	5.66	2.86	4.15
Tractor hours	--	--	--	--	.01	--	--	--	--	--	--
Truck miles	--	--	--	--	--	--	--	--	--	--	--
COST ITEMS PER ACRE											
Growing costs											
Man labor	\$.96	\$1.32	\$.89	\$1.19	\$1.12	\$.79	\$.91	\$1.60	\$1.22	\$1.26	\$.147
Horse labor	.14	.14	.30	.16	.23	.15	--	.71	.23	.97	.48
Tractor use	1.73	2.18	1.57	2.44	1.66	1.32	2.08	2.09	1.79	1.60	1.51
Truck use	--	--	--	--	--	--	--	--	--	--	--
Machinery	1.01	.71	.84	.76	.77	.92	.40	.72	1.23	.71	.99
Seed	.81	.78	.84	.94	.62	.76	.81	.89	.51	.68	.83
Fertilizer	1.12	1.09	.40	3.42	1.13	.55	.15	1.79	2.43	.56	.73
Hail insurance	--	--	--	--	--	--	--	--	--	--	.20
Gen'l farm expense	1.41	1.41	1.80	.63	1.29	.95	1.26	1.37	.93	2.14	1.49
Total growing cost	\$7.18	\$7.63	\$6.64	\$9.54	\$6.82	\$5.44	\$5.61	\$9.17	\$8.34	\$7.92	\$7.70
Harvesting costs											
Man labor	\$.63	\$1.32	\$1.40	\$.84	\$1.14	\$.55	\$.38	\$.86	\$.58	\$1.28	\$1.39
Horse labor	.38	.21	1.59	.22	.42	.58	.67	.04	.42	1.34	.49
Tractor use	.50	.79	.42	.43	.52	.53	.62	1.10	.59	.35	.32
Picker	.95	1.30	1.37	1.17	1.14	.89	.51	1.21	1.07	1.17	.71
Truck use	--	--	--	--	--	--	--	--	--	--	--
Total harvesting cost	\$2.46	\$3.62	\$4.78	\$2.66	\$3.22	\$2.55	\$2.18	\$3.21	\$2.66	\$4.14	\$2.91
Cost of growing and harvesting											
Taxes	\$9.64	\$11.25	\$11.42	\$12.20	\$10.04	\$7.99	\$7.79	\$12.38	\$11.00	\$12.06	\$10.61
Interest on land	1.39	1.49	1.12	1.52	1.96	1.43	1.69	1.16	1.48	1.07	1.02
TOTAL COST	\$16.62	\$18.99	\$20.04	\$19.56	\$18.25	\$15.42	\$16.23	\$20.04	\$19.23	\$20.63	\$17.13
INCOME PER ACRE											
Grain	\$27.70	\$31.19	\$32.09	\$29.50	\$28.15	\$22.81	\$23.64	\$28.88	\$28.06	\$28.11	\$22.92
Pasture	.26	--	.16	1.01	.51	.84	.26	.28	--	.53	.52
TOTAL INCOME	\$27.96	\$31.19	\$32.25	\$30.51	\$28.66	\$23.65	\$23.90	\$29.16	\$28.06	\$28.64	\$23.44
NET PROFIT PER ACRE	\$11.34	\$12.20	\$12.21	\$10.95	\$10.41	\$8.23	\$7.67	\$9.12	\$8.83	\$8.01	\$6.31
NET COST PER BUSHEL	\$.266	\$.274	\$.279	\$.283	\$.284	\$.288	\$.304	\$.308	\$.308	\$.322	\$.326

OATS (COMBINED)

Table 4.--Cost of Production (acre basis) on 16 farms (384.19 acres; 9,682.10 bushels) Champaign-Piatt Counties--1939 (Farms ranked in order of net cost per bushel)

Items	Farm number									
	18	69	83	60	80	47	92	62	67	79
Acres in oats	16.35	10.93	21.92	16.34	27.46	10.09	27.81	14.40	16.38	6.75
Yield per acre (bu.)	50.28	22.87	27.69	31.29	27.31	25.00	31.46	32.29	21.98	29.93
Labor per acre	5.01	2.47	2.05	1.59	2.80	1.05	2.82	4.01	2.60	4.74
Man hours	.61	.64	.27	.49	--	.20	2.23	3.31	--	--
Horse hours	1.89	1.23	1.01	.92	1.66	.95	1.28	2.41	1.62	3.37
Tractor hours	--	.46	1.37	.18	--	--	--	.71	1.40	.59
Truck miles										
COST ITEMS PER ACRE										
Growing costs										
Man labor	\$.44	\$.15	\$.14	\$.15	\$.29	\$.13	\$.29	\$.37	\$.27	\$.55
Horse labor	.13	.08	.04	.22	--	.08	.28	.14	--	--
Tractor use	.94	.12	.26	.24	.85	.24	.37	.51	.56	1.74
Machinery	.12	.21	.15	.19	.27	.11	.16	.42	.22	.48
Seed	.59	.60	.82	.87	.66	.89	.77	1.71	.61	.68
Fertilizer	.13	.21	.19	.42	.83	--	.23	.27	.58	1.81
Gen'l farm expense	.16	.27	.32	.29	.37	.20	.54	.42	.64	.32
Total growing cost	\$ 3.51	\$ 1.64	\$ 1.92	\$ 2.38	\$ 3.27	\$ 1.65	\$ 2.64	\$ 3.84	\$ 2.88	\$ 5.58
Harvesting costs										
Man labor	\$.77	\$.41	\$.35	\$.24	\$.39	\$.12	\$.39	\$.42	\$.35	\$.51
Horse labor	--	--	--	--	--	--	.26	.27	--	--
Tractor use	.55	.44	.32	.27	.22	.26	.38	.33	.23	.38
Truck use	--	.04	.11	.02	--	--	--	.16	.19	.04
Combine	1.10	.99	.84	1.33	1.44	.93	1.21	.96	1.19	1.44
Total harvesting cost	\$ 2.42	\$ 1.88	\$ 1.62	\$ 1.86	\$ 2.05	\$ 1.31	\$ 2.24	\$ 2.14	\$ 1.96	\$ 2.37
Cost of growing and harvesting										
Taxes	\$ 5.93	\$ 3.52	\$ 3.54	\$ 4.24	\$ 5.32	\$ 2.96	\$ 4.88	\$ 5.98	\$ 4.84	\$ 7.95
Interest on land	1.07	.85	.95	1.34	1.49	1.62	1.12	2.00	1.66	1.52
TOTAL COST	\$14.50	\$10.62	\$ 9.49	\$13.08	\$13.06	\$10.83	\$13.50	\$14.23	\$12.50	\$14.47
INCOME PER ACRE										
Grain	\$11.56	\$ 5.26	\$ 6.37	\$ 7.20	\$ 6.28	\$ 5.75	\$ 7.24	\$ 7.43	\$ 5.06	\$ 6.88
Straw	--	--	--	.88	--	--	--	--	--	--
Pasture	--	2.96	--	1.09	2.62	.24	--	--	2.34	--
TOTAL INCOME	\$11.56	\$ 8.22	\$ 6.37	\$ 9.17	\$ 8.90	\$ 5.99	\$ 7.24	\$ 7.43	\$ 7.40	\$ 6.88
NET PROFIT PER ACRE	\$-2.94	\$-2.40	\$-3.12	\$-3.91	\$-4.16	\$-4.84	\$-6.26	\$-6.80	\$-5.10	\$-7.59
NET COST PER BUSHEL	\$.288	\$.335	\$.343	\$.355	\$.382	\$.424	\$.429	\$.441	\$.462	\$.484

Table 4.--Cost of Production (acre basis) on 16 farms (384.19 acres; 9,682.10 bushels) Champaign-Piatt Counties--1939 (Farms ranked in order of net cost per bushel)

Items	Farm number					1939 average 16 farms	1938 average 20 farms	1937 average 7 farms
	15	66	64	49	72				45
Acres in oats	51.29	40.11	27.85	17.80	8.94	24.01	30.16	26.78
Yield per acre (bu.)	25.95	24.81	20.36	22.22	17.90	25.20	34.77	46.91
Labor per acre	2.69	2.90	2.03	3.44	2.80	2.56	2.65	2.53
Man hours	.42	1.99	1.11	.79	.45	.76	1.12	1.05
Horse hours	1.42	1.20	1.09	1.17	1.35	1.34	1.19	1.27
Tractor hours	.55	--	--	--	.78	.41	.34	.40
Truck miles								
COST ITEMS PER ACRE								
Growing costs								
Man labor	\$.31	\$.28	\$.22	\$.20	\$.13	\$.25	\$.30	\$.21
Horse labor	.04	.07	.06	--	.05	.06	.05	.08
Tractor use	.47	.60	.50	.41	.14	.49	.39	.38
Machinery	.17	.30	.12	.08	.11	.24	.16	.18
Seed	.75	.98	.93	.77	.45	.85	.90	1.67
Fertilizer	1.58	.97	.29	.43	.35	.66	.57	.50
Gen'l farm expense	.39	.46	.17	1.09	.51	.45	.37	.56
<u>Total growing cost</u>	\$ 3.71	\$ 3.66	\$ 2.29	\$ 2.98	\$ 1.74	\$ 3.00	\$ 2.74	\$ 3.58
Harvesting costs								
Man labor	\$.36	\$.41	\$.27	\$.78	\$.54	\$.37	\$.34	\$.42
Horse labor	--	.22	.11	.26	--	.07	.09	.17
Tractor use	.24	.27	.18	.47	.41	.28	.26	.38
Truck use	.05	--	--	--	.08	.04	.04	.02
Combine	1.19	1.65	1.13	1.51	1.82	1.14	.95	1.35
<u>Total harvesting cost</u>	\$ 1.84	\$ 2.55	\$ 1.69	\$ 3.02	\$ 2.85	\$ 1.90	\$ 1.68	\$ 2.34
Cost of growing and harvesting	\$ 5.55	\$ 6.21	\$ 3.98	\$ 6.00	\$ 4.59	\$ 4.90	\$ 4.42	\$ 5.92
Taxes	1.95	1.78	1.36	1.52	1.22	1.47	1.44	1.23
Interest on land	6.21	6.50	6.50	6.25	6.75	6.62	6.40	7.13
<u>TOTAL COST</u>	\$13.71	\$14.49	\$11.84	\$13.77	\$12.56	\$12.99	\$12.26	\$14.28
INCOME PER ACRE								
Grain	\$ 5.97	\$ 5.71	\$ 4.68	\$ 5.11	\$ 4.12	\$ 5.80	\$ 6.96	\$13.20
Straw	--	.09	--	--	--	.05	.14	.81
Pasture	--	.54	--	.64	--	.60	.18	.86
<u>TOTAL INCOME</u>	\$ 5.97	\$ 6.34	\$ 4.68	\$ 5.75	\$ 4.12	\$ 6.45	\$ 7.28	\$14.87
NET PROFIT PER ACRE	\$-7.74	\$-8.15	\$-7.16	\$-8.02	\$-8.44	\$-6.54	\$-4.98	\$.59
<u>NET COST PER BUSHEL</u>	\$.528	\$.559	\$.582	\$.591	\$.702	\$.490	\$.343	\$.269

OATS (THRESHED)
 Table 5.---Cost of Production (acre basis) on 13 farms (318.95 acres; 12,230 bushels)
 Champaign-Platt Counties--1939 (Farms ranked in order of net cost per bushel)

Items	Farm number							
	74	56	34	84	15	64	73	90
Acres in oats	39.65	38.09	20.00	14.68	20.08	16.85	13.51	31.33
Yield per acre (bu.)	46.94	42.48	41.75	38.08	49.40	42.97	37.31	31.06
Labor per acre	6.65	4.36	5.32	4.76	5.89	6.15	4.26	5.68
Man hours	3.03	2.31	2.30	3.27	5.08	4.69	2.52	8.74
Tractor hours	2.44	1.50	1.12	1.43	1.13	1.73	1.78	.40
Truck miles	.03	--	--	--	--	--	--	--
COST ITEMS PER ACRE								
Growing costs								
Man labor	\$.43	\$.24	\$.15	\$.13	\$.28	\$.23	\$.28	\$.42
Horse labor	--	--	.06	.05	.04	.06	.07	.65
Tractor use	1.02	.53	.16	.17	.39	.80	.41	--
Machinery	.31	.28	.13	.15	.14	.12	.38	.10
Seed	.63	.93	.48	.71	.75	.93	1.17	.74
Fertilizer	.69	.82	.28	1.64	1.41	.29	2.37	.70
Gen'l farm expense	.89	.64	.90	.80	.86	.82	.57	.65
Total growing cost	\$ 3.97	\$ 3.44	\$ 2.16	\$ 3.65	\$ 3.87	\$ 3.25	\$ 5.25	\$ 3.26
Harvesting costs								
Man labor	\$ 1.18	\$.86	\$ 1.13	\$ 1.01	\$ 1.18	\$ 1.26	\$.75	\$.87
Horse labor	.57	.32	.32	.44	.71	.68	.38	.24
Tractor use	.55	.29	.42	.54	.17	.32	.45	.05
Truck use	--	--	--	--	--	--	--	--
Machinery	.96	.60	1.42	.60	.17	.31	.88	.57
Twine	.18	.03	.08	.12	.21	.16	.19	.14
Threshing	.52	.95	.84	.72	1.42	2.67	.75	.62
Total harvesting cost	\$ 3.99	\$ 3.05	\$ 4.21	\$ 3.44	\$ 3.86	\$ 5.40	\$ 3.40	\$ 2.49
Cost of growing and harvesting								
Taxes	\$ 7.96	\$ 6.49	\$ 6.37	\$ 7.09	\$ 7.73	\$ 8.65	\$ 8.65	\$ 5.75
Interest on land	1.16	1.43	1.30	1.43	1.95	1.35	1.48	1.64
TOTAL COST	6.50	6.75	7.00	6.00	7.00	7.50	6.75	6.25
INCOME PER ACRE	\$15.62	\$14.67	\$14.67	\$14.52	\$16.68	\$17.50	\$16.88	\$13.64
Grain	\$10.80	\$ 9.77	\$ 9.60	\$ 8.76	\$11.36	\$ 9.88	\$ 8.58	\$ 7.14
Straw	1.57	--	1.25	2.04	.44	2.08	.98	.48
Pasture	.87	1.50	.21	--	--	--	2.47	1.47
TOTAL INCOME	\$13.24	\$11.27	\$11.06	\$10.80	\$11.80	\$11.96	\$12.03	\$ 9.09
NET PROFIT PER ACRE	\$-2.38	\$-3.40	\$-3.61	\$-3.72	\$-4.88	\$-5.54	\$-4.85	\$-4.55
NET COST PER BUSHEL	\$.281	\$.310	\$.316	\$.328	\$.329	\$.359	\$.360	\$.376

Table 5.--Cost of Production (acre basis) on 13 farms (318.95 acres; 12,230 bushels) Champaign-Piatt Counties--1939 (Farms ranked in order of net cost per bushel)

Items	Farm number				1939 average 12 farms	1938 average 7 farms	1937 average 17 farms
	71	86	89	452/			
Acres in oats	23.88	41.53	33.66	8.00	26.58	33.18	28.60
Yield per acre (bu.)	38.94	32.03	35.83	16.38	38.34	40.53	59.61
Labor per acre							
Man hours	7.39	4.05	5.48	14.94	5.41	5.86	7.48
Horse hours	6.86	1.88	3.20	--	3.83	4.40	7.12
Tractor hours	1.69	1.30	1.20	1.91	1.42	1.51	1.37
Truck miles	--	--	--	1.64	--	.22	.56
COST ITEMS PER ACRE							
Growing costs							
Man labor	\$.44	\$.16	\$.24	\$.18	\$.27	\$.24	\$.23
Horse labor	.21	.04	.20	--	.13	.15	.21
Tractor use	.60	.23	.30	.39	.41	.36	.36
Machinery	.42	.16	.09	.39	.19	.21	.29
Seed	1.06	1.06	.79	.96	.83	.97	1.48
Fertilizer	1.46	.40	.98	.65	.84	.69	.60
Gen'l farm expense	1.24	.86	1.73	3.37	.94	.89	1.07
Total growing cost	\$ 5.43	\$ 2.91	\$ 4.33	\$ 5.94	\$ 3.61	\$ 3.51	\$ 4.24
Harvesting costs							
Man labor	\$ 1.42	\$.82	1.08	3.44	1.04	1.09	1.39
Horse labor	.87	.23	.43	--	.45	.45	.92
Tractor use	.33	.45	.28	.78	.35	.39	.33
Truck use	--	--	--	.17	--	.01	.05
Machinery	.35	.99	.47	.97	.65	.33	.35
Twine	.21	.21	.27	.30	.18	.24	.25
Threshing	.76	.71	.70	3.58	.82	.85	.94
Total harvesting cost	\$ 3.94	\$ 3.41	\$ 3.23	\$ 9.24	\$ 3.49	\$ 3.36	\$ 4.23
Cost of growing and harvesting	\$ 9.37	\$ 6.32	\$ 7.56	\$15.18	\$ 7.10	\$ 6.87	\$ 8.47
Taxes	1.55	1.39	1.45	1.30	1.44	1.30	1.29
Interest on land	6.25	6.25	7.50	7.50	6.68	6.15	6.51
TOTAL COST	\$17.17	\$13.96	\$16.51	\$23.98	\$15.22	\$14.32	\$16.27
INCOME PER ACRE							
Grain	\$ 8.96	\$ 7.37	\$ 8.24	\$ 3.77	\$ 8.82	\$ 8.11	\$16.69
Straw	1.04	.36	.97	1.56	.94	1.68	3.10
Pasture	--	--	--	.51	.55	.41	.44
TOTAL INCOME	\$10.00	\$ 7.73	\$ 9.21	\$ 5.84	\$10.31	\$10.20	\$20.23
NET PROFIT PER ACRE	\$-7.17	\$-6.63	\$-7.30	\$-18.14	\$-4.91	\$-4.12	\$ 3.96
NET COST PER BUSHEL	.414	.425	.434	1.34	.358	.302	.214

a/ Not included in the average.

SOYBEANS (COMBINED)

Table 6.--Cost of Production (acre basis) on 28 farms (1,830.77 acres; 58,274.4 bushels) Champaign-Piatt Counties--1939 (Farms ranked in order of net cost per bushel)

Items	Farm number										
	83	84	63	47	88	27	34	45	56	75	60
Acres in soybeans	36.81	64.36	81.13	76.98	74.84	66.36	73.30	88.49	102.86	71.07	39.53
Yield per acre (bu.)	30.02	35.74	35.03	30.40	33.42	36.24	33.82	35.41	33.39	30.93	37.82
Labor per acre	2.92	3.08	2.05	2.10	2.85	3.71	3.02	3.75	3.52	7.63	6.51
Man hours	--	.07	--	--	.52	--	1.35	--	.45	2.41	--
Horse hours	2.16	1.91	1.68	2.05	1.70	2.36	2.13	2.65	1.89	3.35	3.25
Tractor hours	.27	.85	2.20	--	--	1.36	--	3.29	--	1.29	7.61
Truck miles											
COST ITEMS PER ACRE											
Growing costs											
Man labor	\$.34	\$.47	\$.35	\$.35	\$.50	\$.64	\$.59	\$.61	\$.44	\$ 1.03	\$.86
Horse labor	--	.01	--	--	.13	--	.26	--	--	.25	--
Tractor use	.71	.61	.69	.78	.87	1.04	.98	1.34	.68	.85	1.20
Truck use	--	--	.08	--	--	--	--	.08	--	--	--
Machinery	.42	.56	.19	.35	.26	.42	.55	.73	.61	.52	.43
Seed	1.22	1.57	1.42	1.21	1.38	1.32	1.31	1.51	1.59	1.57	1.38
Fertilizer	.19	.32	.36	--	.09	.13	.28	.30	1.57	.42	.42
Hail insurance	--	--	.25	--	--	--	--	--	--	.17	--
Gen'l farm expense	.45	.36	.31	.40	.61	.83	.40	.85	.51	1.18	1.11
Total growing cost	\$ 3.33	\$ 3.90	\$ 3.65	\$ 3.09	\$ 3.84	\$ 4.38	\$ 4.37	\$ 5.42	\$ 5.40	\$ 5.99	\$ 5.40
Harvesting costs											
Man labor	\$.36	\$.36	\$.20	\$.16	\$.25	\$.37	\$.28	\$.33	\$.47	\$.71	\$.70
Horse labor	--	--	--	--	--	--	--	--	.04	--	--
Tractor use	.52	.44	.27	.36	.24	.23	.28	.24	.35	.46	.54
Truck use	.02	.10	.22	--	--	.16	--	.30	--	.09	.66
Combine	1.15	1.62	1.77	.87	1.83	1.77	2.21	.60	1.17	.81	1.33
Total harvesting cost	\$ 2.05	\$ 2.52	\$ 2.46	\$ 1.39	\$ 2.32	\$ 2.53	\$ 2.77	\$ 1.47	\$ 2.03	\$ 2.07	\$ 3.23
Cost of growing and harvesting											
Taxes	\$ 5.38	\$ 6.42	\$ 6.11	\$ 4.48	\$ 6.16	\$ 6.91	\$ 7.14	\$ 6.89	\$ 7.43	\$ 8.06	\$ 8.63
Interest on land	.95	1.43	1.29	1.62	1.69	1.54	1.30	1.31	1.43	1.01	1.34
TOTAL COST	\$ 11.24	\$ 13.85	\$ 14.15	\$ 12.35	\$ 14.60	\$ 15.95	\$ 15.04	\$ 15.70	\$ 15.61	\$ 14.57	\$ 17.47
INCOME PER ACRE											
Grain	\$ 21.61	\$ 25.73	\$ 25.22	\$ 21.88	\$ 24.06	\$ 26.09	\$ 24.35	\$ 25.49	\$ 24.05	\$ 22.27	\$ 27.22
Pasture	.11 ^{a/}	.55	.24	.06	--	--	.10	--	.56 ^{b/}	.58	--
TOTAL INCOME	\$ 21.72	\$ 26.28	\$ 25.46	\$ 21.94	\$ 24.06	\$ 26.09	\$ 24.45	\$ 25.49	\$ 24.61	\$ 22.85	\$ 27.22
NET PROFIT PER ACRE	\$ 10.48	\$ 12.43	\$ 11.31	\$ 9.59	\$ 9.46	\$ 10.14	\$ 9.41	\$ 9.79	\$ 9.00	\$ 8.28	\$ 9.75
NET COST PER BUSHEL	\$.371	\$.372	\$.397	\$.404	\$.437	\$.440	\$.442	\$.443	\$.451	\$.452	\$.462

a/ Straw.
b/ Includes \$.21 for straw.

Table 6.--Cost of Production (acre basis) on 28 farms (1,830.77 acres; 58,274.4 bushels) Champaign-Piatt Counties--1939 (Farms ranked in order of net cost per bushel)

Items	Farm number									
	15	86	92	89	80	67	74	62	49	18
Acres in soybeans	53.36	60.66	143.49	45.11	45.62	19.75	56.58	65.44	87.90	151.30
Yield per acre (bu.)	33.06	30.20	31.49	32.70	32.49	31.85	35.40	29.52	29.93	31.28
Labor per acre	3.89	4.70	4.13	3.44	4.65	3.69	9.71	4.99	3.22	5.43
Man hours	.67	.83	.35	.92	--	1.82	--	.29	.52	.74
Tractor hours	2.30	2.69	2.66	1.97	3.11	3.22	3.73	2.66	2.37	2.30
Truck miles	1.22	--	4.29	.75	3.51	1.82	.35	.05	--	2.64
COST ITEMS PER ACRE										
Growing costs										
Man labor	\$.65	\$.57	\$.61	\$.46	\$.58	\$.57	\$ 2.16	\$.41	\$.69	\$.76
Horse labor	.07	.09	--	.17	--	--	--	.02	.18	.13
Tractor use	1.00	.94	1.19	.78	1.84	1.03	2.19	.72	1.45	1.21
Truck use	--	--	--	--	--	--	--	.01	--	--
Machinery	.39	.40	.50	.29	.44	.32	.50	.50	.49	.32
Seed	1.44	1.39	1.23	2.07	1.92	1.77	1.73	1.78	1.76	1.83
Fertilizer	.61	.46	.23	.42	.88	.58	.84	.27	.43	.31
Hail insurance	--	--	--	--	--	.20	--	--	--	--
Gen'l farm expense	.46	.65	.79	.86	.65	.89	1.21	.54	.91	1.26
<u>Total growing cost</u>	<u>\$ 4.62</u>	<u>\$ 4.50</u>	<u>\$ 4.55</u>	<u>\$ 5.05</u>	<u>\$ 6.31</u>	<u>\$ 5.36</u>	<u>\$ 8.63</u>	<u>\$ 4.25</u>	<u>\$ 5.91</u>	<u>\$ 5.82</u>
Harvesting costs										
Man labor	\$.39	\$.88	\$.40	\$.50	\$.54	\$.32	\$.24	\$.83	\$.32	\$.56
Horse labor	--	.01	.09	.06	--	.74	--	.02	--	.02
Tractor use	.25	.71	.35	.30	.32	.57	.24	.40	.51	.46
Truck use	.11	--	.22	.05	.23	.28	.02	--	--	.26
Combine	1.61	1.98	1.17	1.92	1.44	1.19	1.54	1.79	1.32	1.07
<u>Total harvesting cost</u>	<u>\$ 2.36</u>	<u>\$ 3.58</u>	<u>\$ 2.23</u>	<u>\$ 2.83</u>	<u>\$ 2.53</u>	<u>\$ 3.10</u>	<u>\$ 2.04</u>	<u>\$ 3.04</u>	<u>\$ 2.15</u>	<u>\$ 2.37</u>
Cost of growing and harvesting	\$ 6.98	\$ 8.08	\$ 6.78	\$ 7.88	\$ 8.84	\$ 8.46	\$10.67	\$ 7.29	\$ 8.06	\$ 8.19
Taxes	1.96	1.39	1.12	1.45	1.49	1.66	1.16	2.00	1.51	1.07
Interest on land	6.76	5.12	7.50	7.50	6.25	6.00	6.50	6.25	6.25	7.50
<u>TOTAL COST</u>	<u>\$15.70</u>	<u>\$14.59</u>	<u>\$15.40</u>	<u>\$16.83</u>	<u>\$16.58</u>	<u>\$16.12</u>	<u>\$18.33</u>	<u>\$15.54</u>	<u>\$15.82</u>	<u>\$16.76</u>
INCOME PER ACRE										
Grain	\$23.80	\$21.74	\$22.67	\$23.54	\$23.39	\$22.93	\$25.48	\$21.26	\$21.55	\$22.52
Pasture	--	--	--	.37	.20 ^{a/}	--	.21	--	--	.19
<u>TOTAL INCOME</u>	<u>\$23.80</u>	<u>\$21.74</u>	<u>\$22.67</u>	<u>\$23.91</u>	<u>\$23.59</u>	<u>\$22.93</u>	<u>\$25.69</u>	<u>\$21.26</u>	<u>\$21.55</u>	<u>\$22.71</u>
NET PROFIT PER ACRE	\$ 8.10	\$ 7.15	\$ 7.27	\$ 7.08	\$ 7.01	\$ 6.81	\$ 7.36	\$ 5.72	\$ 5.73	\$ 5.95
<u>NET COST PER BUSHEL</u>	<u>\$.475</u>	<u>\$.483</u>	<u>\$.489</u>	<u>\$.503</u>	<u>\$.504</u>	<u>\$.506</u>	<u>\$.512</u>	<u>\$.526</u>	<u>\$.529</u>	<u>\$.530</u>

a/ Straw.

Table 6.--Cost of Production (acre basis) on 28 farms (1,830.77 acres; 58,274.4 bushels) Champaign-Piatt Counties--1939 (Farms ranked in order of net cost per bushel)

Items	Farm number								1939 average 28 farms	1938 average 25 farms	1937 average 28 farms
	72	69	64	73	90	79	71	71			
Acres in soybeans	115.05	113.74	32.21	12.32	18.86	8.87	24.78	24.78	69.81	68.64	
Yield per acre (bu.)	26.66	27.55	30.16	30.28	29.16	23.68	29.70	29.70	32.64	25.64	
Labor per acre	3.52	5.57	5.24	3.79	4.67	3.50	4.42	4.42	4.17	3.86	
Man hours	.03	--	1.15	--	12.20	--	3.09	3.09	.71	1.34	
Horse hours	2.60	3.66	3.86	2.85	.54	2.14	2.53	2.53	2.53	2.21	
Tractor hours	3.46	1.27	--	.49	.69	.56	2.26	2.26	1.07	.58	
Truck miles											
COST ITEMS PER ACRE											
Growing costs											
Man labor	\$.46	\$1.00	\$.75	\$.62	\$.86	\$.26	\$.74	\$.74	\$.64	\$.62	
Horse labor	.01	--	--	--	1.08	--	.33	.33	.07	.14	
Tractor use	.78	1.59	1.85	1.12	.22	.78	1.28	1.28	1.15	1.00	
Truck use	.03	--	--	--	.01	.03	--	--	.01	.01	
Machinery	.45	.31	.44	.67	.34	.36	.58	.58	.46	.47	
Seed	1.06	1.79	1.65	1.44	1.67	1.75	1.56	1.56	1.61	1.09	
Fertilizer	.35	.55	.29	1.39	.96	1.88	1.46	1.46	.31	.24	
Hail insurance	.26	.18	--	--	--	--	--	--	.05	.12	
Gen'l farm expense	.60	.72	.49	.34	.44	.25	.58	.58	.68	.74	
Total growing cost	\$4.00	\$6.14	\$5.47	\$5.58	\$5.58	\$5.31	\$6.53	\$6.53	\$4.98	\$7.43	
Harvesting costs											
Man labor	\$.38	\$.50	\$.64	\$.47	\$.47	\$.55	\$.46	\$.46	\$.42	\$.30	
Horse labor	--	--	.17	--	.08	--	.14	.14	.03	.07	
Tractor use	.31	.20	.50	.31	.25	.44	.36	.36	.47	.25	
Truck use	.32	.15	--	.05	.08	.01	.24	.24	.12	.05	
Combine	1.88	1.67	1.49	1.77	2.10	1.44	1.48	1.48	1.19	1.46	
Total harvesting cost	\$2.89	\$2.52	\$2.80	\$2.60	\$2.98	\$2.44	\$2.68	\$2.68	\$2.23	\$2.13	
Cost of growing and harvesting											
Taxes	\$.689	\$.866	\$.827	\$.818	\$.856	\$.775	\$.921	\$.921	\$.721	\$.56	
Interest on land	1.22	.85	1.36	1.48	1.64	1.52	1.54	1.54	1.34	1.27	
TOTAL COST	6.81	5.47	6.50	6.75	6.25	4.78	6.25	6.25	6.57	6.65	
INCOME PER ACRE	\$14.92	\$14.98	\$16.13	\$16.41	\$16.45	\$14.05	\$17.00	\$17.00	\$15.12	\$17.48	
Grain	\$19.19	\$19.84	\$21.71	\$21.80	\$20.99	\$17.05	\$21.38	\$21.38	\$21.21	\$20.51	
Pasture	.76	.25	--	--	--	.67a/	--	--	.11c/	.09	
TOTAL INCOME	\$19.95	\$20.09	\$21.71	\$21.80	\$20.99	\$17.72	\$21.38	\$21.38	\$21.32	\$20.60	
NET PROFIT PER ACRE	\$5.03	\$5.11	\$5.58	\$5.39	\$4.54	\$3.67	\$4.38	\$4.38	\$6.20	\$3.12	
NET COST PER BUSHEL	\$.531	\$.534	\$.535	\$.542	\$.564	\$.565	\$.573	\$.573	\$.460	\$.678	

a/ Straw .02 for acre. b/ Includes \$.01 for straw. c/ Includes \$.01 for straw.

Table 7.--Cost of Production (acre basis) on 16 farms (374.19 acres; 9,819.67 bushels) Champaign-Piatt Counties--1939 (Farms ranked in order of net cost per bushel)

Items	Farm number									
	47	74	60	84	92	18	63	64	75	71
Acres in winter wheat	29.25	41.80	17.55	13.85	12.58	41.76	12.89	41.69	40.47	16.40
Yield per acre (bu.)	33.06	34.31	39.30	25.99	35.21	32.28	24.67	24.51	21.10	28.60
Labor per acre	2.79	3.28	4.87	2.25	4.08	4.38	2.56	3.61	4.10	3.54
Man hours	--	--	--	--	1.11	1.25	--	.98	2.67	2.93
Horse hours	2.79	2.75	3.51	2.11	3.20	2.30	1.63	2.27	2.59	1.83
Tractor hours	--	--	2.11	--	--	--	3.10	--	.52	1.28
Truck miles	--	--	--	--	--	--	--	--	--	--
COST ITEMS PER ACRE										
Growing costs										
Man labor	\$.52	\$.50	\$.73	\$.19	\$.52	\$.51	\$.21	\$.50	\$.69	\$.67
Horse labor	--	--	--	--	--	.08	--	--	.26	.44
Tractor use	1.09	1.15	1.32	.30	1.26	1.16	.50	.84	.56	.62
Machinery	.33	.47	.30	.28	.49	.28	.29	.28	.33	.20
Seed	.94	1.01	1.23	1.13	1.20	.87	.93	1.16	.89	1.82
Fertilizer	--	1.54	.42	.32	.23	.80	.34	.29	.54	1.46
Hail insurance	--	--	--	--	--	.61	.46	--	--	--
Gen'l farm expense	.57	.40	.59	.21	.78	1.02	.32	.36	.78	.39
Total growing cost	\$ 3.45	\$ 5.07	\$ 4.59	\$ 2.43	\$ 4.48	\$ 5.33	\$ 3.05	\$ 3.43	\$ 4.05	\$ 5.60
Harvesting costs										
Man labor	\$.13	\$.45	\$.43	\$.28	\$.47	\$.49	\$.32	\$.33	\$.28	\$.35
Horse labor	--	--	--	--	.27	.16	--	.15	--	--
Tractor use	.35	.42	.43	.51	.60	.39	.23	.22	.17	.32
Truck use	--	--	.19	--	--	--	.72	--	.04	.15
Combine	.90	.96	1.34	.78	--	--	1.08	1.01	.80	1.68
Total harvesting cost	\$ 1.38	\$ 1.83	\$ 2.39	\$ 1.57	\$ 2.48	\$ 2.12	\$ 2.35	\$ 1.71	\$ 1.29	\$ 2.50
Cost of growing and harvesting										
harvesting	\$ 4.83	\$ 6.90	\$ 6.98	\$ 4.00	\$ 6.96	\$ 7.45	\$ 5.40	\$ 5.14	\$ 5.34	\$ 8.10
Taxes	1.62	1.17	1.34	1.43	1.12	1.07	1.29	1.36	1.02	1.55
Interest on land	6.25	6.50	7.50	6.00	7.50	7.50	6.75	6.92	5.50	6.25
TOTAL COST	\$ 12.70	\$ 14.57	\$ 15.82	\$ 11.43	\$ 15.58	\$ 16.02	\$ 13.44	\$ 13.42	\$ 11.86	\$ 15.90
INCOME PER ACRE										
Grain	\$ 19.84	\$ 20.58	\$ 23.58	\$ 15.59	\$ 21.13	\$ 19.37	\$ 14.80	\$ 14.71	\$ 12.66	\$ 17.16
Straw	--	--	--	--	--	--	--	--	.15	--
Pasture	.08	1.35	--	--	--	1.35	1.49	--	--	--
TOTAL INCOME	\$ 19.92	\$ 21.93	\$ 23.58	\$ 15.59	\$ 21.13	\$ 20.72	\$ 16.29	\$ 14.71	\$ 12.81	\$ 17.16
NET PROFIT PER ACRE	\$ 7.22	\$ 7.36	\$ 7.76	\$ 4.16	\$ 5.55	\$ 4.70	\$ 2.85	\$ 1.29	\$.95	\$ 1.26
NET COST PER BUSHEL	\$.381	\$.385	\$.403	\$.440	\$.442	\$.455	\$.485	\$.547	\$.555	\$.556

WINTER WHEAT (COMBINED) (Cont'd)
 Table 7.---Cost of Production (acre basis) on 16 farms (374.19 acres; 9,819.67 bushels)
 Champaign-Platt Counties--1939 (Farms ranked in order of net cost per bushel)

Items	Farm number				1939 average 16 farms	1938 average 15 farms	1937 average 15 farms
	56	88	45	66			
Acres in winter wheat	11.32	10.30	44.60	6.20	7.33	30.37	32.07
Yield per acre (bu.)	21.29	19.42	19.06	13.23	9.82	27.02	12.65
Labor per acre	1.95	2.82	2.59	4.28	3.96	3.50	3.81
Man hours	--	.49	--	1.29	1.77	1.04	1.93
Horse hours	1.06	1.65	1.79	2.02	1.09	2.13	2.09
Tractor hours	3.98	--	2.11	--	.27	.86	.48
Truck miles							
COST ITEMS PER ACRE							
Growing costs							
Man labor	\$.17	\$.48	\$.24	\$.48	\$.57	\$.39	\$.46
Horse labor	--	.07	--	--	.30	.04	.20
Tractor use	.26	.79	.59	.66	.13	.72	.74
Machinery	.22	.36	.45	.81	.34	.29	.28
Seed	1.15	1.08	1.28	1.41	1.23	2.07	2.39
Fertilizer	2.14	.09	.43	.67	2.02	.54	.69
Hail insurance	--	.13	.22	--	--	.06	.14
Gen'l farm expense	.28	.43	.59	.53	.55	.56	.52
<u>Total growing cost</u>	<u>\$ 4.22</u>	<u>\$ 3.43</u>	<u>\$ 3.80</u>	<u>\$ 4.56</u>	<u>\$ 5.14</u>	<u>\$ 4.67</u>	<u>\$ 5.42</u>
Harvesting costs							
Man labor	\$.34	\$.19	\$.42	\$.50	\$.48	\$.44	\$.31
Horse labor	--	--	--	.16	--	.08	.05
Tractor use	.26	.25	.54	.47	.40	.35	.21
Truck use	.43	--	.25	--	.03	.09	.05
Combine	1.17	1.12	.60	1.60	1.24	.97	.90
<u>Total harvesting cost</u>	<u>\$ 2.20</u>	<u>\$ 1.56</u>	<u>\$ 1.81</u>	<u>\$ 2.73</u>	<u>\$ 2.15</u>	<u>\$ 1.93</u>	<u>\$ 1.52</u>
Cost of growing and harvesting	\$ 6.42	\$ 4.99	\$ 5.61	\$ 7.29	\$ 7.29	\$ 6.60	\$ 6.94
Taxes	1.43	1.69	1.30	1.78	1.96	1.38	1.19
Interest on land	6.75	6.75	7.50	6.50	6.00	6.74	6.87
<u>TOTAL COST</u>	<u>\$14.60</u>	<u>\$13.43</u>	<u>\$14.41</u>	<u>\$15.57</u>	<u>\$15.25</u>	<u>\$14.72</u>	<u>\$15.00</u>
INCOME PER ACRE							
Grain	\$12.77	\$11.65	\$11.43	\$ 7.93	\$ 5.90	\$16.21	\$13.89
Straw	--	--	--	.73	--	.06	.05
Pasture	.40	--	--	--	--	.30	.56
TOTAL INCOME	\$13.17	\$11.65	\$11.43	\$ 8.66	\$ 5.90	\$16.57	\$14.50
NET PROFIT PER ACRE	\$-1.43	\$-1.78	\$-2.98	\$-6.91	\$-9.35	\$ 1.85	\$-.50
NET COST PER BUSHEL	\$.667	\$.692	\$.756	\$ 1.12	\$ 1.55	\$.532	\$ 1.141

Table 8.--Cost of Production (acre basis) on 18 farms (116.65 acres; 328.60 tons) Champaign-Piatt Counties--1939 (Farms ranked in order of net cost per ton)

Items	Farm number										
	66	71	56	15	60	89	47	49	72	79	74
Acres in alfalfa	6.97	8.15	12.42	19.79	5.00	2.54	2.50	5.00	4.45	7.59	9.47
Yield per acre (tons)	5.74	2.64	2.90	2.66	3.20	3.54	3.20	3.60	3.37	2.64	2.96
Labor per acre											
Man hours	21.23	8.96	8.31	8.54	12.35	12.01	15.00	20.20	24.04	20.82	17.95
Horse hours	25.11	13.99	6.40	6.82	8.80	20.47	18.00	5.80	20.90	18.05	12.04
Tractor hours	.29	--	1.05	.25	2.00	--	--	3.20	.90	1.84	4.12
Truck miles	--	--	1.19	1.77	--	--	--	2.60	8.99	--	--
COST ITEMS PER ACRE											
Man labor	\$ 5.10	\$ 2.34	\$ 2.41	\$ 2.44	\$ 3.58	\$ 2.89	\$ 3.63	\$ 5.96	\$ 6.02	\$ 4.87	\$ 4.35
Horse labor	3.53	2.11	.68	.69	5.22	4.80	5.21	1.93	2.39	1.61	2.63
Tractor use	.21	--	.73	.24	1.42	--	--	2.39	.49	.79	2.05
Machinery	1.30	.52	1.09	1.76	2.04	1.20	1.48	.98	2.43	1.26	2.95
Pickup baler	--	--	2.23	3.89	6.00	--	--	2.46	1.35	--	--
Combine	--	--	--	--	1.35	--	--	--	--	--	--
Seed	--	--	--	--	1.47	1.65	1.36	--	--	--	1.87
Fertilizer	.34	.73	.87	.28	2.18	.21	--	.22	.18	1.89	.59
Gen'l farm expense	3.35	1.53	.97	1.07	1.75	3.79	2.84	4.86	4.24	1.52	2.42
TOTAL OPERATING COST	\$13.83	\$ 7.23	\$ 8.98	\$10.37	\$25.01	\$14.54	\$14.52	\$18.80	\$17.10	\$11.94	\$16.86
Taxes	1.78	1.55	1.43	1.95	1.34	1.45	1.61	1.52	1.22	1.52	1.17
Interest on land	6.50	6.25	6.75	7.00	7.50	7.50	6.25	6.25	7.00	6.50	6.50
TOTAL COST	\$22.11	\$15.03	\$17.16	\$19.32	\$33.85	\$23.49	\$22.38	\$26.57	\$25.32	\$19.96	\$24.53
INCOME PER ACRE											
Hay	\$40.17	\$18.47	\$23.71	\$21.69	\$30.40	\$24.80	\$22.40	\$30.13	\$25.61	\$18.45	\$20.70
Pasture	.61	.04	.40	3.68	--	1.70	--	--	.02	--	--
Seed	--	--	--	--	14.80	--	--	--	--	--	--
TOTAL INCOME	\$40.78	\$18.51	\$24.11	\$25.37	\$45.20	\$26.50	\$22.40	\$30.13	\$25.63	\$18.45	\$20.70
NET PROFIT PER ACRE	\$18.67	\$ 3.48	\$ 6.95	\$ 6.05	\$11.35	\$ 3.01	\$.02	\$ 3.56	\$.31	\$-1.51	\$-3.83
NET COST PER TON	\$ 3.75	\$ 5.68	\$ 5.78	\$ 5.89	\$ 5.95	\$ 6.15	\$ 7.00	\$ 7.38	\$ 7.51	\$ 7.57	\$ 8.29

ALFALFA HAY (Cont'd)

Table 8.--Cost of Production (acre basis) on 18 farms (116.65 acres; 328.60 tons) Champaign-Platt Counties--1939 (Farms ranked in order of net cost per ton)

Items	Farm number						1939 average 18 farms	1938 average, 17 farms	1937 average 18 farms
	62	73	64	90	84	80			
Acres in alfalfa	5.00	8.32	4.03	3.60	2.57	7.58	6.48	8.39	8.27
Yield per acre (tons)	2.20	2.04	1.86	1.67	2.72	1.58	2.82	2.76	1.82
Labor per acre									
Man hours	19.60	14.06	13.03	17.78	34.92	18.34	15.04	10.52	11.22
Horse hours	13.30	9.62	15.63	19.44	38.72	19.53	13.55	11.53	11.92
Tractor hours	4.00	.60	--	--	.29	.26	1.16	1.04	.82
Truck miles	--	--	--	--	--	--	1.13	.68	5.08
COST ITEMS PER ACRE									
Man labor	\$ 3.92	\$ 3.46	\$ 3.15	\$ 4.26	\$ 8.25	\$ 4.46	\$ 3.79	\$ 2.53	\$ 2.59
Horse labor	1.65	2.21	2.35	1.84	5.13	1.66	2.19	1.59	2.13
Tractor use	1.63	.36	--	--	.12	.11	.65	.56	.42
Machinery	1.36	2.04	3.63	.88	2.96	1.25	1.74	1.13	1.27
Pickup baler	--	.38	--	--	--	--	1.34	--	--
Combine	--	--	--	--	--	--	.06	--	--
Seed	--	1.18	--	1.33	2.12	--	.45	2.72	.67
Fertilizer	.13	.69	.14	.29	1.34	1.00	.66	.62	.52
Gen'l farm expense	2.98	1.75	1.72	2.17	5.85	2.40	2.21	1.41	1.66
TOTAL OPERATING COST	\$11.67	\$12.07	\$10.99	\$10.77	\$25.77	\$10.88	\$13.09	\$10.56	\$ 9.26
Taxes	2.00	1.48	1.36	1.64	1.43	1.49	1.57	1.61	1.41
Interest on land	6.25	6.75	7.50	6.25	6.00	6.25	6.66	6.65	6.62
TOTAL COST	\$19.92	\$20.30	\$19.85	\$18.66	\$33.20	\$18.62	\$21.32	\$18.82	\$17.29
INCOME PER ACRE									
Hay	\$15.40	\$15.13	\$13.03	\$11.66	\$19.07	\$11.08	\$21.30	\$18.86	\$22.83
Pasture	--	1.71	2.68	1.65	3.38	--	1.08	.26	.07
Seed	--	--	--	--	--	--	.63	--	--
TOTAL INCOME	\$15.40	\$16.84	\$15.71	\$13.31	\$22.45	\$11.08	\$23.01	\$19.12	\$22.90
NET PROFIT PER ACRE									
	\$-4.52	\$-3.46	\$-4.14	\$-5.35	\$-10.75	\$-7.54	\$ 1.69	\$.30	\$ 5.61
NET COST PER TON									
	\$ 9.06	\$ 9.10	\$ 9.23	\$10.21	\$10.95	\$11.76	\$ 6.96	\$6.72	\$ 9.49

a/ Correction made after 1938 report was published.

CLOVER HAY

Table 9.--Cost of Production (acre basis) on 8 farms (171.87 acres; 165.95 tons) Champaign-Platt Counties--1939 (Farms ranked in order of net cost per ton)

Items	Farm number								1939	1938
	86	71	66	90	45	92	69	34	average 8 farms	average 10 farms ^{a/}
Acres in clover hay	25.73	5.49	23.16	24.93	39.69	20.27	21.82	10.78	21.48	15.64
Yield per acre (tons)	.94	1.37	1.04	1.04	1.11	.95	.69	.56	1.00	.91
Labor per acre	6.57	6.06	6.61	7.94	9.03	6.70	4.58	3.06	6.87	8.33
Man hours	6.68	7.74	6.30	10.75	--	2.17	4.12	3.53	4.66	6.82
Horse hours	1.79	--	.22	.40	2.99	1.60	.46	--	1.29	.98
Tractor hours	--	--	.22	.40	2.00	.02	--	--	.55	.01
Truck miles	--	--	--	--	--	--	--	--	--	--
COST ITEMS PER ACRE										
Man labor	\$ 1.53	\$ 1.59	\$ 1.89	\$ 2.08	\$ 2.75	\$ 2.09	\$ 1.12	\$.74	\$ 1.91	\$ 2.04
Horse labor	.81	1.17	.89	1.04	--	.53	.58	.70	.61	.90
Tractor use	.80	--	.24	.27	2.12	1.05	.24	--	.84	.56
Machinery	.41	.38	.58	.48	1.82	.25	.38	.20	.73	.96
Pickup baler	--	--	1.15	.96	1.67	1.71	.74	--	.97	--
Combine	.83	--	2.54	.54	1.97	1.18	--	--	1.14	.73 ^{b/}
Seed	--	1.21	.56	.46	1.23	.47	1.19	--	.67	1.96
Fertilizer	.21	.73	.34	.68	.13	.12	.11	.14	.26	.50
Gen'l farm expense	1.25	1.03	.84	.82	1.14	.83	.48	.51	.91	1.31
TOTAL OPERATING COST	\$ 5.84	\$ 6.11	\$ 9.03	\$ 7.33	\$ 12.83	\$ 8.23	\$ 4.84	\$ 2.29	\$ 8.04	\$ 8.96
Taxes	1.39	1.55	1.78	1.64	1.30	1.12	.85	1.30	1.36	1.45
Interest on land	6.25	6.25	6.50	6.25	7.50	7.50	6.25	7.00	6.77	6.56
TOTAL COST	\$ 13.48	\$ 13.91	\$ 17.31	\$ 15.22	\$ 21.63	\$ 16.85	\$ 11.94	\$ 10.59	\$ 16.17	\$ 16.97
INCOME PER ACRE										
Hay	\$ 5.65	\$ 8.20	\$ 7.77	\$ 7.64	\$ 9.74	\$ 8.74	\$ 5.73	\$ 2.97	\$ 7.46	\$ 5.22
Pasture	--	--	--	--	--	--	.54	.21	.08	1.24
Seed	5.17	--	5.54	2.10	7.18	3.44	--	--	3.89	3.77
TOTAL INCOME	\$ 10.82	\$ 8.20	\$ 13.31	\$ 9.74	\$ 16.92	\$ 12.18	\$ 6.27	\$ 3.18	\$ 11.43	\$ 10.23
NET PROFIT PER ACRE										
	\$ -2.66	\$ -5.71	\$ -4.00	\$ -5.48	\$ -4.71	\$ -4.67	\$ -5.67	\$ -7.41	\$ -4.74	\$ -6.74
NET COST PER TON										
	\$ 8.82	\$ 10.18	\$ 11.37	\$ 12.59	\$ 13.03	\$ 14.17	\$ 16.58	\$ 18.65	\$ 12.63	\$ 13.12

^{a/} Correction made after 1938 report was published

^{b/} Includes threshing

SOYBEAN HAY

Table 10.--Cost of Production (acre basis) on 20 farms (99.55 acres; 216.25 tons) Champaign-Platt Counties--1939 (Farms ranked in order of net cost per ton)

Items	Farm number						
	67	83	89	73	84	71	63
Acreage in soybean hay	2.67	3.32	4.76	1.24	10.15	13.49	4.10
Yield per acre (tons)	3.75	2.71	2.73	2.42	2.07	3.11	2.33
Labor per acre	18.82	19.43	12.76	9.47	9.63	20.68	24.81
Man hours	--	17.47	4.25	4.84	6.97	16.51	10.73
Horse hours	4.59	1.36	5.10	--	1.21	2.15	1.28
Tractor hours	10.86	--	--	--	--	--	.37
Truck miles							
COST ITEMS PER ACRE							
Growing costs							
Man labor	\$.56	\$.33	\$.47	\$.64	\$.47	\$.79	\$.33
Horse labor	--	--	.16	--	.01	.33	--
Tractor use	.96	.77	.78	--	.60	1.36	.67
Machinery	.44	.43	.25	.67	.57	.55	.26
Seed	1.76	1.21	2.08	1.43	1.57	1.56	1.43
Fertilizer	.59	.19	.42	1.39	.16	1.46	.34
Gen'l farm expense	4.60	2.97	2.83	1.27	1.61	3.53	5.12
Total growing cost	\$ 8.91	\$ 5.90	\$ 6.99	\$ 5.40	\$ 4.99	\$ 9.58	\$ 8.15
Harvesting costs							
Man labor	\$ 3.97	\$ 4.38	\$ 3.00	\$ 1.65	\$ 1.78	\$ 4.58	\$ 5.57
Horse labor	--	2.58	.87	.56	.88	2.18	2.10
Tractor use	1.28	--	2.12	1.11	--	--	--
Machinery	1.89	.45	3.34 ^a	.69	.96	.36	.24
Total harvesting cost	\$ 7.14	\$ 7.41	\$ 9.33	\$ 4.01	\$ 3.62	\$ 7.12	\$ 7.91
Cost of growing and harvesting	\$ 16.05	\$ 13.31	\$ 16.32	\$ 9.41	\$ 8.61	\$ 16.70	\$ 16.06
Taxes	1.66	.95	1.45	1.48	1.43	1.55	1.29
Interest on land	6.00	4.87	7.50	6.75	6.00	6.25	6.75
TOTAL COST	\$ 23.71	\$ 19.13	\$ 25.27	\$ 17.64	\$ 16.04	\$ 24.50	\$ 24.10
INCOME PER ACRE							
Hay	\$ 18.73	\$ 13.55	\$ 19.32	\$ 12.10	\$ 10.35	\$ 15.56	\$ 14.63
NET PROFIT PER ACRE	\$ -4.98	\$ -5.58	\$ -5.95	\$ -5.54	\$ -5.69	\$ -8.94	\$ -9.47
NET COST PER TON	\$ 6.33	\$ 7.06	\$ 7.18	\$ 7.29	\$ 7.75	\$ 7.87	\$ 8.24

a/ Includes \$2.95 for baling.

SOYBEAN HAY (Cont'd.)

Table 10.--Cost of Production (acre basis) on 20 farms (99.55 acres; 216.25 tons) Champaign-Platt Counties--1939 (Farms ranked in order of net cost per ton)

Items	Farm number							
	27	88	15	72	62	56	79	64
Acreage in soybean hay	2.81	1.76	5.39	11.98	1.15	5.85	2.33	4.09
Yield per acre (tons)	2.14	2.27	2.23	1.84	1.96	1.88	1.50	1.96
Labor per acre	8.72	13.35	22.36	14.76	18.92	12.27	13.74	20.36
Man hours	3.56	18.75	9.56	6.36	16.74	4.44	6.87	9.78
Tractor hours	2.05	1.42	2.09	3.67	1.52	2.35	3.44	3.12
Truck miles	--	--	--	3.48	--	16.41	--	--
COST ITEMS PER ACRE								
Growing costs								
Man labor	\$.66	\$.48	\$.69	\$.95	\$.39	\$.49	\$.20	\$.75
Horse labor	--	.14	.06	.01	.03	--	--	--
Tractor use	1.06	.89	1.06	1.51	.62	.75	.60	1.88
Machinery	.45	--	.39	.53	.39	.59	.36	.44
Seed	1.32	4.38	1.45	1.06	1.78	1.60	1.74	1.66
Fertilizer	.06	.04	.56	.18	.27	1.47	1.81	.29
Gen'l farm expense	2.51	3.18	3.26	2.67	2.88	1.79	1.00	2.70
Total growing cost	\$ 6.06	\$ 6.11	\$ 7.47	\$ 6.91	\$ 6.36	\$ 6.69	\$ 5.71	\$ 7.72
Harvesting costs								
Man labor	\$ 1.46	\$ 2.74	\$ 4.93	\$ 2.60	\$ 3.39	\$ 2.67	\$ 2.97	\$ 4.17
Horse labor	1.14	3.67	.90	.76	2.04	.39	.58	1.47
Tractor use	--	--	--	--	--	.54	1.11	--
Machinery	.34	.45	.65	.69	.40	2.11	.42	2.19
Total harvesting cost	\$ 2.94	\$ 6.86	\$ 6.48	\$ 4.05	\$ 5.83	\$ 5.71	\$ 5.08	\$ 7.83
Cost of growing and harvesting	\$ 9.00	\$ 12.97	\$ 13.95	\$ 10.96	\$ 12.19	\$ 12.40	\$ 10.79	\$ 15.55
Taxes	1.55	1.69	1.96	1.21	2.00	1.43	1.52	1.35
Interest on land	7.50	6.75	6.68	6.90	6.25	6.75	5.54	6.50
TOTAL COST	\$ 18.05	\$ 21.41	\$ 22.59	\$ 19.07	\$ 20.44	\$ 20.58	\$ 17.85	\$ 23.40
INCOME PER ACRE	\$ 10.67	\$ 11.36	\$ 11.13	\$ 9.19 ^{a/}	\$ 9.78	\$ 9.40	\$ 7.51	\$ 9.78
Hay	\$ 7.38	\$ 10.05	\$ 11.46	\$ 9.88	\$ 10.66	\$ 11.18	\$ 10.34	\$ 13.62
NET PROFIT PER ACRE	\$ 8.46	\$ 9.42	\$ 10.15	\$ 10.38	\$ 10.45	\$ 10.95	\$ 11.88	\$ 11.96
NET COST PER TON								

a/ Includes \$.01 for pasture.

SOYBEAN HAY (Cont'd)
Table 10.--Cost of Production (acre basis) on 20 farms (99.55 acres; 216.25 tons)
Champaign-Piatt Counties--1939 (Farms ranked in order of net cost per ton)

Items	Farm number				1939 average 20 farms	1938 average 19 farms	1937 average 25 farms
	34	18	75	80			
Acres in soybean hay	.23	5.28	9.51	9.01	4.98	3.18	5.30
Yield per acre (tons)	2.17	1.89	1.58	1.22	2.17	1.67	1.85
Labor per acre	32.60	24.33	30.02	20.72	18.39	16.07	15.05
Man hours	27.18	19.94	19.03	6.10	10.50	11.41	13.77
Horse hours	1.09	1.66	4.10	5.02	2.83	1.77	1.56
Tractor hours	--	--	.03	--	1.69	.08	.14
COST ITEMS PER ACRE							
Growing costs							
Man labor	\$.52	\$.76	\$ 1.48	\$.59	\$.71	\$.55	\$.48
Horse labor	.22	.13	.25	--	.09	.13	.27
Tractor use	.57	1.20	1.33	1.84	1.16	.82	.74
Machinery	.43	.30	.49	.44	.47	.52	.40
Seed	1.30	1.83	1.57	1.92	1.56	1.49	3.27
Fertilizer	.26	.48	.42	2.82	.81	.36	.27
Gen'l farm expense	5.48	5.64	4.64	2.72	3.13	2.62	2.21
Total growing cost	\$ 8.78	\$ 10.34	\$ 10.18	\$ 10.33	\$ 7.93	\$ 6.49	\$ 7.64
Harvesting costs							
Man labor	\$ 7.35	\$ 5.14	\$ 5.49	\$ 4.44	\$ 3.77	\$ 3.27	\$ 2.91
Horse labor	5.17	4.04	2.15	.52	1.45	1.50	1.68
Tractor use	--	--	--	1.15	.31	.07	.09
Machinery	.09	1.29	.42	.42	.90 ^a	.63	.83
Total harvesting cost	\$ 12.61	\$ 10.47	\$ 8.06	\$ 6.53	\$ 6.43	\$ 5.47	\$ 5.51
Cost of growing and harvesting							
Taxes	\$ 21.39	\$ 20.81	\$ 18.24	\$ 16.86	\$ 14.36	\$ 11.96	\$ 13.15
Interest on land	1.30	1.07	1.02	1.48	1.40	1.37	1.07
TOTAL COST	7.00	7.50	5.50	6.25	6.42	6.10	5.26
INCOME PER ACRE	\$ 29.69	\$ 29.38	\$ 24.76	\$ 24.59	\$ 22.18	\$ 19.43	\$ 19.48
Hay	\$ 10.87	\$ 9.47	\$ 7.89	\$ 6.10	\$ 11.13	\$ 8.36	\$ 17.57
NET PROFIT PER ACRE	\$ -18.82	\$ -19.91	\$ -16.87	\$ -18.49	\$ -11.05	\$ -11.07	\$ -1.91
NET COST PER TON	\$ 13.66	\$ 15.51	\$ 15.70	\$ 20.15	\$ 10.21	\$ 11.62	\$ 10.53

^a/ Includes \$.14 for baling.

Table 11.--Cost of Production (acre basis), Champaign-Platt Counties--1939

Items	Sweet corn		Miscellaneous Hays		Mixed
	83	66	Timothy Farm number	Oat	
Acres in crop	10.17	16.78	49	80	49
Yield per acre (bu. or ton)	2.68	2.47	1.11	4.94	33.90
			2.25	.81	.59
Labor per acre					
Man hours	12.20	11.04	8.56	9.51	3.95
Horse hours	13.38	7.04	--	5.26	.77
Tractor hours	1.87	3.99	8.56	1.47	.44
Truck miles	15.14	--	--	--	--
COST ITEMS PER ACRE					
Growing costs					
Man labor	\$.62	\$ 1.12	\$ --	\$.29	\$.03
Horse labor	.19	.25	--	--	.04
Tractor use	1.07	2.40	--	.83	--
Machinery	.98	.93	--	.30	--
Seed	1.86	.49	--	.66	--
Fertilizer	.34	1.18	.22	2.46	1.37
Gen'l farm expense	1.86	1.61	2.70	1.25	.22
<u>Total growing cost</u>	<u>\$ 6.92</u>	<u>\$ 7.98</u>	<u>\$ 2.92</u>	<u>\$ 5.79</u>	<u>\$ 2.46</u>
Harvesting costs					
Man labor	\$ 2.33	\$ 1.52	\$ 2.42	\$ 2.02	\$ 1.14
Horse labor	1.87	.70	--	.45	.18
Tractor use	--	2.01	6.47	.17	.31
Truck use	1.20	--	--	--	--
Machinery	--	--	.57	.41	--
Combine	--	--	--	--	1.50 ^a
Threshing and fuel	--	--	--	--	--
<u>Total harvesting cost</u>	<u>\$ 5.40</u>	<u>\$ 4.23</u>	<u>\$ 9.46</u>	<u>\$ 3.05</u>	<u>\$ 3.13</u>
Cost of growing and harvesting	\$12.32	\$12.21	\$12.38	\$ 8.84	\$ 5.59
Taxes	.95	1.78	1.51	1.49	1.51
Interest on land	5.00	6.50	6.25	6.25	6.25
TOTAL COST	\$18.27	\$20.49	\$20.14	\$16.58	\$13.35
INCOME PER ACRE					
Grain	\$20.08	\$18.53	\$ --	\$ --	\$ --
Hay	--	--	11.26	3.64	4.65
Straw	--	--	--	--	--
Pasture	--	1.05	--	--	--
<u>TOTAL INCOME</u>	<u>\$20.08</u>	<u>\$19.58</u>	<u>\$11.26</u>	<u>\$3.64</u>	<u>\$ 4.68</u>
NET PROFIT PER ACRE	\$ 1.81	\$ -.91	\$ -8.88	\$ -12.94	\$ -8.67
NET COST PER BUSHEL OR TON	\$ 6.82	\$ 7.87	\$ 8.94	\$20.48	\$22.58

Includes \$.79 for baling.

LIVESTOCK PRODUCTION COSTS

Hogs

The total amount of pork produced on the cash-grain farms included in this study has been gradually increasing during the twenty years that this cost work has been conducted in Champaign and Piatt counties. The total of 14,649 pounds produced per farm in 1939 was the highest average production of the twenty years, 1920-1939.

The amount of pork produced varied greatly from farm to farm. Of the 29 farms, one produced no pork, 6 produced less than 5,000 pounds, and 8 produced more than 20,000 pounds.

The spring of 1939 was cold and damp, and the litters weaned were smaller than normal. But, because of low corn prices during the growing and feeding seasons, hogs were produced at only slightly higher costs in 1939 than in 1938. The cost figures in Table 12 are for the pork produced by feeding outside cattle lots; it is the hundredweight cost of the 14,175 pounds of pork produced per farm.

When hogs were not following cattle, 390 pounds of corn, or its equivalent in other grains, and 20 pounds of tankage, or its equivalent in protein feeds, were required to produce 100 pounds of pork. All the farmers provided pasture for their hogs although not all of it was legume or mixed-legume pasture. Neither could all of the pastures be classified as clean, since some of them had carried hogs the previous year.

Milk Cattle

Milk cattle are kept on most farms in this area of the state simply to supply the farm family with milk, cream, and butter. On two of the farms, a cow or two in the beef herd was milked. However, these beef herds are not included in Table 13.

The average cost of feed and other items used in caring for an animal unit of dairy stock was \$97.05 in 1939, or \$13.36 more than it was in 1938. Materially more grain and hay were fed to ~~milk~~ cows in 1939 than in 1938; but the milk production per cow was less in 1939 than in 1938. One reason for the increased quantity of feed per animal unit in 1939 was that more of the animals in the herd were mature and were fed for milk production in 1939 than in 1938.

There were 9 farms on which 5 or more dairy cows were kept, but the number exceeded 10 on only 3 of them. For all but one of the herds with more than five cows, the milk yield ranged between 5,000 and 8,000 pounds per cow. In the complete study all of the milk cows that produced only 5,000 to 6,000 pounds of milk had costs of \$1.84 a hundred pounds, but those cows that produced 7,000 to 8,000 pounds of milk had costs of only \$1.37 a hundred pounds. The 13 farms with net profits averaged 7,420 pounds of milk per cow, but the 14 farms with net losses averaged only 5,634 pounds. Even when milk cows are carried as a sideline, the dairy enterprise merits enough attention for a reasonable degree of efficiency.

Feeder Cattle

Nine of the farmers fed calves or yearling steers which were sold during 1939. This total is the largest number of cooperating farmers to feed steers in any year throughout the twenty years that the study has been in progress.

The figures shown in Table 14 are the cost of producing beef from the time the steers were purchased in 1938 until they were sold during 1939. The weight of the steers when they were purchased ranged from 360 to 620 pounds, and the cost of the steers at the farm ranged from \$8.11 to \$9.64 a hundred pounds. The gains which the cattle made while they were on feed ranged from \$7.54 to \$10.20 a hundred pounds and averaged \$8.55.

Feed was 83 percent of the fattening costs. For each 100 pounds of beef gained, the cattle were fed 734 pounds of corn and 200 pounds of hay and were pastured for 13 days. When these steers were sold, their owners received 65 cents a bushel for all the corn fed to them after the market prices for all other feeds had been paid and after all other expenses had been met.

Hogs were placed in the feedlot with all the feeder cattle under study. The gains made by hogs while they were following cattle were credited to the cattle at the average yearly price received for hogs sold from the farm. The gain in weight of the hogs which were running behind cattle depended largely on the age of the steers and the kind and amount of corn fed them. The following factors were used in calculating the gains in hogs when they ran behind feeder cattle:

Pork Per Bushel of Corn Fed Steers
(Steers not fed silage)

Kind of corn fed cattle	Yearling steers (lb. of pork)	Calves (lb. of pork)
Broken ear	1.5	--
Corn-and cob-meal	.5	.3
Crushed ear	.75	.5
Ground shelled	.5	.3
Shelled	1.2	.75

Beef Herds

The number of farms on which beef cows are maintained is not large; but the number is gradually increasing under the soil conservation program. The farmers who used their beef herds as a means of converting farm roughages into meat found beef herds a profitable enterprise in 1939. There was only one beef herd that did not obtain more than 60 percent of its feed during the year from roughages. This herd was composed of only a few beef cows and all of them were milked to supply the household with milk.

It is extremely difficult to place a farm price on the miscellaneous farm roughages and pastures used by beef cows; so, in order to give a check on what returns the cows made on the feed fed them, a figure called "returns to roughage and labor per animal unit" was calculated. This figure shows how much an animal unit of beef cattle returned to its owner during the year for the roughage fed to it and for the labor expended on it after the market prices for all other feeds had been paid and after all other expenses but roughage and labor had been met.

All the beef herds returned something to their owners for roughage and labor, and all but one, a very small herd, paid very well for what might have been surplus roughage and idle labor.

Poultry

The difference between good and poor flock management is clearly shown by the range in net profits realized from poultry flocks. Even when the flock is distinctly a sideline, as it is on most of these farms, good care shows an increased farm income. On all but 3 or 4 of these farms, the flock of chickens was too small to give an economical production of eggs.

Only 7 of the 26 flocks used in the average showed profits, the highest profit being \$198.85. For several years, the size of the "increase," which is shown in Table 16 and which includes chickens sold and increases in inventory, has closely approximated and sometimes has been greater than the income from eggs sold. Because of the two sources of income--poultry and eggs--the net cost per dozen eggs has been calculated by dividing the total cost for the flock between poultry and eggs in the same proportion as the income from these sources. When the cost is figured in this manner, the net cost per dozen eggs in 1939 was 19 cents, the same cost as in 1938.

Sheep

Farm flocks were maintained on 6 of the 29 cooperating farms. One flock was composed of purebred stock, and its income was secured mainly from showings at county and state fairs and from sales of breeding stock. This one flock was the only one that showed a profit in 1939.

A large portion of the feed what was consumed by farm flocks on the other 5 farms was nonmarketable. In finding the cost of carrying these farm flocks, an attempt was made to place a market value on most of the feeds that these flocks consumed. This task is a difficult one, and a farmer is never sure that the nonmarketable feed would have brought anything on the market. However, when the market prices were placed on feed and on the labor which was used in carrying the farm flocks, the farm flocks showed no profit in 1939. However, sheep may have returned enough for the nonmarketable feeds and have helped enough in keeping down weeds on the farm to make their handling worth while. Also, in some cases, flocks are being built up by crossing with purebred males; but the inventory value of the breeding flock has not been increased, although the individuals in the flock are really more valuable.

Table 12.--Cost of Production of 100 pounds live weight of hogs on 26 farms (366,219 lb.)
Champaign-Piatt Counties--1939 (Farms ranked in order of total cost of producing 100 pounds)

Items	Farm number									
	64	75	86	45	90	34	63	15	92	80
COST ITEMS PER 100 POUNDS										
Feed fed	\$2.93	\$3.51	\$3.42	\$3.36	\$3.48	\$3.75	\$3.95	\$3.54	\$3.33	\$2.93
Man labor	.32	.19	.33	.30	.57	.36	.22	.53	.58	1.02
Interest on investment	.13	.12	.12	.15	.15	.11	.19	.15	.12	.23
Building expense	.06	.01	.16	.26	.05	.19	.15	.10	.40	--
Gen'l farm expense	.17	.13	.29	.28	.29	.25	.19	.32	.45	.55
Veterinary and medicine	.01	--	.06	--	.17	.10	.10	.12	--	.05
Equipment expense	.14	.09	.13	.14	.03	.05	.06	.15	.05	.25
Miscellaneous	--	--	.06	.09	.03	.02	.02	.03	.03	--
TOTAL COST	\$3.76	\$4.05	\$4.57	\$4.58	\$4.77	\$4.83	\$4.88	\$4.94	\$4.96	\$5.03
INCOME PER 100 POUNDS										
Receipts and net increases ^{a/}	\$4.35	\$6.03	\$5.53	\$5.33	\$4.13	\$4.41	\$6.44	\$5.37	\$5.88	\$5.78
PROFIT PER 100 POUNDS	\$.59	\$1.98	\$.96	\$.75	\$-.64	\$-.42	\$1.56	\$.43	\$.92	\$.75
FEED FED PER 100 POUNDS (lb.)^{b/}										
Corn equivalent	323	373	337	297	303	296	295	376	346	306
Corn	283	370	337	293	250	221	272	360	226	297
Oats	44	3	--	4	43	87	26	17	139	11
Wheat	2	--	--	--	16	--	--	2	--	--
Tankage equivalent	5	18	27	29	22	27	33	15	4	12
Soybeans	1	--	--	--	5	--	--	1	--	9
Tankage	--	6	3	--	1	4	4	3	--	5
Skim milk	--	9	--	7	45	244	138	21	49	--
Other proteins	--	10	29	--	28	--	7	9	--	--
Millfeeds	9	11	2	36	1	--	23	3	--	--
Minerals	.2	.4	3	.2	1.3	3	--	1	.2	.4
Straw	--	14	8	9.0	--	15	24	9	22	18
Poughage	--	--	--	--	--	--	--	2	--	9
Pasture days (an. unit)	4	3	3	4	3	5	2	5	4	5
MAN HOURS PER 100 POUNDS	1.3	.9	1.4	1.2	2.4	1.5	.9	2.2	2.4	4.2
Pork produced from feed fed	20 755	29 060	21 830	11 679	16 610	10 580	12 708	59 545	6 969	12 115
Total pounds hogs produced	20 755	29 060	21 830	12 165	16 510	10 580	13 360	60 680	6 995	12 115
Sold ^{c/}	13 175	26 195	25 330	11 090	15 235	7 900	12 230	43 305	6 240	13 028
Used	1 010	725	--	460	770	1 400	1 400	275	1 500	967

^{a/}Includes hogs butchered for home use.

^{b/}Feed required to make gains in hogs other than gains made by hogs following cattle.

^{c/}Includes the opening inventory weight of hogs that were sold plus the gain made by hogs sold.

HOGS (Cont'd.)

Table 12.--Cost of Production of 100 pounds live weight of hogs on 26 farms (366,219 lb.)
Champaign-Piatt Counties--1939 (Farms ranked in order of total cost of producing 100 pounds)

Items	Farm number									
	74	56	66	89d/	49	71	84	18	88	62
COST ITEMS PER 100 POUNDS										
Feed fed	\$3.84	\$3.64	\$3.64	\$3.44	\$4.43	\$4.08	\$3.92	\$3.94	\$2.91	\$5.15
Man labor	.56	.59	.82	.59	.31	.71	.88	.76	1.64	.53
Interest on investment	.10	.18	.17	.19	.19	.24	.12	.22	.09	.11
Building expense	.08	.05	.06	.16	.26	.17	.27	.13	.16	.25
Gen'l farm expense	.31	.34	.55	.79	.34	.46	.63	.73	1.61	.40
Veterinary and medicine	.15	.09	--	.22	.06	.01	--	.09	--	.02
Equipment expense	.07	.22	.21	.22	.10	.03	.11	.26	.08	.05
Miscellaneous	--	.04	.02	.02	.01	.02	.01	.04	.01	.01
TOTAL COST	\$5.11	\$5.15	\$5.47	\$5.63	\$5.70	\$5.72	\$5.94	\$6.17	\$6.50	\$6.52
INCOME PER 100 POUNDS										
Receipts and net increases ^{a/}	\$6.04	\$5.91	\$4.94	\$6.38	\$5.17	\$4.26	\$5.73	\$5.09	\$6.03	\$4.78
PROFIT PER 100 POUNDS	\$.93	\$.76	\$-.53	\$.75	\$-.53	\$-1.46	\$-.21	\$-1.08	\$-.47	\$-1.74
FEED FED PER 100 POUNDS (lb.)^{b/}										
Corn equivalent	320	423	446	276	335	471	278	445	298	646
Corn	314	344	419	241	331	445	273	407	298	629
Oats	7	91	15	40	--	18	6	44	--	20
Wheat	--	--	14	--	4	10	--	--	--	--
Tankage equivalent	29	30	8	23	46	6	53	15	16	5
Soybeans	--	--	--	2	--	--	7	7	--	--
Tankage	6	15	--	3	--	--	2	1	--	1
Skimmilk	106	46	--	98	500	22	547	--	183	46
Other proteins	5	15	--	3	--	--	--	11	--	--
Millfeeds	25	--	2	19	--	10	--	2	--	--
Minerals	3	.2	.1	.1	.5	3	.1	2.5	.5	.3
Straw	11	43	37	14	--	6	--	--	14	15
Roughage	3	--	--	--	--	--	--	--	--	--
Pasture days (an. unit)	3	5	3	4	6	4	4	4	4	4
MAN HOURS PER 100 POUNDS	2.3	2.3	3.5	2.5	1.1	2.7	3.8	3.2	6.8	2.6
Pork produced from feed fed	35 961	18 779	5 435	18 020	6 990	25 212	4 198	9 040	2 149	13 125
Total pounds hogs produced	36 985	23 210	5 435	18 020	9 055	27 050	4 377	9 040	2 149	13 125
Sold ^{c/}	34 610	21 120	4 930	13 515	6 755	39 625	3 252	9 310	1 795	9 250
Used	1 395	465	1 160	220	310	225	425	650	400	--

a/ Includes hogs butchered for home use.

b/ Feed required to make gains in hogs other than gains made by hogs following cattle.

c/ Includes the opening inventory weight of hogs that were sold plus the gain made by hogs sold.

d/ Not included in the average.

Table 12.--Cost of Production of 100 pounds live weight of hogs on 26 farms (366,219 lb.)
Champaign-Piatt Counties--1939 (Farms ranked in order of total cost of producing 100 pounds)

Items	Farm number						1939 average 25 farms	1938 average 25 farms	1937 average 26 farms
	60	83	69	73	47	67			
COST ITEMS PER 100 POUNDS									
Feed fed	\$4.75	\$3.74	\$6.61	\$4.81	\$5.97	\$6.50	\$3.84	\$7.40	
Man labor	.78	1.61	.38	1.77	1.18	1.61	.54	.59	
Interest on investment	.16	.12	.18	.11	.29	.10	.15	.22	
Building expense	.13	.32	.02	--	.28	.33	.12	.09	
Gen'l farm expense	.60	1.02	.27	.97	.92	1.66	.36	.37	
Veterinary and medicine	.10	.13	.18	.13	--	--	.08	.10	
Equipment expense	.22	.29	.13	.18	.08	.28	.12	.13	
Miscellaneous	.03	.02	.01	--	--	--	.02	.03	
TOTAL COST	\$6.77	\$7.25	\$7.78	\$7.97	\$8.72	\$10.48	\$5.23	\$8.93	
INCOME PER 100 POUNDS									
Receipts and net increases ^{a/}	\$4.86	\$6.30	\$6.28	\$5.51	\$5.86	\$4.96	\$5.37	\$8.60	
PROFIT PER 100 POUNDS	\$-1.91	\$-.95	\$-1.50	\$-2.46	\$-2.86	\$-5.52	\$.14	\$-.33	
FEED FED PER 100 POUNDS (lb.)^{b/}									
Corn equivalent	420	375	737	563	641	783	390	420	
Corn	364	319	737	544	613	702	365	362	
Oats	59	65	--	21	29	94	26	62	
Wheat	5	--	--	--	3	--	3	5	
Tankage equivalent	33	10	27	2	24	18	20	24	
Soybeans	9	--	15	--	--	--	2	3	
Tankage	--	--	4	1	--	--	3	8	
Skimmilk	212	--	65	--	263	181	65	64	
Other proteins	--	--	8	1	1	--	16	10	
Millfeeds	17	23	--	--	.6	6	--	2	
Minerals	.3	--	.1	6	.3	.2	1	1	
Straw	7	17	16	10	--	--	12	14	
Roughage	--	--	--	5	--	--	1	14	
Pasture days (an. unit)	6	4	6	4	4	--	4	3	
MAN HOURS PER 100 POUNDS	3.3	6.6	1.6	7.3	4.9	6.8	--	2.6	
Pork produced from feed fed	7 585	3 020	12 493	1 940	4 255	2 350	14 175	--	
Total pounds hogs produced	7 585	3 020	12 493	1 940	4 255	2 350	14 649	12 736	
Sold ^{c/}	3 105	2 960	10 030	400	1 735	3 825	13 057	11 383	
Used	750	--	750	--	250	--	612	686	

a/ Includes hogs butchered for home use.

b/ Feed required to make gains in hogs other than gains made by hogs following cattle.

c/ Includes the opening inventory weight of hogs that were sold plus the gain made by hogs sold.

MILK CATTLE

Table 13.--Cost and income (animal unit basis) for milk cattle on 27 farms
Champaign-Piatt Counties--1939 (Farms ranked in order of net profit for each animal unit)

Items	Farm number							89		
	84	34	74	63	49	73	88		15	27
COST ITEMS PER ANIMAL UNIT										
Feed	\$ 52.18	\$ 42.13	\$ 53.75	\$ 38.95	\$ 56.35	\$ 55.26	\$ 32.48	\$ 58.91	\$ 44.02	\$ 46.78
Man labor	18.59	10.92	24.82	12.67	25.39	19.71	22.64	23.15	32.58	19.87
Horse labor	--	.13	.22	.13	--	.14	.61	.02	--	--
Interest on investment	2.66	2.53	2.54	3.02	2.94	5.39	3.25	3.19	4.36	3.23
Building expense	3.88	3.87	1.71	.66	1.89	4.20	2.54	6.66	5.71	1.20
Gen'l farm expense	13.39	7.59	13.82	11.00	28.28	10.87	22.26	13.52	38.65	26.09
Equipment expense	1.44	1.04	1.91	.60	.46	1.01	4.64	2.01	.46	.69
Veterinary, medicine, and testing	.95	--	.98	--	--	4.62	--	--	--	.45
Miscellaneous ^{a/}	.17	.19	.22	.24	.45	15.15	.69	.07	21.12	.26
TOTAL COST	\$ 93.26	\$ 68.40	\$ 99.97	\$ 67.27	\$ 115.76	\$ 116.35	\$ 89.11	\$ 107.53	\$ 146.90	\$ 98.57
INCOME PER ANIMAL UNIT										
Milk	\$ 96.16	\$ 71.30	\$ 97.16	\$ 76.85	\$ 107.31	\$ 100.00	\$ 73.52	\$ 67.01	\$ 135.64	\$ 81.25
Manure	1.40	1.05	1.92	1.29	1.57	5.20	2.49	1.62	3.08	1.93
Increase	29.06	27.72	25.03	10.98	24.68	28.84	30.00	51.48	19.97	27.08
TOTAL INCOME	\$ 126.62	\$ 100.07	\$ 124.11	\$ 89.12	\$ 133.56	\$ 134.04	\$ 106.01	\$ 120.11	\$ 158.69	\$ 110.26
NET PROFIT PER ANIMAL UNIT	\$ 33.36	\$ 31.67	\$ 24.14	\$ 21.85	\$ 17.80	\$ 17.69	\$ 16.90	\$ 12.58	\$ 11.79	\$ 11.69
FEED PER ANIMAL UNIT (lb.)										
Farm grains	2 381	1 500	1 600	1 602	3 088	2 441	1 316	3 843	1 735	1 467
Millfeeds	--	--	--	--	--	46	--	38	--	--
Hay	2 794	1 318	3 556	1 223	1 689	3 644	2 000	2 785	2 663	2 610
Silage	--	--	--	--	--	--	--	--	--	--
Straw	826	659	981	874	--	66	350	155	1 183	1 011
Skim milk	582	1 080	155	--	--	--	1 634	244	--	963
Whole milk	447	482	799	394	612	370	--	311	514	476
Pasture days	315	256	213	302	329	216	245	193	235	235
LABOR PER ANIMAL UNIT										
Man hours	80.1	45.2	102.4	53.2	89.6	81.5	93.6	92.3	134.8	82.7
Horse hours	--	.7	1.0	.7	--	.6	2.5	.1	--	--
MILK PRODUCED PER COW	8 775	6 350	7 473	6 578	8 626	7 203	9 037	7 839	9 098	8 018
Number of animal units	6.05	9.10	8.16	5.72	3.32	9.69	2.00	7.60	3.38	4.69
Value of milk per cow	\$ 134.64	\$ 92.07	\$ 108.36	\$ 95.38	\$ 125.07	\$ 126.88	\$ 131.04	\$ 113.66	\$ 152.27	\$ 116.25
Number of dairy cows	4.32	7.05	7.31	4.61	2.84	7.64	1.12	4.48	3.01	3.28

a/ Includes cost of hauling milk and cream.

MILK CATTLE (Cont'd)
 Table 13.---Cost and income (animal unit basis) for milk cattle on 27 farms
 Champaign-Piatt Counties--1939 (Farms ranked in order of net profit for each animal unit)

Items	Farm number									
	75	80	62	66	72	60	79	64	83	47
COST ITEMS PER ANIMAL UNIT										
Feed	\$ 57.62	\$ 50.38	\$ 50.38	\$ 56.05	\$ 38.85	\$ 55.62	\$ 49.67	\$ 39.95	\$ 40.85	\$ 33.21
Man labor	11.56	26.05	13.72	17.61	10.51	16.69	20.12	17.48	24.71	15.98
Horse labor	.07	--	.34	--	--	--	.04	.27	.29	2.05
Interest on investment	2.73	3.07	3.06	2.52	3.41	2.30	2.61	3.01	2.27	2.60
Building expense	2.05	4.00	2.35	2.10	5.34	3.22	2.78	.41	1.38	1.70
Gen'l farm expense	7.96	14.04	10.43	11.67	7.99	12.68	6.41	9.58	15.58	12.49
Equipment expense	1.73	2.08	1.03	.16	2.58	.55	2.84	1.71	1.28	3.20
Veterinary, medicine, and testing	--	74	--	1.46	1.15	--	.94	.52	--	--
Miscellaneous ^{a/}	9.41	11.91	.49	8.13	1.50	.58	11.50	9.70	7.82	.03
TOTAL COST	\$ 93.13	\$112.27	\$ 81.80	\$ 99.70	\$ 71.33	\$ 91.64	\$ 96.91	\$ 82.63	\$ 94.18	\$ 71.26
INCOME PER ANIMAL UNIT										
Milk	\$ 68.66	\$ 95.73	\$ 39.76	\$ 59.49	\$ 29.71	\$ 72.33	\$ 72.69	\$ 66.82	\$ 73.68	\$ 38.06
Manure	.29	1.99	1.14	6.48	2.30	3.09	3.41	.82	2.54	--
Increase	33.96	20.71	45.75	32.93	37.80	12.90	17.06	10.00	10.55	24.47
TOTAL INCOME	\$102.91	\$118.43	\$ 86.65	\$ 98.90	\$ 69.81	\$ 88.32	\$ 93.16	\$ 77.64	\$ 86.77	\$ 62.53
NET PROFIT PER ANIMAL UNIT	\$ 9.78	\$ 6.16	\$ 4.85	\$ -.80	\$ -1.52	\$ -3.32	\$ -3.75	\$ -4.99	\$ -7.41	\$ -8.73
FEED PER ANIMAL UNIT (lb.)										
Farm grains	2 124	2 605	688	1 376	1 234	3 197	2 092	1 558	1 623	1 844
Millfeeds	--	--	--	62	172	--	21	--	--	--
Hay	2 331	2 394	3 968	3 362	2 038	2 258	3 514	2 147	1 812	921
Silage	--	--	--	--	--	--	--	--	--	--
Straw	126	313	--	1 827	331	484	167	69	443	--
Skinmilk	--	--	--	--	--	375	--	--	--	--
Whole milk	1 228	332	1 193	553	181	28	512	410	461	457
Pasture days	262	226	252	289	254	317	184	234	285	178
LABOR PER ANIMAL UNIT										
Man hours	50.9	107.1	68.6	73.9	43.6	69.0	88.0	72.3	102.0	66.1
Horse hours	.7	--	2.7	--	--	--	.4	1.8	2.0	5.5
MILK PRODUCED PER COW										
Number of animal units	6 785	6 077	4 605	7 159	4 572	6 344	6 754	5 141	5 299	4 330
Value of milk per cow	\$107.58	\$110.91	\$ 67.33	\$ 91.27	\$ 67.63	\$ 91.98	\$121.95	\$ 90.21	\$ 73.68	\$ 62.79
Number of dairy cows	10.13	8.71	5.43	4.46	3.45	4.88	13.91	10.69	4.97	4.11

^{a/} Includes cost of hauling milk and cream.

Table 13.--Cost and income (animal unit basis) for milk cattle on 27 farms
Champaign-Piatt Counties--1939 (Farms ranked in order of net profit for each animal unit)

Items	Farm number							1939 average 27 farms	1938 average 26 farms	1937 average 27 farms
	67	90	92	45	71	69	56			
COST ITEMS PER ANIMAL UNIT										
Feed	\$ 28.25	\$ 72.37	\$ 53.66	\$ 68.16	\$ 55.38	\$ 64.08	\$ 55.14	\$ 43.99	\$ 72.65	
Man labor	15.15	28.32	23.05	31.99	17.13	32.54	37.59	17.53	18.57	
Horse labor	--	.30	--	--	.73	--	.18	.16	.18	
Interest on investment	2.43	3.32	3.76	2.79	3.83	3.56	3.98	2.30	2.73	
Building expense	3.95	1.70	28.74	8.17	.78	5.66	3.15	2.66	2.33	
Gen'l farm expense	15.51	14.42	18.22	29.42	11.18	23.60	21.37	9.97	10.69	
Equipment expense	1.21	.46	2.68	1.62	.99	.30	.51	1.44	1.62	
Veterinary, medicine, and testing	.53	--	--	--	.20	--	--	.55	.67	
Miscellaneous ^a /	1.98	.26	1.24	2.03	.10	3.40	.23	4.11	.02	
TOTAL COST	\$ 69.01	\$ 121.15	\$ 131.35	\$ 134.18	\$ 90.32	\$ 133.14	\$ 122.15	\$ 82.71	\$ 109.46	
INCOME PER ANIMAL UNIT										
Milk	\$ 30.68	\$ 64.13	\$ 59.54	\$ 93.91	\$ 52.79	\$ 69.75	\$ 71.40	\$ 63.83	\$ 97.69	
Manure	2.63	1.27	4.16	1.82	2.86	1.20	3.36	3.01	4.36	
Increase	19.63	34.16	36.59	5.46	-3.33	24.09	-.06	16.85	22.35	
TOTAL INCOME	\$ 52.94	\$ 99.56	\$ 100.29	\$ 101.19	\$ 52.32	\$ 95.04	\$ 74.70	\$ 83.69	\$ 124.40	
NET PROFIT PER ANIMAL UNIT	\$ -16.07	\$ -21.59	\$ -31.06	\$ -32.99	\$ -38.00	\$ -38.10	\$ -47.45	\$.98	\$ 14.94	
FEED PER ANIMAL UNIT (lb.)										
Farm grains	576	849	1 878	3 072	1 845	3 728	2 137	1 752	1 765	
Millfeeds	--	--	--	155	--	--	--	16	39	
Hay	2 212	2 276	3 664	818	900	2 850	5 556	2 108	2 321	
Silage	--	--	--	--	--	--	--	--	--	
Straw	211	253	894	316	500	713	763	608	511	
Skimmilk	172	2 673	--	4 636	--	--	671	64	168	
Whole milk	113	--	710	--	1 548	429	--	336	714	
Pasture days	225	260	207	238	286	272	235	274	195	
LABOR PER ANIMAL UNIT										
Man hours	63.3	118.3	95.0	130.0	65.3	135.7	145.8	75.6	80.5	
Horse hours	--	3.2	--	--	4.8	--	2.1	1.2	1.1	
MILK PRODUCED PER COW										
Number of animal units	3 724	7 186	6 127	6 951	3 641	5 034	6 614	6 451	6 593	
Value of milk per cow	9.49	7.91	2.24	1.83	3.00	2.81	4.59	7.72	7.90	
Number of dairy cows	\$ 55.93	\$ 104.20	\$ 88.84	\$ 100.78	\$ 52.79	\$ 73.00	\$ 95.91	\$ 103.15	\$ 151.24	
	5.21	4.87	1.50	1.71	3.00	2.68	3.42	4.78	5.10	

^a Includes cost of hauling milk and cream.

Table 14.---Cost and income (head basis) for feeder cattle on 9 farms
Champaign-Piatt Counties--1939 (Farms ranked in order of net profit per head sold)

Items	Farm number									1939 average 9 droves
	56	63	49	45	15	71	74	84	72	
Number of head sold	118	18	40	15	61	18	26	13	25	37
Sales weight	1 038	931	1 009	952	948	1 072	825	1 142	1 020	996
Purchase weight	530	413	498	360	417	489	371	349	620	477
Gain in weight	508	518	511	592	531	583	454	793	400	520
Days on feed	295	314	281	388	345	364	269	465	264	314
Gain per head per day	1.72	1.65	1.82	1.53	1.54	1.60	1.69	1.71	1.51	1.66
PURCHASE VALUE PER HEAD SOLD	\$ 45.48	\$ 39.82	\$ 44.22	\$ 33.29	\$ 39.66	\$ 40.33	\$ 31.57	\$ 29.16	\$ 50.30	\$ 41.78
FEEDING COST PER HEAD	\$ 32.04	\$ 38.56	\$ 38.52	\$ 40.68	\$ 42.43	\$ 47.93	\$ 29.76	\$ 51.82	\$ 32.33	\$ 36.92
Feed	2.12	1.65	1.63	1.79	1.55	3.83	5.59	3.89	2.74	2.40
Man labor	.16	.16	.16	--	.03	.43	.10	--	.29	.14
Horse labor	1.70	1.73	2.11	2.97	1.77	2.47	1.21	3.31	1.49	1.87
Interest on investment	.55	.47	.38	1.14	.98	.41	.63	2.83	.49	.71
Building expense	.47	.26	.68	1.26	1.07	.56	.66	.92	1.20	.72
Equipment expense	1.15	1.50	1.88	1.63	.85	2.31	2.96	2.58	1.98	1.54
Gen'l farm expense	.14	.13	.50	--	.06	.09	.01	.09	.23	.16
Miscellaneous	\$ 38.33	\$ 44.46	\$ 45.86	\$ 49.47	\$ 48.74	\$ 58.03	\$ 40.92	\$ 65.44	\$ 40.75	\$ 44.46
TOTAL FEEDING COST	\$ 83.81	\$ 84.28	\$ 90.08	\$ 82.76	\$ 88.40	\$ 98.36	\$ 72.49	\$ 94.60	\$ 91.05	\$ 86.24
TOTAL COST PER HEAD	\$ 102.79	\$ 93.58	\$ 99.08	\$ 91.63	\$ 94.69	\$ 95.77	\$ 75.80	\$ 97.92	\$ 89.76	\$ 96.22
Income per head	2.16	2.39	3.18	1.88	1.15	5.30	2.10	.77	2.02	2.20
Sales value	1.73	2.48	1.72	2.47	1.31	5.97	1.44	1.65	2.53	1.99
Value of hog gains	\$ 106.68	\$ 98.45	\$ 103.98	\$ 95.98	\$ 97.15	\$ 107.04	\$ 79.34	\$ 100.34	\$ 94.31	\$ 100.41
Manure	\$ 22.87	\$ 14.17	\$ 13.90	\$ 13.22	\$ 8.75	\$ 8.68	\$ 6.85	\$ 5.74	\$ 3.26	\$ 14.17
TOTAL INCOME PER HEAD	\$ 8.58	\$ 9.64	\$ 8.89	\$ 9.26	\$ 9.52	\$ 8.25	\$ 8.51	\$ 8.36	\$ 8.11	\$ 8.76
Profit per head	\$ 9.90	\$ 9.84	\$ 9.82	\$ 9.62	\$ 9.99	\$ 8.94	\$ 9.19	\$ 8.58	\$ 8.80	\$ 9.66
PURCHASE PRICE PER CWT.	3 058	3 130	3 661	2 471	3 490	4 754	2 770	3 261	1 994	3 184
SALE PRICE PER CWT.	223	779	456	783	493	690	380	197	787	434
AMOUNT OF FEED (lb.)	329	414	148	124	49	--	127	185	140	198
Corn	754	1 111	728	1 533	1 236	1 906	750	2 015	1 560	1 064
Oats	6	1	16	8	6	16	10	7	22	9
Millfeeds	309	639	--	423	60	611	154	1 477	160	288
Hay	33	--	71	128	131	57	31	218	69	69
Minerals and salt	8.0	7.4	6.0	7.2	6.0	14.4	23.4	16.8	11.5	9.5
Straw	1.8	.8	.5	--	.2	2.8	.5	--	2.5	1.2
Pasture days	\$ 7.54	\$ 8.58	\$ 8.97	\$ 8.35	\$ 9.17	\$ 9.96	\$ 9.01	\$ 8.25	\$ 10.20	\$ 8.55
LABOR	\$.81	\$.65	\$.60	\$.71	\$.55	\$.50	\$.54	\$.53	\$.50	\$.65
Man hours	8.0	7.4	6.0	7.2	6.0	14.4	23.4	16.8	11.5	9.5
Horse hours	1.8	.8	.5	--	.2	2.8	.5	--	2.5	1.2
FEEDING COST PER 100 LB. GAIN	\$ 7.54	\$ 8.58	\$ 8.97	\$ 8.35	\$ 9.17	\$ 9.96	\$ 9.01	\$ 8.25	\$ 10.20	\$ 8.55
PRICE REALIZED PER BU. OF CORN	\$.81	\$.65	\$.60	\$.71	\$.55	\$.50	\$.54	\$.53	\$.50	\$.65

Table 15.--Cost and income (herd basis) for beef herds on 6 farms
Champaign-Piatt Counties--1939 (Farms ranked in order of net profit for each herd)

Items	Farm number					
	71	18	45	89	69	86
Number of cows in herd	11.58	16.17	6.08	8.15	2.83	2.27
Number of animal units	27.38	31.14	11.76	16.48	5.42	3.63
HERD COSTS						
Feed	\$ 582.05	\$ 726.88	\$ 321.02	\$ 499.65	\$ 264.96	\$ 183.40
Man labor	108.88	134.63	26.38	27.40	15.28	62.56
Horse labor	3.25	3.35	--	.49	--	--
Interest on investment	92.65	85.68	56.69	63.30	39.88	19.35
Building expense	59.37	77.86	15.70	8.26	9.40	38.40
Gen'l farm expense	71.07	128.81	24.25	35.98	11.09	55.51
Veterinary and medicine	5.00	6.00	15.00	3.00	--	20.75
Equipment expense	26.79	52.74	19.19	14.35	1.63	1.98
Miscellaneous	1.90	7.47	--	5.33	2.08	.79
TOTAL COST	\$ 950.96	\$1 223.42	\$ 478.23	\$ 657.76	\$ 344.32	\$ 382.74
HERD INCOME						
Sales and inventory increase	\$1 301.13	\$1 195.57	\$ 606.92	\$ 580.55	\$ 345.00	\$ 209.79
Milk	56.12	228.83	--	116.97	--	78.79
Manure	22.30	17.53	12.69	23.40	6.66	10.44
TOTAL INCOME	\$1 379.55	\$1 441.93	\$ 619.61	\$ 720.92	\$ 351.66	\$ 299.02
PROFIT PER HERD	\$ 428.59	\$ 218.51	\$ 141.38	\$ 63.16	\$ 7.34	\$ -83.72
Returns to roughage and labor per animal unit	\$ 36.73	\$ 27.63	\$ 32.69	\$ 29.75	\$ 35.26	\$ 16.94
Total pounds beef produced	13 690	17 020	7 660	5 970	2 975	1 230
POUNDS FEED FED HERD						
Corn	10 920	23 912	2 269	5 544	7 728	1 960
Oats	3 936	4 768	8 160	6 720	4 512	9 920
Millfeeds	--	--	612	--	--	--
Hay	10 300	31 000	17 000	32 760	18 500	13 000
Minerals and salt	336	755	157	56	26	27
Straw	2 000	8 000	2 320	15 260	8 000	3 680
Pasture days	7 912	7 947	2 638	4 283	1 365	698
LABOR						
Man hours	415.2	556.0	107.5	114.0	63.8	260.2
Horse hours	21.5	16.0	--	2.0	--	--
PERCENT OF FEED VALUE THAT WAS:						
Grain	19.0	29.2	27.9	19.6	36.3	54.8
Protein supplement	--	--	4.1	--	--	--
Minerals and salt	.6	1.0	.5	.4	.1	.1
Total concentrate	19.6	30.2	32.5	20.0	36.4	54.9
Hay and straw	6.4	16.0	24.6	32.1	34.7	26.0
Pasture	74.0	53.8	42.9	47.9	28.9	19.1

Table 16.--Cost and income for entire flock on 28 farms
 Champaign-Platt Counties--1939 (Farms ranked in order of total net profit from the poultry enterprise)

Items	Farm number							
	79 ^a / 207 220	89 192 104	92 176 105	75 82 60	63 76 144	69 ^b / 103 70	73 137 180	80 157 139
Number of hens in flock								
Eggs per hen								
COST ITEMS PER FLOCK								
Feed	\$ 419.56	\$ 177.15	\$ 176.10	\$ 126.00	\$ 195.08	\$ 27.53	\$ 216.31	\$ 282.30
Man labor	440.09	58.76	39.94	19.36	25.76	45.67	125.24	104.36
Horse labor	.76	.12	--	--	--	--	7.24	--
Interest on investment	14.07	10.24	4.16	6.50	3.88	5.96	5.54	6.20
Bldg. & equip. expense	45.08	22.94	19.32	48.27	6.70	11.15	49.62	57.54
Gen'l farm expense	140.08	77.16	31.57	13.32	22.36	33.13	69.07	56.24
Miscellaneous	23.29	3.72	--	12.48	9.38	--	21.55	7.47
Decrease	--	--	--	--	--	--	--	--
TOTAL COST	\$1 082.93	\$ 350.09	\$ 271.09	\$ 225.93	\$ 263.16	\$ 123.44	\$ 494.57	\$ 514.11
INCOME PER FLOCK								
Eggs sold	\$ 715.74	\$ 228.48	\$ 181.76	\$ 50.39	\$ 118.70	\$ 39.13	\$ 371.24	\$ 344.92
Eggs used	74.63	76.40	29.37	21.76	40.46	42.20	34.96	33.79
Manure	25.46	5.92	9.52	4.00	2.00	3.00	7.00	12.07
Increase	766.70	238.14	133.47	223.17	169.58	103.19	141.04	137.30
TOTAL INCOME	\$1 582.53	\$ 548.94	\$ 354.12	\$ 299.32	\$ 330.74	\$ 187.52	\$ 554.24	\$ 528.08
NET PROFIT PER FLOCK	\$ 499.60	\$ 198.85	\$ 83.03	\$ 73.39	\$ 67.58	\$ 64.08	\$ 59.67	\$ 13.97
FEED PER FLOCK (lb.)								
Farm grains	27 144	16 216	8 820	8 106	11 416	896	13 256	21 724
Purchased concentrates	9 800	900	5 000	5 500	2 700	1 370	4 375	3 200
Skim milk	--	7 568	2 317	2 640	6 949	215	--	--
Straw for litter	3 300	--	1 000	--	2 250	--	--	4 500
LABOR PER FLOCK								
Man hours	1 924.2	244.5	164.5	85.2	108.2	190.5	518.0	429.0
Horse hours	9.0	.5	--	--	--	--	31.5	--
Number of eggs produced	45 618	19 908	18 481	4 920	10 920	7 247	24 632	21 771
No. used in household	40 350	14 515	16 408	3 384	8 064	3 660	22 164	19 386
No. sold	5 268	5 393	2 073	1 536	2 856	2 979	2 468	2 385
No. used for hatching	--	--	--	--	--	608	--	--
NET RETURN ON 100 HEN BASIS	\$ 241.12	\$ 103.68	\$ 47.26	\$ 89.72	\$ 88.92	\$ 62.21	\$ 43.52	\$ 8.89
NET COST PER DOZEN EGGS	\$.142	\$.118	\$.106	\$.132	\$.139	\$.104	\$.176	\$.204

Turkey Sales \$514.49.

a/ Not included in the average.
 b/ Not included in the average.

POULTRY (Total Flock) (Cont'd)
 Table 16.--Cost and income for entire flock on 28 farms
 Champaign-Piatt Counties--1939 (Farms ranked in order of total net profit from the poultry enterprise)

Items	Farm number							
	15	72	74	84	62	88	83	56
Number of hens in flock	90	77	65	64	112	30	68	39
Eggs per hen	150	123	51	118	88	71	139	99
COST ITEMS PER FLOCK								
Feed	\$ 153.98	\$ 135.19	\$ 159.65	\$ 146.63	\$ 102.02	\$ 28.27	\$ 140.08	\$ 77.35
Man labor	103.89	30.42	50.38	52.66	34.43	35.96	58.23	23.41
Horse labor	.91	--	--	1.97	--	.49	--	.42
Interest on investment	6.11	5.15	4.00	3.11	3.92	1.49	4.56	2.56
Bldg. & equip. expense	19.69	26.43	46.33	31.10	26.18	6.25	25.80	56.23
Gen'l farm expense	60.68	23.14	28.05	37.93	26.19	35.38	36.73	13.31
Miscellaneous	23.31	5.70	10.47	23.33	6.24	.65	16.17	2.03
Decrease	--	--	--	--	--	--	--	--
TOTAL COST	\$ 368.57	\$ 226.03	\$ 298.88	\$ 296.73	\$ 198.98	\$ 108.49	\$ 281.57	\$ 175.31
INCOME PER FLOCK								
Eggs sold	\$ 171.60	\$ 106.09	\$ 20.45	\$ 101.86	\$ 87.72	\$ 16.00	\$ 92.12	\$ 29.70
Eggs used	20.91	22.74	22.63	19.22	43.29	11.11	28.70	21.84
Manure	3.84	3.00	4.06	7.00	2.75	1.00	3.00	2.90
Increase	185.12	88.05	217.36	131.98	26.50	35.49	107.65	69.49
TOTAL INCOME	\$ 381.47	\$ 219.88	\$ 264.50	\$ 260.06	\$ 160.26	\$ 63.60	\$ 231.47	\$ 123.93
NET PROFIT PER FLOCK	\$ 12.90	\$ -6.15	\$ -34.38	\$ -36.67	\$ -38.72	\$ -44.89	\$ -50.10	\$ -51.38
FEED PER FLOCK (lb.)								
Farm grains	9 942	10 752	12 016	7 525	10 555	2 828	9 432	6 892
Purchased concentrates	1 550	2 000	2 000	2 400	700	100	2 190	718
Skim milk	6 940	1 075	--	2 925	--	1 161	--	--
Straw for litter	2 195	100	200	3 000	--	--	400	--
LABOR PER FLOCK								
Man hours	414.2	126.2	208.0	227.0	172.2	148.8	240.2	90.8
Horse hours	9.0	--	--	16.0	--	2.0	--	4.8
Number of eggs produced								
No. used in household	13 446	9 482	3 319	7 490	9 918	2 165	9 422	3 858
No. sold	11 970	7 877	1 722	6 132	6 862	1 292	7 396	2 316
No. used for hatching	1 476	1 605	1 597	1 358	3 056	784	2 026	1 542
NET RETURN ON 100 HEN BASIS	\$ 14.40	\$ -7.96	\$ -53.14	\$ -57.75	\$ -34.42	\$ -147.18	\$ -74.00	\$ -131.74
NET COST PER DOZEN EGGS	\$.164	\$.169	\$.173	\$.223	\$.197	\$.277	\$.186	\$.229

POULTRY (Total Flock) (Cont'd)

Table 16.--Cost and income for entire flock on 28 farms

Champaign-Platt Counties--1939 (Farms ranked in order of total net profit from the poultry enterprise)

Items	Farm number							
	90	47	66	67	18	34	71	27
Number of hens in flock	140	96	106	80	56	114	95	39
Eggs per hen	126	66	139	83	45	86	70	71
COST ITEMS PER FLOCK								
Feed	\$ 126.91	\$ 78.99	\$ 258.67	\$ 94.07	\$ 47.11	\$ 119.33	\$ 93.44	\$ 18.88
Man labor	66.93	50.17	61.80	68.70	44.19	48.66	52.11	31.85
Horse labor	1.80	6.01	4.60	--	--	4.35	.76	--
Interest on investment	5.48	4.19	5.21	4.77	3.09	9.81	4.44	1.95
Bldg. & equip. expense	29.04	19.64	51.33	20.40	20.31	12.82	33.19	18.80
Gen'l farm expense	34.08	39.22	40.94	69.88	42.28	33.84	34.01	37.79
Miscellaneous	1.01	8.65	23.57	9.02	--	2.81	3.47	.38
Decrease	15.50	--	--	--	--	--	--	5.46
TOTAL COST	\$ 280.75	\$ 206.87	\$ 446.12	\$ 266.94	\$ 156.98	\$ 231.62	\$ 221.42	\$ 115.11
INCOME PER FLOCK								
Eggs sold	\$ 187.93	\$ 63.96	\$ 166.76	\$ 78.10	\$ 10.27	\$ 94.53	\$ 41.43	\$ 11.66
Eggs used	31.45	13.10	71.68	14.09	23.12	24.90	54.82	23.84
Manure	5.00	--	5.00	6.72	1.29	4.07	2.00	1.00
Increase	--	70.05	142.45	95.94	49.75	35.10	46.95	--
TOTAL INCOME	\$ 224.38	\$ 147.11	\$ 385.89	\$ 194.85	\$ 84.43	\$ 158.60	\$ 145.20	\$ 36.50
NET PROFIT PER FLOCK	\$ -56.37	\$ -59.76	\$ -60.23	\$ -71.99	\$ -72.55	\$ -73.02	\$ -76.22	\$ -78.61
FEED PER FLOCK (lb.)								
Farm grains	12 856	3 768	15 962	6 892	5 032	11 200	8 136	2 432
Purchased concentrates	425	2 200	4 000	1 066	250	800	775	20
Skim milk	1 806	525	--	701	--	258	172	--
Straw for litter	200	--	2 100	--	--	1 800	900	--
LABOR PER FLOCK								
Man hours	279.5	207.5	259.5	285.2	182.5	201.2	198.8	131.8
Horse hours	19.0	16.0	38.0	--	--	22.0	5.0	--
Number of eggs produced								
No. used in household	17 598	6 289	14 741	6 717	2 544	9 795	6 699	2 791
No. sold	15 378	5 364	9 303	5 723	912	8 037	2 829	980
No. used for hatching	2 220	925	5 057	994	1 632	1 758	3 870	1 684
No. used for hatching	--	--	381	--	--	--	--	127
NET RETURN ON 100 HEN BASIS	\$ -40.32	\$ -62.51	\$ -56.66	\$ -89.43	\$ -128.63	\$ -64.00	\$ -79.98	\$ -201.05
NET COST PER DOZEN EGGS	.188	.205	.232	.224	.296	.213	.262	.520

POULTRY (Total Flock) (Cont'd)
Table 16.---Cost and income for entire flock on 28 farms
Champaign-Piatt Counties--1939 (Farms ranked in order of total net profit from the poultry enterprise)

Items	Farm number				1939 average 26 flocks	1938 average 25 flocks	1937 average 27 flocks
	64	60	86	45			
Number of hens in flock	122	122	72	54	95	104	89
Eggs per hen	105	59	114	69	105	105	104
COST ITEMS PER FLOCK							
Feed	\$200.22	\$ 86.08	\$153.79	\$112.56	\$134.85	\$149.62	\$196.69
Man labor	49.68	29.68	74.28	26.56	52.59	70.28	62.48
Horse labor	.90	--	1.22	--	1.19	1.39	1.54
Interest on investment	4.98	6.70	3.60	1.85	4.75	5.63	5.22
Bldg. & equip. expense	40.15	15.95	27.06	63.06	30.54	28.54	24.69
Gen'l farm expense	27.22	22.92	65.91	24.43	38.60	38.91	36.87
Miscellaneous	17.38	1.95	13.19	13.85	9.15	4.84	9.94
Decrease	--	20.10	--	--	--	--	--
TOTAL COST	\$340.53	\$183.38	\$339.05	\$242.31	\$271.67	\$299.21	\$337.43
INCOME PER FLOCK							
Eggs sold	\$154.20	\$ 50.83	\$115.67	\$ 5.00	\$111.59	\$133.29	\$105.57
Eggs used	11.45	38.31	10.68	47.52	30.47	45.22	56.25
Manure	5.00	5.00	9.00	2.56	4.41	4.70	--
Increase	86.52	--	86.09	63.39	97.67	125.16	135.78
TOTAL INCOME	\$257.20	\$ 94.14	\$221.44	\$118.47	\$244.14	\$308.37	\$297.60
NET PROFIT PER FLOCK	\$-83.33	\$-89.24	\$-117.61	\$-123.84	\$-27.53	\$ 9.16	\$-39.83
FEED PER FLOCK (lb.)							
Farm grains	14 431	8 152	7 472	4 264	9 618	10 433	8 835
Purchased concentrates	2 200	50	2 400	1 700	1 893	2 138	1 576
Skim milk		6 097	2 236	369	1 682	2 597	2 044
Straw for litter	4 200	--	2 760	250	994	1 376	1 111
LABOR PER FLOCK							
Man hours	205.5	124.8	309.0	108.2	218.1	309.6	272.0
Horse hours	6.0	--	10.0	--	6.9	10.8	9.7
Number of eggs produced							
No. used in household	12 709	7 194	8 206	3 714	9 951	10 957	9 308
No. sold	11 901	4 106	7 452	360	7 763	2 763	2 672
No. used for hatching	808	2 704	754	3 354	2 150	8 130	6 483
NET RETURN ON 100 HEN BASIS	--	384	--	--	38	64	153
NET COST PER DOZEN EGGS	\$-68.98	\$-73.09	\$-162.89	\$-231.48	\$-29.09	\$ 8.78	\$-44.68
	\$.206	\$.318	\$.283	\$.344	\$.191	\$.190	\$.237

SHEEP

Table 17.--Cost and income for flocks on 6 farms
Champaign-Piatt Counties--1939 (Farms ranked in order of net profit per flock)

Items	Farm number					
	69	89	83	86	72	80
COST ITEMS PER FLOCK						
Feed	\$366.96	\$ 42.22	\$ 28.79	\$ 84.60	\$ 52.06	\$295.48
Man labor	57.65	9.25	9.63	16.47	25.30	36.98
Horse labor	--	--	.36	.24	.57	--
Interest on investment	42.88	3.70	3.38	5.26	5.32	15.68
Building expense	15.58	--	5.13	2.02	--	21.03
Gen'l farm expense	42.69	12.15	6.08	14.61	19.24	19.93
Veterinary and medicine	--	--	--	--	--	--
Equipment expense	2.56	1.24	1.44	1.56	2.94	14.32
Miscellaneous	136.68	2.85	--	3.82	3.90	13.09
TOTAL COST	\$665.00	\$ 71.41	\$ 54.81	\$128.58	\$109.33	\$416.51
INCOME PER FLOCK						
Increase	\$1 293.85 ^a	\$ 50.84	\$ 38.53	\$ 69.81	\$ 51.06	\$ 93.78
Wool	56.00	13.42	9.37	37.50	32.05	92.39
Manure	6.34	1.04	--	2.14	--	--
TOTAL INCOME	\$1 356.19	\$ 65.30	\$ 47.90	\$109.45	\$ 83.11	\$186.17
NET PROFIT PER FLOCK	\$691.19	\$ -6.11	\$ -6.91	\$ -19.13	\$ -26.22	\$ -230.34
FEED PER FLOCK (lb.)						
Corn	5 910	--	--	448	140	3 416
Oats	15 292	1 248	640	2 112	224	4 480
Millfeeds	375	--	--	--	--	1 470
Minerals and salt	--	7	--	221	97	--
Hay	15 375	1 000	3 500	3 000	600	20 500
Straw	2 420	500	250	310	700	--
Silage	--	--	--	--	--	--
Pasture days	1 592	597	289	.764	878	2 460
LABOR PER FLOCK						
Man hours	245.5	38.5	39.75	68.50	105.0	152.0
Horse hours	--	--	2.50	2.00	5.0	--
Average number of sheep	52.7	14.6	10.0	21.7	21.3	69.4
Number of ewes Jan. 1, 1939	20.0	11.0	5.0	15.0	15.0	60.0
Lambs per ewe	1.17	1.29	1.20	1.29	.83	.70

^a/ Fair premiums \$819.

LABOR AND POWER COSTS

Man Labor Costs

The hourly cost of hired help varied from 28 cents on the farm with the highest cost to 20 cents on the farm with the lowest cost. The average hourly cost of hired-man labor on the farms in the study was 24.2 cents. This amount was about one-half cent above the 1938 hourly cost and one cent above the 1937 hourly cost.

For the 29 farms, man labor costs in 1939 equalled 19.5 percent of the total farm expenses. This relationship varied from 8.4 percent to 38.3 percent on the various farms.

Table 18.--Man Labor Cost, Including the Cost of Husking and Detasseling Corn

Items	Average of the 29 farms		Your farm	
	Amount	Percent of total	Amount	Percent of total
Cash	\$ 302.39	72.0	\$ _____	_____
Perquisites				
Board	55.80	13.3	_____	_____
Food	22.03	5.3	_____	_____
Feed	8.87	2.1	_____	_____
Buildings and lots	30.70	7.3	_____	_____
Total perquisites	\$ 117.40	28.0	\$ _____	_____
Total hired labor cost	\$ 419.79	100.0	\$ _____	_____
Hours of labor performed by hired labor	1 684		_____	_____
Cost an hour of hired labor (including husking and detasseling)	\$.2492		\$ _____	_____
Cost an hour of regular monthly labor	\$.2418		\$ _____	_____

Items	Average of the 29 farms			Your farm		
	Cost	Percent of total cost	Hours of labor	Cost	Percent of total cost	Hours of labor
Hired labor	\$ 419.79	39.4	1 684	\$ _____	_____	_____
Custom labor ^{a/}	22.52	2.1	64	_____	_____	_____
Family labor	133.00	12.5	550	_____	_____	_____
Operator's labor	490.92	46.0	2 031	_____	_____	_____
Total labor	\$1 066.23	100.0	4 329	\$ _____	_____	_____
Labor off farm	57.89		238	_____	_____	_____
Net labor on farm	\$1 008.34		4 091	\$ _____	_____	_____

^{a/} Custom labor was the labor coming to the farm with the machinery which was hired to do special farm jobs, such as combining, mechanical corn husking, etc.

Horse Labor Costs

Horse labor costs in 1939 averaged 16.0 cents an hour as compared with 14.6 cents in 1938 and 16.4 cents in 1937. There was an average of only 2.9 work horses per farm; this amount was the smallest number of work horses on cooperating farms in the 20 years of the cost work in this area. The number of hours worked per horse dropped to 433 in 1939 as compared with 446 in 1938 and 818 in 1932.

Horses are fed and cared for according to the number of hours of work they do. In 1939, when a horse was worked 433 hours, the horse was fed only 1,733 pounds of grain and 1,828 pounds of hay; whereas, in 1932, when a horse was worked 818 hours, the horse was fed 3,426 pounds of grain and 2,075 pounds of hay.

Tractor Costs

All but one of the 29 farms used tractors. The tractors used have been classified into four groups for the purpose of cost analysis. Two groups contain two-bottom tractors, and these tractors are separated into one group of only general-purpose tractors and a second group in which all two-bottom tractors are thrown together (Table 19). The two other groups are three-bottom tractors, and these tractors are separated into one group of general-purpose tractors and a second group of standard tractors (Table 20).

Two-plow tractors were used on 22 of the farms, with 4 farms using 2 two-plow tractors. There were only 2 standard two-plow tractors in the group. Two-plow general-purpose tractors were operated an average of 539 hours at an average cost of 49.6 cents an hour in 1939 as compared with 45.1 cents an hour in 1938. The hourly cost of operating a two-plow general-purpose tractor varied from 37.1 cents on the farm where the tractor was operated 970.5 hours to 72.5 cents where the hourly cost was the highest and where the tractor was operated only 426.5 hours. Eighteen of the 28 two-plow tractors had rubber tires.

Three-plow tractors were used on 13 of the 29 farms. Seven of the three-plow tractors were of the general-purpose type. These tractors were operated an average of 669 hours at an average hourly cost of 55.2 cents. All of the three-plow general-purpose tractors were equipped with rubber tires. Seven of the three-plow tractors were of the standard type. One was purchased late in the year and operated only 46 hours; so it is not included in the averages of Table 22. The remaining tractors were operated an average of 435.4 hours at an average hourly cost of 74 cents. Only one of the 7 standard tractors was equipped with rubber tires.

HORSE LABOR

Table 19.---Net cost on 27 farms (74,234 work horses)
Champaign-Platt Counties--1939 (Items of cost and feed based on number of horse units.
Farms ranked in order of net cost per hour of horse labor)

Items	Farm number									
	79	56	90	15	75	72	66	86	84	62
Number of work horses	2.0	3.0	6.0	2.0	4.0	2.0	2.2	2.0	2.0	3.0
Number of horse units	2.0	3.0	6.0	2.0	4.0	2.0	4.7	2.0	2.0	3.0
COST ITEMS PER HORSE UNIT										
Feed	\$29.74	\$36.17	\$34.94	\$38.10	\$28.79	\$22.97	\$33.91	\$41.16	\$28.75	\$27.29
Man labor	1.11	5.20	8.64	18.56	5.18	7.35	3.85	16.77	12.30	7.85
Horse labor	--	--	.03	--	--	--	.10	--	--	--
Interest on investment	2.25	3.00	6.67	2.88	6.47	7.06	4.21	9.19	5.00	1.60
Depreciation	5.00	6.67	3.33	5.00	8.75	17.50	--	--	10.00	6.00
Shelter	2.12	1.26	3.72	10.24	6.51	12.44	.96	11.57	2.10	3.36
Harness	2.90	1.35	2.03	4.66	2.72	4.62	4.08	4.93	1.22	.36
Veterinary	1.42	---	2.04	--	1.25	7.00	2.15	2.50	--	1.41
Miscellaneous	1.94	.43	.46	.82	1.63	1.04	2.32	.94	1.24	.91
TOTAL COST FOR YEAR	\$46.48	\$54.08	\$61.86	\$80.26	\$61.30	\$79.98	\$51.58	\$87.06	\$60.61	\$48.78
Appreciation	\$ --	\$ --	\$ --	\$ --	\$ --	\$ --	\$12.88	\$ 2.50	\$ --	\$ --
Manure credit	1.48	2.69	1.68	1.02	6.60	1.26	4.20	1.88	1.03	.72
NET COST FOR YEAR	\$45.00	\$51.39	\$60.18	\$79.24	\$54.70	\$78.72	\$34.50	\$82.68	\$59.58	\$48.06
AMOUNT OF FEED (lb.)										
Total concentrates	1 420	1 181	1 707	3 018	950	536	732	2 336	868	625
Corn	924	989	1 344	1 610	742	168	162	--	644	518
Oats	496	192	363	1 408	208	368	570	2 336	224	107
Hay	1 400	4 667	2 567	1 250	2 250	1 100	3 434	1 500	500	2 333
Other roughage	150	833	333	--	--	350	429	1 090	2 250	--
Pasture days	226	171	284	168	245	266	208	291	324	282
LABOR (Chores)										
Man hours	4.88	20.17	36.08	74.00	22.81	30.50	16.15	69.75	53.00	39.25
Horse hours	--	--	.33	--	--	--	.86	--	--	--
Average hours work for each horse	529.5	580.7	635.7	782.6	522.3	688.5	605.7	679.0	484.1	389.0
COST PER HOUR	\$.085	\$.088	\$.095	\$.101	\$.105	\$.114	\$.121	\$.122	\$.123	\$.124

HORSE LABOR (Cont'd.)

Table 19.--Net cost on 27 farms (74,234 work horses)
Champaign-Piatt Counties--1939 (Items of cost and feed based on number of horse units.
Farms ranked in order of net cost per hour of horse labor)

Items	Farm number									
	69	83	64	71	63	34	18	74	73	88
Number of work horses	1.4	.8	2.0	5.1	2.0	5.0	4.0	4.0	2.0	2.0
Number of horse units	1.4	.8	2.0	6.2	4.9	6.0	6.2	4.0	2.0	2.0
COST ITEMS PER HORSE UNIT										
Feed	\$32.79	\$44.37	\$34.86	\$34.95	\$29.71	\$36.91	\$62.23	\$46.01	\$25.27	\$25.19
Man labor	21.13	16.45	8.25	10.30	3.10	9.07	14.72	13.99	13.24	6.68
Horse labor	--	.44	--	.21	--	.39	--	.44	--	.61
Interest on investment	8.61	1.74	5.19	5.93	5.70	4.69	6.41	4.65	4.25	3.56
Depreciation	--	6.31	12.50	9.62	--	9.95	--	--	10.00	7.50
Shelter	4.51	4.32	5.76	2.73	4.17	4.70	8.35	1.67	3.20	4.05
Harness	8.52	2.21	3.88	1.28	1.79	2.31	3.01	2.32	2.50	3.01
Veterinary	3.48	--	--	4.35	2.03	1.25	2.01	4.38	--	--
Miscellaneous	1.33	1.62	.94	1.58	.79	1.19	3.32	1.81	1.62	4.34
TOTAL COST FOR YEAR	\$80.37	\$77.46	\$71.38	\$70.95	\$47.29	\$70.46	\$100.05	\$75.27	\$60.08	\$54.94
Appreciation	\$ --	\$ --	\$ --	\$ --	\$14.69	\$ --	\$ 5.63	\$11.25	\$ --	\$ --
Manure credit	.26	3.03	1.09	4.24	1.27	1.03	1.72	1.50	1.78	2.51
NET COST FOR YEAR	\$80.11	\$74.43	\$70.29	\$66.71	\$31.33	\$69.43	\$ 92.70	\$62.52	\$58.30	\$52.43
AMOUNT OF FEED (lb.)										
Total concentrates	1 352	2 530	2 100	1 585	1 343	2 015	5 071	2 674	714	1 120
Corn	818	1 237	2 100	1 107	908	529	1 197	1 330	154	1 120
Oats	534	1 293	--	478	435	1 486	3 874	1 344	560	--
Hay	348	1 894	--	2 331	608	962	1 929	1 000	1 275	2 000
Other roughage	--	316	2 000	836	1 419	481	--	1 000	100	500
Pasture days	364	364	254	261	307	290	270	305	244	245
LABOR (Chores)										
Man hours	88.14	67.87	34.12	39.31	13.02	37.53	60.77	57.75	54.75	27.62
Horse hours	--	3.16	--	1.37	--	1.99	--	2.00	--	2.50
Average hours work for each horse	620.3	525.3	467.0	539.2	395.5	423.6	688.2	285.8	253.5	215.5
COST PER HOUR	\$.131	\$.142	\$.150	\$.151	\$.195	\$.198	\$.209	\$.219	\$.230	\$.243

HORSE LABOR (Cont'd)
 Table 19.--Net cost on 27 farms (74,234 work horses)
 Champaign-Platt Counties--1939 (Items of cost and feed based on number of horse units.
 Farms ranked in order of net cost per hour of horse labor)

Items	Farm number							1939 average 26 farms	1938 average 26 farms	1937 average 27 farms
	89	92a/	49	47	67	27	60			
Number of work horses	3.0	4.0	4.0	3.0	1.7	2.0	4.0	2.9	3.0	4.0
Number of horse units	3.0	4.1	4.0	3.0	2.8	2.0	4.0	3.3	3.9	4.9
COST ITEMS PER HORSE UNIT										
Feed	\$38.32	\$66.10	\$35.55	\$32.83	\$18.73	\$23.40	\$38.70	\$35.43	\$31.74	\$49.60
Man labor	12.97	5.90	5.73	5.50	3.87	10.16	3.67	8.78	7.45	9.90
Horse labor	--	--	--	--	--	--	--	.09	.06	.09
Interest on investment	7.68	5.89	4.39	2.51	2.98	5.94	1.75	4.92	5.10	5.02
Depreciation	--	--	9.50	5.00	--	12.50	5.00	2.57	--	.32
Shelter	.62	10.18	4.44	3.85	2.08	15.39	3.00	4.51	3.46	2.73
Harness	5.20	2.21	3.86	1.07	.99	5.95	2.40	2.75	2.19	2.60
Veterinary	5.12	--	--	--	2.84	4.00	--	1.93	1.78	1.07
Miscellaneous	1.40	2.98	.75	2.12	6.67	.64	.80	1.63	1.01	1.18
TOTAL COST FOR YEAR	\$71.31	\$93.26	\$64.22	\$52.88	\$38.16	\$77.98	\$55.32	\$62.61	\$52.79	\$72.51
Appreciation	\$ --	\$ 7.36	\$ --	\$ --	\$ 5.33	\$ --	\$ --	\$ --	\$.54	\$ --
Manure credit	2.03	6.72	1.78	--	2.61	1.30	2.20	2.12	2.36	4.33
NET COST FOR YEAR	\$69.28	\$79.18	\$62.44	\$52.88	\$30.22	\$76.68	\$53.12	\$60.49	\$49.89	\$68.18
AMOUNT OF FEED (lb.)										
Total concentrates	2 114	1 212	1 295	2 150	267	368	1 529	1 733	1 634	1 943
Corn	--	969	1 295	187	119	112	1 449	838	838	955
Oats	2 114	243	--	1 963	148	256	80	895	796	988
Hay	330	9 153	4 100	333	1 775	750	2 500	1 828	900	1 198
Other roughage	2 312	491	--	2 000	710	1 000	250	666	1 020	1 185
Pasture days	312	307	306	244	185	260	305	268	282	157
LABOR (Chores)										
Man hours	54.00	24.29	20.25	22.75	16.15	42.00	15.19	36.2	31.3	44.0
Horse hours	--	--	--	--	--	--	--	.5	.5	.5
Average hours work for each horse										
COST PER HOUR	\$.244	\$.244	\$.334	\$.376	\$.403	\$.428	\$.593	\$.160	\$.146	\$.164
	284.3	330.0	187.0	140.7	123.5	179.0	89.5	433.0	446.4	515.8

a/ Not included in the average

TWO-PLOW TRACTOR COSTS
 Table 20.--Total operating cost of tractor and hours of use for 28 tractors
 Champaign-Platt Counties--1939 (Tractors ranked in order of net cost per hour of use)

Items	Farm number						
	69	72	72	62	45	75	63
COST ITEMS PER TRACTOR							
Fuel and oil	\$196.63	\$ 78.53	\$ 84.45	\$130.29	\$101.70	\$162.43	\$ 33.65
Repairs	121.82	.25	--	135.68	.75	23.59	--
Man labor	4.79	1.51	3.19	40.18	2.88	3 63	--
Shelter	--	1.51	1.05	2.50	2.71	6.92	.17
Depreciation	--	100.00	100.00	10.00	130.00	115.00	75.00
Interest on investment	35.00	35.50	47.50	10.00	50.40	37.00	27.50
Miscellaneous	2.25	3.69	4.99	2.18	5.15	3.02	--
TOTAL COST	\$360.49	\$220.99	\$241.18	\$330.83	\$293.59	\$351.59	\$136.32
HOURS TRACTOR USED							
Draw-bar work	970.5	551.0	582.5	795.5	718.75	825.0	313.0
Belt work	--	2.5	16.75	16.5	--	28.5	4.5
TOTAL HOURS USED	970.5	553.5	599.25	812.0	718.75	853.5	317.5
NET COST PER HOUR	\$.371	\$.399	\$.402	\$.407	\$.408	\$.412	\$.429
Year new	1936	1936	1937	--	1937	1936	1938
Hours of man labor (chores and overhauling)	20.00	6.25	13.25	201.00	11.75	16.00	--
Crop acres per farm	286.99	316.46	316.46	228.24	434.49	218.53	268.99

TWO-FLOW TRACTOR COSTS (Cont'd)
 Table 20.---Total operating cost of tractor and hours of use for 28 tractors
 Champaign-Piatt Counties--1939 (Tractors ranked in order of net cost per hour of use)

Items	Farm number						
	27	56a/	56	34	64	47	69
COST ITEMS PER TRACTOR							
Fuel and oil	\$ 99.48	\$ 9.78	\$ 44.83	\$126.90	\$ 60.20	\$ 81.56	\$182.95
Repairs	11.64	--	7.55	7.40	23.20	13.25	--
Man labor	5.32	2.19	4.13	2.66	--	--	--
Shelter	3.07	1.13	4.16	1.71	4.80	2.20	.04
Depreciation	65.00	20.00	50.00	75.00	50.00	125.00	150.00
Interest on investment	32.85	12.61	11.48	24.03	31.25	39.50	54.32
Miscellaneous	1.75	--	1.04	3.90	--	.21	--
TOTAL COST	\$219.11	\$ 45.71	\$123.19	\$241.60	\$169.45	\$261.72	\$387.31
HOURS TRACTOR USED							
Draw-bar work	430.00	88.0	232.0	446.0	269.5	470.0	704.0
Belt work	.75	--	5.0	10.0	46.0	16.5	--
TOTAL HOURS USED	430.75	88.0b/	237.0b/	456.0	315.5	486.5	704.0
NET COST PER HOUR	\$.509	\$.519	\$.520	\$.530	\$.537	\$.538	\$.550
Year new	1937	1939	1929	1934	--	1935	1936
Hours of man labor (chores and overhauling)	22.0	8.5	16.0	11.0	--	--	--
Crop acres per farm	137.12	332.01	332.01	246.73	215.23	171.74	286.99

a/ Not included in the average.

b/ The tractor used 237 hours was on the farm from Jan. 1 to Oct. 14; the tractor used 88 hours was on the farm from Oct. 14 to Dec. 31.

TWO-FLOW TRACTOR COSTS (Cont'd)
 Table 20.--Total operating cost of tractor and hours of use for 28 tractors
 Champaign-Piatt Counties--1939 (Tractors ranked in order of net cost per hour of use)

Items	1939 average of 25 general purpose tractors	1939 average of 27 two- plow tractors	1938 average of 20 general purpose tractors	1938 average of 22 two- plow tractors	1937 average of 21 general purpose tractors	1937 average of 23 two- plow tractors
COST ITEMS PER TRACTOR						
Fuel and oil	\$107.64	\$102.46	\$119.06	\$114.10	\$101.25	\$ 94.68
Repairs	19.72	19.19	16.16	15.65	14.61	13.51
Man labor	3.76	3.48	5.78	5.43	8.94	8.16
Shelter	2.58	2.57	2.49	2.68	2.70	2.65
Depreciation	93.84	88.55	75.09	69.85	65.05	60.48
Interest on investment	37.32	35.22	36.08	33.94	31.47	29.66
Miscellaneous	2.55	2.41	1.56	1.42	.45	.41
TOTAL COST	<u>\$267.41</u>	<u>\$253.88</u>	<u>\$256.22</u>	<u>\$243.07</u>	<u>\$224.47</u>	<u>\$209.55</u>
HOURS TRACTOR USED						
Draw-bar work	527.79	500.89	557.72	533.25	472.75	448.25
Belt work	11.23	11.14	10.19	14.58	15.75	17.25
TOTAL HOURS USED	<u>539.02</u>	<u>512.03</u>	<u>567.91</u>	<u>547.83</u>	<u>488.50</u>	<u>465.50</u>
NET COST PER HOUR	\$.496	\$.496	\$.451	\$.444	\$.459	\$.450
Year new	--	--	--	--	--	--
Hours of man labor (chores and overhauling)	16.99	15.73	25.20	23.70	29.00	26.50
Crop acres per farm	246.30	240.37	255.95	249.42	264.05	256.56

THREE-FLOW STANDARD TRACTOR COSTS

Table 22.--Total operating cost of tractors and hours of use for 7 tractors
Champaign-Piatt Counties--1939 (Tractors ranked in order of net cost per hour of use)

Items	Farm number							1939 average of 6 standard tractors	1938 average of 12 standard tractors	1937 average of 12 standard tractors
	84a/ 45	71	64	74	18	80	80			
COST ITEMS PER TRACTOR										
Fuel and oil	\$ 6.09	\$139.95	\$135.83	\$ 87.82	\$179.35	\$ 96.51	\$134.01	\$138.58	\$115.34	
Repairs	--	62.33	39.73	53.23	102.30	40.58	72.71	22.46	24.56	
Men labor	--	7.34	--	--	.24	36.80	8.49	6.56	4.79	
Shelter	--	2.07	6.72	1.56	2.27	1.52	2.87	2.16	2.39	
Depreciation	1.25	--	50.00	100.00	77.00	125.00	75.34	64.17	50.62	
Interest on investment	1.37	7.00	22.00	37.50	34.65	13.56	27.50	23.29	25.85	
Miscellaneous	--	1.41	--	.98	1.48	.28	1.43	.75	.25	
TOTAL COST	\$ 8.71	\$220.10	\$254.28	\$281.09	\$397.29	\$314.25	\$322.35	\$257.97	\$223.80	
HOURS TRACTOR USED										
Draw-bar work	46.00	339.00	346.00	348.00	488.00	290.50	427.50	346.37	301.75	
Belt work	--	--	115.00	5.00	--	37.50	7.92	17.50	16.00	
TOTAL HOURS USED	46.00 ^b	339.00	351.00	353.00	488.00	328.00	435.42	363.87	317.75	
NET COST PER HOUR	\$.189	\$.649	\$.724	\$.796	\$.814	\$.958	\$.740	\$.709	\$.704	
Year new	--	--	1930	1934	1935	--	--	--	--	
Hours of man labor (Chores and overhauling)	--	28.0	--	--	1.0	154.5	35.0	94.4	20.7	
Crop acres per farm	197.24	169.48	215.23	271.42	435.89	189.80	286.05	281.41	311.23	

a/ Not included in the average.

b/ Tractor on the farm from Nov. 21 to Dec. 31.

THE ANALYSIS OF THE FARM BUSINESS

The costs, incomes, profits and losses, yields, labor and power requirements, other physical factors in crop production, and the feed and labor used for each livestock enterprise of the 29 farms in the study have been set forth in the preceding pages. The following tables (Tables 23, 24, and 25) bring together in convenient form some pertinent information dealing largely with the farms as a whole. The comparisons afforded here should be of particular value to the individual cooperator in his efforts to improve the management of the farm.

In Tables 23, 24, and 25, the farms are arranged in order of the rate earned on investment. The figures in the other columns do not run in any particular order as far as the size of the figures are concerned. Farms differ in many respects; so usually a farm with a high income has some points of weakness, and a farm with a low income has some points of strength.

At the foot of each column figures are shown for the high- and low-income farms and for the average of the group. These figures are an aid in making comparisons with individual farms.

Description of Table 23 (Page 54)

Rate earned on capital in percent represents the net income of the farm, expressed as a percentage of the total investment. The value of the labor of the farmer and his family is deducted as an expense, but no compensation is allowed for his management.

Total investment per acre gives the combined value of land, improvements (except operator's dwelling), machinery, feed, grain, and livestock, as shown in the opening inventory, divided by the total farm acreage.

Operating capital per acre is the sum of the capital invested in the farm business other than real estate. The principal items in the operating capital are the investment in livestock, machinery, grain, and feed at the beginning of the year. A high operating capital usually indicates an intensive farm business.

Investment and expense under farm buildings per acre shows the total building investment and annual expense reduced to an acre basis. High figures often show overinvestment in buildings, and very low figures often indicate inadequate equipment.

Investment and expense under fencing per acre may represent a considerable burden.

Gross income per acre is the sum of sales, increases in inventory, products used in the household, and perquisites furnished to labor divided by the total farm acreage. The total expense includes cash expenditures, decreases in inventory, perquisites furnished labor, and the value of unpaid labor of farm operator and family.

Net income per acre is the difference between the gross income and the total expense an acre.

Description of Table 24 (Page 56)

Crop acres in farm indicates the acreage upon which work was performed, such as preparing a seedbed, planting, or harvesting.

Investment and expense under crop machinery per crop acre is the burden each acre of crops must bear for the machinery (not including power) which is necessary to work it. The proper balance between modern equipment and low cost is an ever-present problem on most farms.

Man labor cost per crop acre shows the value of hired labor plus the value of the time of the farm operator and members of the farm family. This time is charged at hired man's wages, and is distributed over each crop acre in the farm.

Power cost per crop acre includes the acre cost of horse labor, tractor power, truck expense, and the farm share of automobile expense. It is one of the larger farm expenses.

Power and machinery cost per crop acre is the total of the power cost and machinery expense shown per crop acre.

Labor, power, and machinery cost per crop acre shows the combined cost of these three items.

Man labor under cost per \$100 gross income represents the proportion of the income required to pay the total labor bill (operator, family, hired labor, and perquisites).

Power and machinery under cost per \$100 gross income shows the relationship of the machinery plus horse cost to the total income of the farm.

Total farm under costs per \$100 gross income shows the proportion of all income required to pay total expenses.

Crop acres per man is a general measure of labor efficiency. This measure is affected by the amount of livestock and large-scale machinery on the farm.

Labor and power costs per hour appear small when taken by themselves, but they are significant because of the large number of units required in operating the farm.

(Continued on Page 60)

Table 23.--Factors helping to analyze the farm business on 29 farms
Champaign-Piatt Counties--1939 (Farms ranked in order of rate earned on investment)

Farm No.	Rate earned on capital in percent	Acres in farm	Total investment per acre	Operating capital per acre	Farm buildings per acre		Fencing per acre		Gross income per acre	Total expense per acre	Net income per acre	Percent of cropland in				Crop yields per acre of		
					Investment	Expense	Investment	Expense				Corn	Oats	Wheat	Soy-beans	Corn	Oats	Wheat	Soy-beans
56	13.37	413.24	\$199.46	\$50.42	\$12.95	\$1.27	\$109	.38	\$69.17	\$42.53	\$26.64	9.73	2.89	26.28	83	42	21	33
63	12.60	318.55	177.41	31.75	10.12	.88	.53	.19	37.73	15.37	22.36	9.55	4.79	30.16	65	27	25	35
83	12.38	153.32	110.54	17.55	4.35	.63	.85	.24	33.30	19.61	13.69	18.68	--	31.38	62	28	--	30
92	12.38	409.63	183.86	21.90	11.86	.98	.10	.16	48.73	25.97	22.76	7.11	3.22	36.71	71	31	35	31
84	11.71	226.82	167.64	30.55	16.30	1.64	.79	.29	37.95	18.29	19.64	7.44	7.02	32.63	51	38	26	36
75	11.33	309.29	150.20	29.41	9.92	1.02	.87	.21	32.47	15.46	17.01	--	17.94	31.49	51	--	21	31
88	10.34	150.15	159.18	21.10	12.52	.99	.55	.12	27.25	10.90	16.35	--	7.25	52.66	53	--	19	33
27	9.70	157.91	195.18	28.25	15.72	1.60	1.20	.16	31.86	12.92	18.94	--	--	48.39	54	--	--	36
67	9.69	113.36	177.99	45.60	11.73	1.24	.66	.19	39.13	21.90	17.23	17.73	--	21.37	63	22	--	32
72	9.66	363.49	186.49	30.72	17.56	1.60	2.01	.50	33.91	15.89	18.02	2.82	--	36.36	69	18	--	27
89	9.61	235.95	205.46	44.58	10.15	.96	.72	.58	40.31	20.43	19.88	17.37	--	23.28	69	36	--	33
47	9.59	197.74	161.17	29.25	6.28	.62	.64	.15	25.56	10.10	15.46	5.75	16.67	43.88	45	25	33	30
45	9.58	518.15	194.22	34.33	8.79	1.43	1.10	.21	34.92	16.31	18.61	16.72	9.59	19.02	67	16	19	35
15	9.24	341.85	212.48	55.20	20.70	2.21	3.47	.71	46.67	26.64	20.03	26.16	2.69	19.56	63	33	10	33
34	9.18	279.14	167.54	24.74	8.43	1.05	.77	.42	29.30	13.91	15.39	8.11	--	29.71	63	42	--	34
79	9.16	99.60	158.02	34.63	13.93	2.26	1.66	.63	58.47	44.00	14.47	7.46	--	9.81	66	30	--	24
18	9.13	537.99	198.71	33.69	12.43	1.29	2.58	.40	30.01	11.86	18.15	3.75	9.58	34.71	62	50	32	31
66	8.90	185.72	177.73	33.86	12.79	1.24	1.08	.28	35.82	20.01	15.81	22.76	3.52	--	75	25	13	--
64	8.79	262.28	188.81	31.38	15.10	1.41	.51	.13	30.25	13.65	16.60	20.77	19.37	14.97	69	29	25	30
86	8.55	294.10	148.72	24.66	12.41	1.48	1.33	.30	32.71	20.39	12.32	18.21	--	26.59	62	32	--	30
60	8.15	197.98	194.37	32.79	10.66	.98	.91	.17	28.66	12.82	15.84	9.57	10.27	23.14	73	31	39	38
74	7.77	349.15	195.56	46.68	17.53	1.63	1.35	.26	39.91	24.65	15.26	12.98	13.68	18.52	64	47	34	35
49	6.90	300.73	182.00	44.76	10.67	.99	1.58	.24	46.72	34.15	12.57	6.72	--	33.19	56	22	--	30
69	6.86	317.13	154.90	33.64	5.49	.46	3.36	.65	35.85	25.22	10.63	3.81	--	39.63	45	23	--	28
80	6.28	201.04	180.87	45.91	8.29	1.36	1.67	.56	38.43	27.07	11.36	14.47	--	24.04	69	27	--	32
73	6.18	79.07	203.36	43.55	21.45	2.56	3.35	.42	37.98	25.40	12.58	22.11	--	20.16	62	37	--	30
62	5.73	274.11	143.45	17.47	4.40	.78	1.14	.28	20.62	12.39	8.23	6.31	11.48	28.67	46	32	18	30
71	4.59	237.16	181.45	43.59	10.34	1.19	2.53	.56	32.50	24.17	8.33	14.09	9.68	14.62	60	39	29	30
90	3.62	171.46	180.59	30.31	24.49	2.23	.79	.30	23.29	16.86	6.43	22.40	--	13.49	54	31	--	29

High	13.37	537.99	212.48	55.20	24.49	2.56	3.47	.65	69.17	44.00	26.64	46.10	26.16	19.37	52.66	83	50	39	38
Low	3.62	79.07	110.54	17.47	4.35	.46	.10	.12	20.62	10.10	6.43	30.16	--	--	--	45	16	10	24
Ave.	9.00	265.56	179.85	34.54	12.09	1.27	1.42	.34	37.22	20.57	16.65	38.11	10.78	5.67	27.76	62	31	26	32

a/ The total investment at the beginning of the year less the value of land, buildings, and fencing. It consists principally of livestock, machinery, grain, and feed.

Table 24.--Factors helping to analyze the farm business on 29 farms
Champaign-Platt Counties--1939 (Farms ranked in order of rate earned on investment)

Farm No.	Rate earned	Crop acres in farm	Crop machinery per crop acre		Man labor cost per crop acre	Power cost per crop acre	Power and machinery cost per crop acre	Labor, power and machinery cost per crop acre	Cost per \$100 gross income			Crop acres per man	Labor and power cost per hour		
			In-vestment	Ex-pense					Man labor	Power and machinery	Total farm		Man labor	Horse	Tractor
56	13.37	391.48	\$5.30	\$2.21	\$3.83	\$2.67	\$8.71	\$5.18	\$6.61	\$61.48	126.28	\$.258	\$.088	\$.520	\$.584
63	12.60	268.99	4.49	1.45	2.30	2.97	6.72	5.14	9.90	40.75	193.52	.238	.195	.429	.524
83	12.38	117.31	2.41	1.64	4.83	3.19	9.66	11.10	11.10	58.90	92.37	.242	.142	.574	--
92	12.38	390.91	5.70	2.09	2.81	3.31	8.21	5.51	10.57	53.30	160.87	.243	.244	.581	--
84	11.71	197.24	7.84	2.35	3.97	2.67	8.99	9.10	11.50	48.22	108.97	.232	.123	.496	--
75	11.33	225.66	9.07	1.75	4.93	3.51	10.19	11.08	11.82	47.60	88.84	.227	.105	.412	--
88	10.34	142.11	4.50	1.92	2.77	2.77	7.46	9.61	16.31	40.00	163.34	.242	.243	.647	--
27	9.70	137.12	5.11	2.63	3.97	4.00	10.60	10.81	18.08	40.56	114.27	.242	.428	.509	--
67	9.69	92.41	9.47	2.01	5.72	5.93	13.66	11.91	16.54	55.95	77.66	.241	.403	.467	.515
72	9.66	316.46	7.99	2.29	3.48	3.21	8.98	8.93	14.13	46.86	128.64	.241	.114	.402	--
89	9.61	193.78	8.97	2.32	4.20	4.94	11.46	8.55	14.81	50.70	107.06	.240	.244	.399	--
47	9.59	175.45	10.18	1.73	2.39	3.20	7.32	8.28	17.13	39.52	188.66	.242	.376	.478	--
45	9.58	465.27	8.08	2.64	3.45	2.61	8.70	8.87	13.51	46.70	136.04	.245	--	.538	.620
15	9.24	272.78	8.23	2.71	7.75	3.61	14.07	13.25	10.81	57.09	61.58	.251	.101	--	.492
34	9.18	246.73	4.67	1.88	3.71	2.90	8.49	11.19	14.42	47.49	123.98	.242	.198	.530	--
79	9.16	90.47	3.92	2.33	17.42	3.77	23.52	27.06	9.48	75.26	24.25	.229	.085	--	--
18	9.13	435.89	6.45	1.75	3.60	3.98	9.33	9.72	15.47	39.53	128.58	.242	.209	.634	.814
66	8.90	176.25	3.63	2.24	4.86	3.01	10.11	12.88	13.91	55.86	100.14	.238	.121	.725	--
64	8.79	215.23	8.81	2.23	4.46	3.09	9.78	12.10	14.43	45.13	100.57	.242	.150	.537	.724
86	8.55	228.11	4.08	2.43	3.77	3.23	9.43	8.93	13.41	62.33	120.69	.240	.122	.505	--
60	8.15	170.81	7.34	2.53	3.24	4.11	9.88	9.77	19.98	44.72	140.01	.242	.593	--	.557
74	7.77	305.52	7.90	2.52	5.10	4.10	11.72	11.19	14.51	61.76	87.79	.242	.219	.490	.796
49	6.90	264.81	12.98	2.47	2.93	4.15	9.55	5.52	12.48	73.10	180.14	.283	.334	.496	.756
69	6.86	286.99	4.89	1.92	3.85	3.58	9.35	9.72	13.88	70.35	117.14	.240	.131	--	--
69	6.86	286.99	4.89	1.92	3.85	3.58	9.35	9.72	13.88	70.35	117.14	.240	.131	.550	--
80	6.28	189.80	9.15	2.13	8.47	4.08	14.68	20.81	15.26	70.44	54.23	.243	.085	--	.431
73	6.18	61.11	10.07	3.50	9.34	5.95	18.79	19.01	19.23	66.89	48.12	.242	.230	.553	.958
62	5.73	228.24	3.67	1.79	4.13	2.62	8.54	16.69	17.80	60.09	90.93	.200	.124	.407	--
71	4.59	169.48	3.44	1.71	7.43	4.89	14.03	16.33	14.51	74.38	68.34	.262	.151	--	.649

90	3.62	139.85	2.41	2.00	6.71	3.63	5.63	12.34	23.49	19.72	72.39	67.24	.239	.095	--	--
High	13.37	465.27	12.98	3.50	17.42	5.95	9.45	23.52	27.06	19.98	75.26	193.52	.283	.593	.725	.958
Low	3.62	61.11	2.41	1.45	2.30	2.61	4.41	6.72	5.14	6.61	39.52	24.25	.200	.085	.371	.431
Ave.	9.00	227.46	6.68	2.16	4.43	3.48	5.64	10.07	10.20	12.98	55.26	102.68	.242	.160	.503	.619

Table 25.--Factors helping to analyze the farm business on 29 farms
Champaign-Platt Counties--1939 (Farms ranked in order of rate earned on investment)

Farm No.	Rate earned	Labor and management wage	Acres in farm	Hours man labor performed per farm		Man equivalent per farm	Percent hired labor of total labor cost	C.F.E. per hour man labor	Investment per acre in prod. L.S.	Live-stock income per acre	Returns per \$100 invested in productive L.S.	Returns per \$100 feed fed		Feed per acre to prod. L.S.	
				By operator	By hired labor							Total for farm	Feed fed		Feed to prod. L.S.
56	13.37	\$7527.99	418.24	1959	3667	5735	64.23	\$1.147	\$11.93	\$20.84	\$174.63	\$192	\$203	\$194	\$10.77
63	12.60	4692.12	318.55	1023	732	2574	21.69	.207	4.40	8.61	195.92	189	172	181	4.77
83	12.38	1902.73	153.32	2330	9	2339	.57	.153	2.99	5.87	196.75	212	169	186	3.16
92	12.38	6065.54	409.63	2092	1582	4492	35.26	.192	1.13	2.63	232.59	189	177	201	1.40
84	11.71	3059.76	226.82	1983	980	3345	27.82	.167	6.95	9.70	139.53	172	152	170	5.69
75	11.33	3563.01	309.29	2495	2159	4694	44.93	.156	5.44	11.92	219.24	179	172	238	6.66
88	10.34	1639.20	150.15	1458	--	1608	--	.237	1.33	2.70	203.24	326	207	260	1.04
27	9.70	1960.05	157.91	1690	--	2209	--	.287	2.12	3.63	171.52	361	--	342	1.06
67	9.69	1626.39	113.36	1827	367	2194	11.49	.245	5.32	7.18	135.02	187	76	158	4.54
72	9.66	3523.85	363.49	1504	2307	4536	50.35	.183	6.30	5.19	82.69	128	--	130	4.01
89	9.61	2660.71	235.95	1628	76	3352	1.52	.316	10.68	12.72	119.10	172	185	193	6.61
47	9.59	1848.48	197.74	1521	--	1712	--	.189	3.44	4.15	120.76	188	98	147	2.82
45	9.58	5038.15	518.15	1648	2893	6310	46.19	.226	4.83	4.90	101.45	168	166	163	3.00
15	9.24	3659.76	341.85	2330	5764	8188	73.17	.146	13.14	24.73	188.26	156	155	248	15.60
34	9.18	2447.00	279.14	2018	58	3677	3.26	.168	3.19	5.50	172.72	238	117	171	3.22
79	9.16	1455.14	99.60	2866	3282	6894	41.52	.073	15.05	37.71	250.59	188	--	238	15.85
18	9.13	4736.75	537.99	1292	4973	6265	79.76	.232	4.02	3.69	91.75	198	129	176	2.10
66	8.90	1777.92	185.72	1269	1762	3258	47.01	.158	3.43	7.17	209.27	176	136	158	4.52
64	8.79	2312.04	262.28	1788	--	3956	--	.132	5.79	8.72	150.59	194	149	165	5.28
86	8.55	2158.67	294.10	2350	808	3499	21.25	.213	4.29	6.25	145.71	106	162	144	4.31
60	8.15	1413.82	197.98	809	--	2252	--	.184	3.37	5.23	155.07	159	102	131	4.00
74	7.77	2361.05	349.15	1949	4381	6426	68.12	.135	5.32	13.44	252.56	183	162	171	7.84
49	6.90	1466.30	300.73	1632	952	2719	46.41	.315	7.14	9.97	139.64	155	161	156	6.40
69	6.86	1205.24	317.13	1201	1377	4526	29.40	.174	7.64	9.29	121.64	139	95	177	5.25
80	6.28	1178.23	201.04	2512	3946	6470	58.57	.131	8.00	12.98	162.26	235	197	181	7.17
73	6.18	744.70	79.07	2292	--	2350	--	.133	15.14	24.79	163.77	243	115	232	10.69
62	5.73	595.76	274.11	1269	2940	4638	55.34	.152	3.44	5.78	167.93	172	93	128	4.53
71	4.59	238.73	237.16	1718	1930	4584	48.56	.171	17.04	15.73	92.28	152	116	138	11.36
90	3.62	307.40	171.46	3114	636	3837	16.61	.122	6.61	9.90	149.84	138	119	133	7.45

High	13.37	7527.99	537.99	2866	5764	8188	4.43	79.76	.316	17.04	37.71	252.56	361	207	681	342	15.85
Low	3.62	238.73	79.07	809	--	1608	.87	--	.073	1.13	2.63	82.69	106	76	105	128	1.04
Ave.	9.00	2522.98	265.56	1847	1641	4091	2.21	39.37	.172	6.25	9.80	156.73	178	147	208	171	5.72

Description of Table 25 (Page 58)

Labor and management wage indicates the income left to pay for the labor and management of the operator after all the other expenditures and the interest at 5 percent on the total farm investment have been deducted from gross income.

Hours of man labor performed per farm gives the time devoted to the farm business by the operator and hired labor. The figure for operator's labor is growing smaller each year.

Man equivalent per farm represents the average number of men used on the farm and assumes that each man worked 1 847 hours per year, the average number of hours for the 29 operators.

Percent hired labor is of total labor cost indicates the extent to which the farm is dependent on outside labor.

General farm expense includes miscellaneous expenditures of the farm such as taxes on land in the farmstead, farm share of auto expense, farm bureau dues, farm papers, and the other expenditures which cannot be allocated directly to the productive farm enterprises. It also includes labor for the time spent cutting hedgerows, cutting weeds in fence rows, etc. These general or overhead items are grouped together and proportioned to the crop and livestock enterprises on the basis of amounts of man labor used. The cost of these general farm expenses for each hour of labor used on the farm shows the basis of distributing this item.

Investment per acre in productive livestock includes the beginning inventory of livestock other than horses reduced to an acre basis.

Livestock income per acre and returns per \$100 invested in productive livestock vary with the kind of livestock; dairy cattle, hogs, and poultry usually show a more rapid turnover and higher relative returns than do beef herds and sheep.

Returns per \$100 feed fed is a good measure of livestock efficiency, although it obviously is affected by the relative prices of livestock and feed. To be profitable, livestock should pay more than market prices for feed, although some feeds used have little or no sales value.

Feed fed per acre to productive livestock shows the intensity of livestock production on a farm.

Farm Efficiency Chart (Page 61)

Of the 52 comparisons shown in Tables 23, 24, and 25, seventeen have been selected as a basis for a farm efficiency chart.

When the position of each farm in these 17 factors is indicated on this chart, it shows the farm operator in a graphic way some of the more important factors of analysis of his farm business.

FARM EFFICIENCY CHART

Champaign-Piatt Counties--1939

The numbers between the lines across the middle of the page are the approximate averages for the 29 farms for the factors named at the top of the columns. A line drawn across each column at the number for your farm shows your efficiency as compared with that of the other farmers.

Rate earned on investment	Crops						Livestock			Labor and power cost per hour			Power and machinery cost per crop acre	Labor, power & machinery cost per crop acre	Size of farm
	Corn		Oats		Soybeans		Income per acre	Re-turns per \$100 fed	Man	Horse	Tractor				
	Yield per acre	Cost per bu.	Yield per acre	Cost per bu.	Yield per acre	Cost per bu.					2-pow	5-pow			
	83	.22	52	.28	--	--	16.80	241	.200	--	.363	.409			
13.50	80	.23	49	.30	.36	15.80	231	.206	--	.383	.439	--	425		
12.75	77	.24	46	.32	.38	14.80	221	.212	--	.403	.469	4.25	400		
12.00	74	.25	43	.34	.40	13.80	211	.218	--	.423	.499	4.50	375		
11.25	71	.26	40	.36	.42	12.80	201	.224	.07	.443	.529	4.75	350		
10.50	68	.27	37	.38	.44	11.80	191	.230	.10	.463	.559	5.00	325		
9.75	65	.28	34	.40	.46	10.80	181	.236	.13	.483	.589	5.25	300		
9.00	62	.29	31	.42	.48	9.80	171	.242	.160	.503	.619	5.64	266		
8.25	59	.30	28	.44	.50	8.80	161	.248	.19	.523	.649	5.75	250		
7.50	56	.31	25	.46	.52	7.80	151	.254	.22	.543	.679	6.00	225		
6.75	53	.32	22	.48	.54	6.80	141	.260	.25	.563	.709	6.25	200		
6.00	50	.33	19	.50	.56	5.80	131	.266	.28	.583	.739	6.50	175		
5.25	47	.34	16	.52	.58	4.80	121	.272	.31	.603	.769	6.75	150		
4.50	44	.35	13	.54	--	3.80	--	.278	.34	.623	.799	7.00	125		
3.75	--	.36	--	.56	--	2.80	--	.284	.37	.643	.829	7.25	100		

FIFTEENTH ANNUAL REPORT

of the

FARM BUREAU

FARM MANAGEMENT

SERVICE

1939

615 Farms in 22 Counties

Department of Agricultural Economics
University of Illinois, College of Agriculture
Extension Service in Agriculture and Home Economics
Urbana, Illinois

In Cooperation with Farm Bureaus in 22 Counties

May, 1940

AE-1410

Purpose and Organization of the Farm Bureau Farm Management Service

The Farm Bureau Farm Management Service was first organized in Illinois in 1925. The service has proved helpful to cooperating farmers in four ways. First, it enables each one to learn how profitably he has operated his farm as compared with the operation of other farms of the same type. Second, through an annual report it points out clearly those parts of the business that tend to make the farm income high or low. Third, it gives each one the opportunity to learn from the most successful farmers the practices that have led to their success. Fourth, it provides a carefully audited annual record of the farm business that proves helpful in making income tax returns, securing bank credit, adjusting the shares of the tenant and landlord's income, settling estates, and adjusting taxes.

Advisory committees, composed of one representative from each farm bureau and the head of the Department of Agricultural Economics, plan and direct the work. These committees employ fieldmen from among those recommended by the University. They also hold and expend the funds collected from the cooperators.

The fieldmen make five regular contacts with all cooperators during the year. On these visits they assist the men with their records, study the annual report with each cooperator, discuss management problems, and give extra time to those who wish special service in reorganizing some parts of their farm business.

The organization and continuation of the project have been made possible by the hearty support of the farm advisers and their assistants. During the past year the fieldmen, farm advisers, and committeemen were as follows:

COUNTY	ADVISER	COMMITTEEMAN
<u>Fieldman: W. A. Herrington</u>		
Livingston	J. L. Stormont	G. K. Gee
McLean	L. G. Rodman	B. C. Kraft
Tazewell	G. H. Iftner	H. I. Peine
Woodford	T. H. Brock	J. F. Felter
<u>Fieldman: E. G. Fruin</u>		
Bureau	P. V. Dean	Robert Jackson
DeKalb	R. P. Johnson	M. C. Bullis
Grundy	M. E. Tascher	E. N. Burnham, Jr.
Kendall	W. P. Miller	Ralph Smith
LaSalle	V. D. Evans	W. F. Whipple
Lee	C. E. Yale	Clarence Hart
Marshall-Putnam	L. J. Hager	C. O. Johnson
<u>Fieldman: B. E. King</u>		
Fulton	J. E. Watt	M. R. Staggs
Henderson	A. J. Rehling	G. F. Longley
Henry	H. K. Danforth	J. P. Hanna
Knox	A. R. Kemp	Ira Moats
McDonough	R. G. Benbow	C. J. Webb
Mercer	E. D. Peterson	L. J. Schroll
Peoria	J. W. Whisenand	George Shissler
Rock Island	R. C. Smith	H. O. Klawonn
Stark	W. A. Gilbert	A. G. Siebenthal
Warren	E. W. Walworth	Carl Stewart

FIFTEENTH ANNUAL REPORT OF THE
FARM BUREAU FARM MANAGEMENT SERVICE
FOR THE YEAR 1939^{1/}

M. L. Mosher, W. A. Herrington, E. G. Fruin, B. E. King, H. C. M. Case^{2/}

Average earnings of farms in the Farm Bureau Farm Management Service were higher in 1939 than in 1938 by about \$1600 a farm. About one-half of the increase was due to higher yields and increased inventory values of grain carried over and about one-half to larger AAA payments. These increases in AAA payments which were received in 1939 largely resulted from payments which were received on most farms for both 1938 and 1939 during the year 1939. Earnings realized in cash were about the same in 1939 as in 1938.

Two hundred and seventy-one tenant farm operators, keeping records in this project on farms of higher valued land, received average earnings of \$2473 for their labor and management. Those on the lower valued farms received an average of \$1706 per farm. (Table 1, page 2.) This average includes about \$280 for the sale value of farm produce used in the home, but it does not include the value of house rent, which would have cost about \$240 per tenant family at town and city rates. The landlords on the same farms received average net incomes of 6.12 and 5.03 percent on their capital investments on the farms of higher valued and lower valued land respectively.

Earnings shown in this report are much higher than are those for typical farms of the area. Repeated studies have shown that the average earnings of all farms in an area are much lower than they are for farms included in the Farm Bureau Farm Management Service.

As usual, wide differences in earnings were in evidence between farms having about the same opportunities. The net returns for capital and management averaged \$6291 on the 109 most profitable farms on the higher valued land and \$2902 on the 109 least profitable farms. The two groups of farms were about the same size, were on about the same quality of land, and fed about the same amounts of feed to livestock. This difference of \$3389 a farm was largely due to better yields, better handled livestock, and lower expenses. (Table 2, page 3.)

More hogs and poultry were found on the 109 most profitable farms than on the 109 least profitable farms, as is evidenced by larger investments and much larger receipts. Expenses for farm improvements, machinery and equipment, and labor were from 20 to 25 percent greater on the least profitable farms than on

^{1/} Records of 615 farms were included. Thirty other records were kept but not used in the report because they were not typical farms, having an unusual size or source of income.

^{2/} As head of the Department of Agricultural Economics, H. C. M. Case gives general supervision to the project. The project is under the direct supervision of M. L. Mosher.

the most profitable ones, even though the farms were about the same average size and even though the least profitable farms fed a little less feed to livestock.

The value of farm produce used in the farm home was about 11 percent greater on the 109 most profitable farms than on the 109 least profitable ones. The farm operators of the 109 least profitable farms spent about one-half month less time per man on the farms than did the operators of the 109 most profitable farms.

Table 1.--Cash Balance--Inventory Changes--Tenant Farm Earnings

Items	Your farm	Higher-valued-land farms			70
		All 545 farms	109 with highest earnings	109 with lowest earnings	lower-valued farms
<u>Cash Balances</u>					
Total cash receipts	\$	\$10 191	\$10 910	\$ 9 273	\$ 7 962
Total cash expenses		7 312	7 425	7 220	6 069
Cash balance ^{a/}		2 879	3 485	2 053	1 893
<u>Inventory changes</u>					
Farm improvements		315	319	200	275
Horses		-42	-45	-46	-54
All productive livestock		461	698	517	569
Feed and grain		1 499	2 055	601	985
Machinery and equipment		95	166	-17	145
Automobile		7	6	-10	10
Total inventory changes		2 335	3 199	1 245	1 930
<u>Rented farms--number</u>					
Tenant's share		271	71	41	22
<u>Capital investment</u>					
Capital investment	\$	\$ 7 377	\$ 7 650	\$ 6 961	\$ 5 182
Returns for labor, capital, and management		2 842	3 714	1 534	1 965
Five percent of capital invested		369	382	348	259
Labor and management earnings		2 473	3 332	1 186	1 706
<u>Landlord's share</u>					
Capital investment		39 704	38 914	36 745	24 911
Returns for capital investment		2 428	3 176	1 475	1 252
Rate earned on investment	%	6.12%	8.16%	4.01%	5.03%

a/ The cash balance as used in this report would be a true cash balance if all sales and purchases had been for cash. It is really the difference between sales and purchases.

Cash receipts were \$1637 larger per farm on the 109 most profitable farms than on the 109 least profitable farms on the higher valued land. Also, cash expenses were \$205 higher per farm, thus leaving \$1432 more cash balance on the more profitable group of farms (Table 1, page 2).

Likewise, inventory increases were \$1954 larger per farm on the 109 most profitable farms than on the 109 least profitable ones. The inventory increases accounted for about 60 percent of the larger incomes, which average \$3389 larger per farm. Most of this difference occurred in the feed and grain account, where the inventory increase was \$1454 larger for the most profitable group.

Table 2.--Investments and Receipts, Expenses, and Earnings on Inventory Basis

Items	Your farm	Higher-valued-land farms			70
		All 545 farms	109 with highest earnings	109 with lowest earnings	lower valued farms
CAPITAL INVESTMENTS					
Land.	\$	\$33 640	\$31 198	\$32 430	\$20 884
Farm improvements		6 438	5 195	7 553	5 199
Horses.		381	356	416	400
Productive livestock: Cattle. . .		2 315	2 265	2 670	2 321
Hogs.		1 005	1 151	944	903
Sheep		162	73	181	124
Bees.		7	--	32	2
Poultry		110	136	113	106
<u>Total productive livestock. . . .</u>		<u>3 599</u>	<u>3 625</u>	<u>3 940</u>	<u>3 456</u>
Feed and grain.		3 904	3 683	3 935	2 645
Machinery and equipment		2 702	2 462	2 703	2 321
Automobile (farm share)		218	203	238	193
Total capital investments	\$	\$50 882	\$46 722	\$51 215	\$35 098
RECEIPTS AND NET INCREASES					
Horses.	\$	\$ --	\$ --	\$ --	\$ --
Productive livestock: Cattle. . .		1 717	2 054	1 749	1 548
Dairy sales		456	383	367	765
Hogs.		1 710	2 195	1 346	1 630
Sheep		147	117	122	151
Bees.		--	--	--	--
Poultry		104	216	104	105
Egg sales		161	202	143	138
<u>Total productive livestock. . . .</u>		<u>4 295</u>	<u>5 167</u>	<u>3 831</u>	<u>4 337</u>
Farm products used in household .		278	296	267	286
Feed and grain.		2 526	2 773	1 477	1 071
Labor off farm.		60	77	39	65
Miscellaneous		16	16	11	26
Soil conservation payments. . . .		1 031	1 119	855	723
Total receipts and net increases	\$	\$ 8 206	\$ 9 448	\$ 6 480	\$ 6 508
EXPENSES AND NET DECREASES					
Farm improvements	\$	\$ 371	\$ 325	\$ 442	\$ 286
Horses.		16	13	21	12
Productive livestock.		1	--	4	--
Feed and grain.		--	--	--	--
Machinery and equipment		776	668	838	686
Automobile (farm share)		128	114	137	118
Hired labor		629	572	683	635
Miscellaneous		59	57	58	54
Crop expense.		249	232	260	200
Livestock expense		89	116	83	89
Taxes		396	371	389	319
Total expenses and net decreases	\$	\$ 2 714	\$ 2 468	\$ 2 915	\$ 2 399
RECEIPTS LESS EXPENSES (Farm and family earnings).					
Family earnings).	\$	\$ 5 492	\$ 6 980	\$ 3 565	\$ 4 109
Family labor.		160	160	157	173
Returns for labor, capital, mgt..		5 332	6 820	3 408	3 936
Operator's labor.		518	529	506	516
Returns for capital and management		4 814	6 291	2 902	3 420
RATE EARNED ON INVESTMENT	%	9.46%	13.46%	5.67%	9.74%
Interest on investment	\$	\$ 2 544	\$ 2 336	\$ 2 561	\$ 1 755
LABOR AND MANAGEMENT EARNINGS		2 788	4 484	847	2 181

Table 3.--Some Factors That Affect Farm Incomes and Methods of Calculating
Index Figures^{a/}

Items	Your farm	Higher-valued-land farms			70 lower valued farms
		All 545 farms	109 with highest earnings	109 with lowest earnings	
Rate earned on total investment. . .	%	9.46%	13.46%	5.67%	9.74%
Size of business--days of work . . .		388.2	395.2	363.1	398.3
Crop system rating (page 13)		66.2	66.7	65.2	66.1
Percent of tillable land in legumes ^{b/}		21.1	21.6	20.9	22.6
Feed per acre to productive livestock	\$	\$ 11.23	\$ 12.48	\$ 12.02	\$ 9.56
Yield of grain--bushels per acre					
Corn		73.8	77.7	69.3	62.2
Oats		41.7	44.5	40.8	33.2
Wheat.		25.2	26.0	24.2	18.8
Soybeans		29.1	31.9	26.5	24.9
Crop yield index--% (2) is of (1) . .		101.5	107.8	96.2	83.9
(1) Acres of grain grown		158.6	154.8	146.5	122.9
(2) Acres at average yields.		161.0	166.9	141.0	103.1
Cattle efficiency index--% (1) is of (2)		100.2	118.5	88.7	104.3
(1) Returns from all cattle.	\$	\$ 2 305	\$ 2 577	\$ 2 236	\$ 2 451
(2) Returns at average rate (p.16)		2 300	2 174	2 521	2 351
Hog efficiency index--% (1) is of (2)		100.4	111.3	86.4	96.3
(1) Returns from all hogs.	\$	\$ 1 749	\$ 2 239	\$ 1 386	\$ 1 670
(2) Returns at average rate (p.19)		1 743	2 011	1 605	1 735
Sheep efficiency index--% (1) is of (2)		100.0	113.5	89.1	105.6
(1) Returns from all sheep	\$	\$ 148	\$ 118	\$ 122	\$ 152
(2) Returns at average rate (p.15)		148	104	137	144
Poultry efficiency index--% (1) is of (2)		99.7	101.5	93.4	114.7
(1) Returns from all poultry	\$	\$ 317	\$ 476	\$ 301	\$ 296
(2) Returns at average rate (p.19)		318	469	322	258
All livestock efficiency index--% (1) is of (2)		100.2	113.7	88.2	101.8
(1) Returns from all livestock	\$	\$ 4 519	\$ 5 410	\$ 4 045	\$ 4 569
(2) Returns at average rate (p.14)		4 509	4 758	4 585	4 488
Price index--% (1) is of (2)		100.2	102.1	100.0	99.9
(1) Value of products sold	\$	\$ 8 307	\$ 8 721	\$ 7 603	\$ 6 464
(2) Value at average prices (p.20)		8 294	8 539	7 603	6 471
Labor accomplishment index--% (2) is of (1)		100.0	104.9	91.5	101.2
(1) Total labor cost	\$	\$ 1 272	\$ 1 219	\$ 1 321	\$ 1 284
(2) Cost at normal rate (p.21)		1 272	1 279	1 209	1 299
Power and machinery accomplishment index--% (2) is of (1)		109.4	121.4	96.8	115.0
(1) Total power and machinery cost	\$	\$ 1 047	\$ 914	\$ 1 136	\$ 948
(2) Cost at normal rate ^{c/} (p.21).		1 145	1 110	1 100	1 090

a/ All of the factors used in the farm efficiency charts on pages 5 and 7 are given in this table. See page 9 for definitions.

b/ Only biennial and perennial legumes are included here.

c/ The normal rate is based on farms having little or no income from custom work.

Chart 2.--Number of Above-Average Factors as Related to Net Farm Earnings

Number above ave. factors ^{a/}	Average rate earned	Adjusted average net earnings	Adjusted average net farm earnings ^{b/}					
			\$1000	\$2000	\$3000	\$4000	\$5000	\$6000
7	13.30%	\$6528	9 farms					
6	12.00%	5890	27 farms					
5	10.95%	5375	109 farms					
4	9.78%	4801	136 farms					
3	8.91%	4374	173 farms					
2	8.50%	4172	114 farms					
1	7.89%	3873	35 farms					
0	4.70%	2307	12 farms					

a/ The seven efficiency factors used were: (1) crop system rating; (2) feed per acre to productive livestock; (3) crop yield index; (4) all livestock efficiency index; (5) price index; (6) labor accomplishment index; (7) horse and machinery accomplishment index.

b/ The net farm earnings of each group of farms are adjusted to the average capital of all 615 farms considered in this report by applying the rate earned by the group to the average capital of \$49,086.

Net farm earnings were much higher for farms on which work of above-average quality was done in six or seven of the factors named above than for farms on which above-average work was done in only one or two factors or in none at all.

The nine farms that were above the average of all farms in each of the seven factors earned an average of \$6528 when earnings were adjusted to the average-sized farm. The twelve farms that were below the average in each of the seven factors had an average income of only \$2307. This difference amounts to \$4221 when applied to the average-sized farm. The value of well-balanced farming in which all important parts of the business are done at least fairly well is shown clearly from these data.

Table 4.--Organization of Business--Expenses per Acre

Items	Your farm	Higher-valued-land farms			70 lower-valued farms
		All 545 farms	109 with highest earnings	109 with lowest earnings	
<u>Size and intensity of business</u>					
Size of farm--total acres		269.6	255.6	257.4	303.0
Percent of land tillable.		88.0	88.8	87.4	69.1
Total days of productive work		388.2	395.2	363.1	398.3
On crops.		164.2	156.9	157.2	148.1
On livestock.		224.0	238.3	205.9	250.2
Per acre of farm.		1.44	1.55	1.41	1.31
Feed per acre to productive livestock \$	\$	\$ 11.23	\$ 12.48	\$ 12.02	\$ 9.56
Gross earnings per acre		30.44	36.96	25.17	21.50
Gross expense per acre.		12.58	12.35	13.90	10.20
Net earnings per acre		17.86	24.61	11.27	11.30
<u>Investments per acre--total</u>	\$	\$ 188.73	\$ 182.79	\$ 198.97	\$ 115.94
Land.		124.78	122.06	125.99	68.99
Farm improvements		23.88	20.32	29.34	17.17
(Limestone and rock phosphate) ^{a/}	()	(.91)	(.73)	(1.13)	(.50)
Operating capital		40.07	40.41	43.64	29.78
<u>Selected items of expense per acre</u>					
Farm improvements	\$	\$ 1.38	\$ 1.27	\$ 1.72	\$.95
(Limestone and rock phosphate) ^{a/}	()	(.22)	(.18)	(.29)	(.16)
Machinery and equipment		2.88	2.61	3.25	2.27
Automobile. . . . .		.48	.45	.53	.39
Hired and home labor.		4.84	4.93	5.23	4.37
Miscellaneous expense . . . . .		.22	.22	.23	.18
Crop expense. . . . .		.92	.91	1.01	.66
Livestock expense . . . . .		.33	.46	.32	.29
Taxes		1.47	1.45	1.51	1.05
Feed, grain, livestock decreases. . . . .		.06	.05	.10	.04

a/ The limestone and rock phosphate are included with the farm improvements. The investments and expenses per acre of farm buildings and fences is the difference between the investments and expenses per acre of farm improvements and of limestone and phosphate.

Organization of the farm business. The size of farm had little to do with the rate earned on the investment, as the average size of the 109 most profitable farms was approximately the same as the size of the 109 least profitable farms and as there were about as many of the most profitable farms as of the least profitable ones in each size-of-farm group (Table 4 and Chart, page 10).

About the same amount of livestock was kept on the 109 most profitable and the 109 least profitable farms, as is shown by the value of feed fed per acre, \$12.48 and \$12.02 on the respective groups of farms (Table 3, page 4). Moreover, high- and low-earning farms were found in approximately equal numbers in all types of farms (Chart, page 11).

Farm expenses. The individual farmer may well study his expenses per acre as shown in Table 4 to learn whether his expenses are unduly high in one or more items. However, in studying expenses, especially for machinery and labor, he may wisely take into account the returns for such expenses as shown by the crop yields (Table 3, page 4), by the returns for feed fed to livestock (Tables 7, 8, 9, and 10 on pages 15, 16, 17, and 19), and by the conditions in which the farm and farmstead are kept.

DEFINITIONS OF SOME WORDS AND EXPRESSIONS USED IN THIS REPORT

Cash balance. Page 2. The cash balance is the difference between the cash farm income and the cash farm expense. It is what the farm business furnishes during the calendar year for family living, savings, life insurance, and payments of old accounts, interest, and principle of debts.

Returns for capital and management. Page 3. The returns for capital and management are the difference between the total farm expense and the total receipts and net increases on the accrual, or inventory, basis. The total farm expense includes the total expenses and net decreases, including the family and operator's labor and depreciation on improvements and machinery.

Rate earned on investment. Page 3. The rate earned on investment is the return for capital and management for each \$100 invested in land, operating capital, and improvements (not including the residence).

Crop yield index. Page 4. The crop yield index for any farm, as used in this report, is the percentage that the yield of all grain crops on the farm is of the average yield on all farms.

Crop system rating. See page 13.

Days of productive work. See page 12.

Cattle efficiency index. Pages 4, 14, 16, and 17. The cattle efficiency index for any farm is the percentage that the return from cattle on the farm is of what the return would have been if the cattle had been fed with the average return per \$100 feed for that class of cattle.

Sheep, hog, and poultry efficiency indexes. Pages 4, 14, 15, and 19. These numbers are calculated the same as are those for cattle.

All livestock efficiency index. Pages 4 and 14. The livestock efficiency index for any farm is the percentage that the return from all livestock is of what the return would have been if each class of livestock had been fed with the average return for \$100 feed.

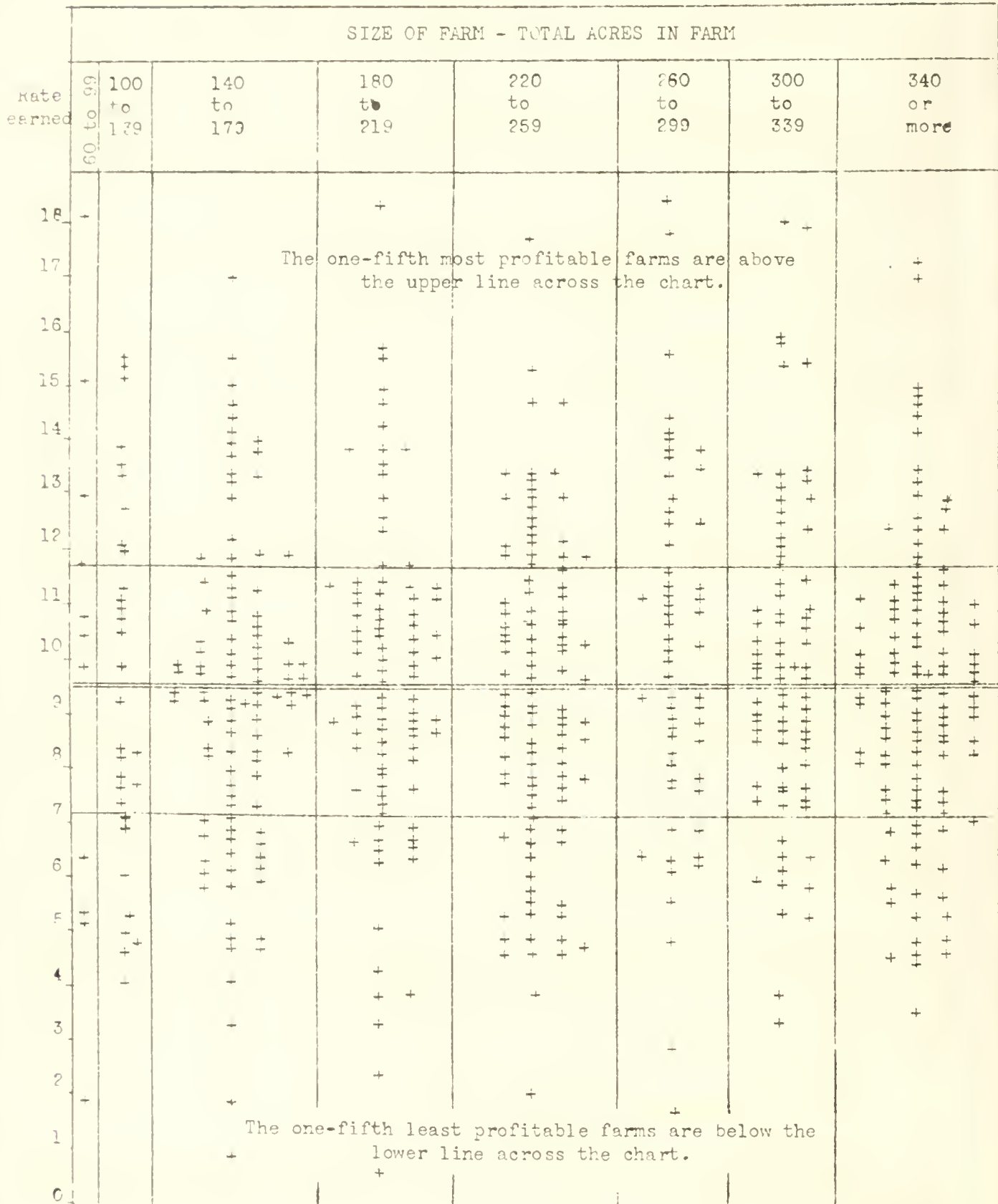
Price index. Pages 4 and 20. The price index for any farm is the percentage that the total value of the sales of grain, livestock, and livestock products on that farm is of the total value if each product had been sold at the average price of that product on all farms.

Labor accomplishment index. Pages 4 and 21. The labor accomplishment index for any farm is the percentage that the average labor cost on farms having the same amount of work on crops and livestock as that farm is of the labor cost on that farm. It is really a measure of the number of acres worked and the amount of livestock handled per man on farms having about the same amount of work on crops and livestock.

Horse and machinery accomplishment index. Pages 4 and 21. These numbers are calculated the same as are those for labor.

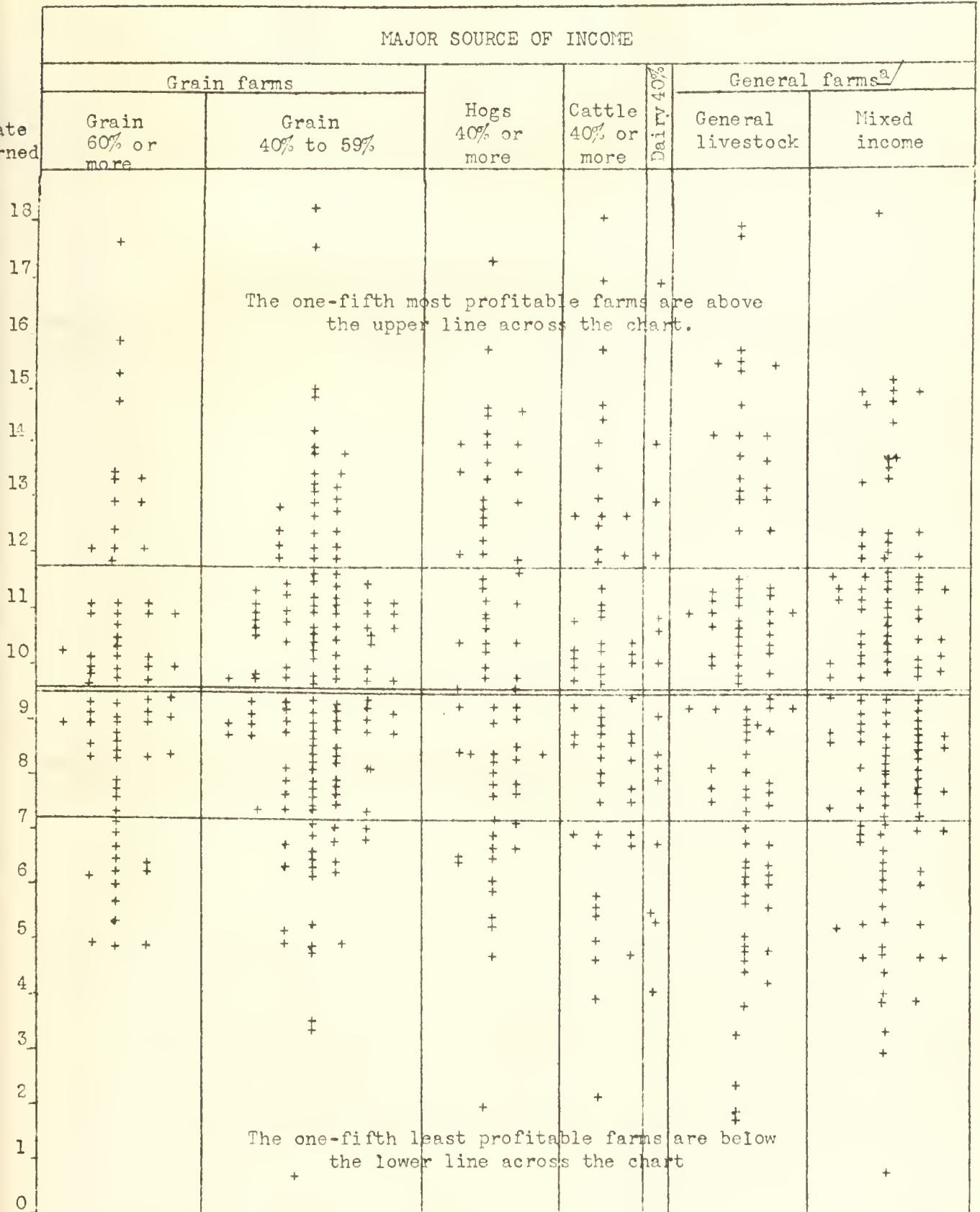
Feed charge (and returns) per 100 pounds of beef or 1000 pounds of milk. Experiment station data show that it requires approximately the same value of feed to produce 100 pounds of beef as to produce 1000 pounds of milk. Consequently, in order to show the relative cost of and returns for cattle products on farms in which the relative amounts of beef and milk vary greatly, this factor has been found useful.

Size of Farm As Related to Rate Earned on Investment



Each sign (+) represents a farm as farms were distributed from the bottom to the top of the chart according to the rate earned on investment.

Source of Farm Income as Related to Rate Earned on Investment



a/ General farms have less than 40% of their income from any one source or have 40% or more from each of two sources. General livestock farms have 60% or more of their income from productive livestock, and mixed income farms have less than 60% of income from productive livestock

Standards for calculating the crop system rating. A crop system rating was calculated for each farm by multiplying the acres of each crop on tillable land by the factors given in Table 5, and then by dividing the total rating for all crops by the total acres of tillable land. The ratings obtained on different farms are approximately in proportion to the average net earnings per acre to be expected on the tillable land if other factors than the crop system were equal. The crop ratings were made up from various experimental data. No credit was given to legumes for soil-improvement value.

Table 5.--Standards for Calculating a Crop System Rating
and for Calculating Days of Productive Labor

Kind of crop	Crop system rating	Days of labor required per acre
Corn	8	.95
Oats (threshed basis)	4	.67
Winter wheat (combined)	7	.37
Spring wheat (threshed)	6	.67
Barley (threshed)	6	.67
Soybeans for grain (combined)	7	.42
Alfalfa	10	1.30
Clover	5	.92
Timothy	4	.92
Soybean hay	5	1.50
Sweet clover	7	--
Bluegrass pasture	5	--
Truck crops	10	10.00
Sweet corn	8	1.40

Kind of livestock	Days required
Cattle per animal unit (not cows milked)	1.50
Cows milked per cow	11.00
Hogs per 100 pounds produced	.26
Sheep per animal unit	3.00
Hens per 100 head	29.00

Standards for calculating days of productive labor. The standard days of man. labor required for the production of crops and livestock, as shown in Table 5, are based on many years of complete cost studies conducted by the Department of Agricultural Economics. Estimates for uncommon crops were made by applying the same figure used for similar common crops. These standard requirements were applied to the acres of crops and amounts of livestock on each farm in order to calculate the total days of productive work for the farm.

Table 6.--Crop System Rating and Percent of Tillable Land in Different Crops

Items	Your farm	Higher-valued-land farms			70 lower-valued farms
		All 545 farms	109 with highest earnings	109 with lowest earnings	
Crop system rating		66.2	66.7	65.2	66.1
<u>Percent of tillable land in:</u>					
Grain crops--total		67.9	69.4	66.7	60.7
Corn--includes silage corn		38.6	39.7	37.5	34.2
Oats		17.7	17.7	18.5	13.1
Wheat		2.8	2.9	2.8	6.1
Barley		1.3	1.0	2.0	1.0
Soybeans		7.4	7.8	5.7	5.6
Miscellaneous . . . . .		.1	.3	.2	.7
Hay and pasture crops--total		25.2	24.8	25.6	28.0
Bluegrass		2.0	2.2	2.6	2.5
Timothy . . . . .		.9	.5	1.0	1.9
Clover and mixed		6.1	7.1	6.2	6.9
Alfalfa		5.2	5.1	4.6	5.9
Sweet clover		8.1	7.4	8.0	6.1
Soybeans		1.3	1.0	1.4	1.8
Miscellaneous		1.6	1.5	1.8	2.9
Other crops--total ^{a/}		6.9	5.8	7.7	11.3
All biennial and perennial legumes		21.1	21.6	20.9	22.6
All annual legumes		9.8	10.1	8.0	9.6
Crops after first year sweet clover		4.0	5.1	3.6	3.5

a/ Other crops include clipped oats, soybeans plowed under, and clovers and timothy cut for seed, canning and truck crops, and other miscellaneous crops.

The crop system. The percent of tillable land occupied by high- or low-net-income crops is an important factor affecting net farm incomes. The crop system rating used in this report indicates the relative net income value of all crops grown on tillable land. Although the crop system rating of the 109 farms with highest earnings differed very little from that of the 109 farms with lowest earnings, individual farms showed marked differences. This fact is brought out in the Farm Efficiency Chart on page 5, where one-fifth of the higher-valued-land farms had crop system ratings of 69.5 to 79.4 while another one-fifth had ratings of only 54.5 to 62.6.

Of the 175 farms in the Farm Bureau Farm Management Service in Livingston, McLean, Tazewell, and Woodford counties during 1936, 1937, and 1938, the 35 farms with the highest crop system rating had more income, by \$438 per farm per year, than did the 35 farms with the lowest rating. Many farmers fail to realize on the high income value of certain legume crops because they neglect to utilize these crops fully, either as seed-producing crops or as feed for livestock.

Efficiency of Livestock Enterprises

On livestock farms, the efficiency with which the livestock is produced or purchased, fed, and marketed is as important in making the net farm income high or low as are all the other factors combined. (See Bulletin 444, "Farm Practices and Their Effects on Farm Earnings," page 554.)^{1/}

Since about 60 to 80 percent of all costs of producing livestock is for the feed, the returns from livestock for \$100 feed fed is the most satisfactory single measure of efficiency for each class of livestock. The average returns per \$100 feed fed to different classes of livestock and the average prices received for stock sold were as follows:

	Number of herds	Returns per \$100 feed	Price received per 100 pounds sold
1. Beef cow herds.....	41	\$ 146	\$ 9.03
2. Dairy cow herds.....	166	204	7.32
3. Dual purpose cow herds.....	30	162	7.57
4. Beef cow herds and dairy cow herds...	20	167	8.22
5. Feeders bought.....	96	131	9.57
6. Beef cow herds and feeders bought...	52	143	9.34
7. Dairy cow herds and feeders bought...	80	151	9.00
8. Dual purpose herds and feeders bought	7	129	8.99
9. Beef herds, dairy herds, and feeders bought.....	17	150	9.36
1. Native flocks of sheep.....	55	136	9.24
2. Feeder lambs bought.....	41	136	8.47
3. Native flocks and feeder lambs bought	18	133	8.35
Hogs.....	474	144	6.38
Poultry.....	247	195	--

When calculations were made for the value of feed fed, grain was charged to livestock at average farm prices for Illinois, reported by the Illinois Cooperative Crop Reporting Service as follows:

	<u>Jan. to Aug.</u>	<u>Sept. to Dec.</u>
Corn.....	\$.41	\$.46
Oats.....	.26	.31
Wheat.....	.62	.79
Barley.....	.40	.44
Soybeans.....	.72	.79
Rye.....	.38	.48

Hay and silage were charged at inventory prices as determined on each farm. Pasture was charged at five cents per day per animal unit. An animal unit is considered as one mature horse or cow or the equivalent of young animals.

(continued on page 18)

^{1/} Bulletin 444 is based on records kept by cooperators in the Farm Bureau Farm Management Service during the ten years 1925-1934.

Table 7.--Sheep Enterprise^{a/}

Items	Your flock	Average of all flocks	Average of one-third best	Average of one-third poorest
<u>Native flocks of sheep</u>				
Number of flocks		55	18	18
Total feed to sheep	\$	\$ 167	\$ 124	\$ 195
Total returns from sheep		227	254	170
Total returns at average rate		227	169	265
Sheep efficiency index		100	150	64
Returns per \$100 feed	\$	\$ 136	\$ 205	\$ 87
Pounds of mutton and wool produced		2574	2538	2556
Returns per 100 lb. produced	\$	\$ 8.83	\$ 9.99	\$ 6.64
Feed charge per 100 lb. produced		6.47	4.88	7.65
Price per 100 lb. sold		9.24	10.22	6.58
<u>Percent of feed value that was:</u>				
Grain		23.0	16.7	25.6
Protein supplement . . . . .		.3	.0	.3
Salt and minerals . . . . .		.8	.5	.1
<u>Total concentrates</u>		<u>24.1</u>	<u>17.2</u>	<u>26.0</u>
Hay		23.8	22.8	29.6
Silage		1.3	2.7	.2
Pasture		50.8	57.3	44.2
<u>Total roughages</u>		<u>75.9</u>	<u>82.8</u>	<u>74.0</u>
<u>Feeder lambs bought</u>				
Number of flocks		41	14	14
Total feed to sheep	\$	\$ 749	\$ 530	\$ 1046
Total returns from sheep		1020	1097	962
Total returns at average rate		1020	721	1423
Sheep efficiency index		100	152	68
Returns per \$100 feed	\$	\$ 136	\$ 207	\$ 92
Pounds of mutton and wool produced		12015	10755	13817
Returns per 100 lb. produced	\$	\$ 8.49	\$ 10.20	\$ 6.96
Feed charge per 100 lb. produced		6.24	4.93	7.57
Price per 100 lb. bought		8.13	8.00	8.27
Price per 100 lb. sold		8.47	8.64	8.41
<u>Percent of feed value that was:</u>				
Grain		63.4	57.3	63.5
Protein supplement		4.3	5.7	4.3
Salt and minerals		1.9	2.8	1.9
<u>Total concentrates</u>		<u>69.6</u>	<u>65.8</u>	<u>69.7</u>
Hay		19.0	19.3	21.9
Silage . . . . .		.2	.0	.3
Pasture		11.2	14.9	8.1
<u>Total roughages</u>		<u>30.4</u>	<u>34.2</u>	<u>30.3</u>

a/ Farms were divided into groups according to the returns per \$100 feed fed to sheep. Only farms having three or more animal units in sheep were used in this comparison.

Table 8.--Cattle Enterprises^{a/}

Items	Your herd	Dairy herds			Dual purpose herds		
		Average of all herds	One-third best	One-third poorest	Average of all herds	One-third best	One-third poorest
Number of herds		166	55	55	30	10	10
Number of cows in herd		13.3	13.9	11.9	10.3	9.3	10.9
Number of cows milked		11.5	12.2	9.8	6.2	6.0	6.2
Total animal units in herd		18.4	18.5	16.9	15.5	13.4	18.3
Percent of cattle units milked		62.5	66.3	58.1	39.6	44.8	33.8
Total feed to cattle	\$	830	790	821	\$ 601	\$ 470	\$ 746
Total returns from cattle		1690	2151	1208	972	1028	890
Total returns at average rate		1690	1612	1675	972	761	1209
Cattle efficiency index		100	133	72	100	135	74
Returns per \$100 feed	\$	204	272	147	\$ 162	\$ 219	\$ 119
Total pounds of beef produced		6011	5677	5937	7472	7474	7228
Total pounds of milk produced		85925	98992	65500	37718	37195	34914
Pounds of beef per cow in herd		452	407	497	724	808	666
Pounds of milk per cow in herd		6460	7103	5487	3656	4021	3218
Pounds of milk per cow milked		7460	8088	6684	6123	6209	5650
Price paid per 100 lb. cattle bought	\$	10.07	12.54	9.08	\$ 8.56	\$ 7.29	\$ 11.32
Price received per 100 lb. cattle sold		7.32	7.48	7.14	7.57	7.73	7.28
Returns per 100 lb. milk produced		1.49	1.74	1.30	1.12	1.31	1.15
Feed charge per 100 lb. beef or 1000 lb. milk		5.68	5.07	6.57	5.35	4.20	6.96
Returns per 100 lb. beef or 1000 lb. milk		11.57	13.81	9.67	8.64	9.18	8.31
Percent of feed value that was:							
Grain		31.6	32.1	32.1	38.8	37.0	37.4
Protein supplement		8.0	9.4	6.3	2.7	3.2	3.6
Salt and minerals . . . . .		.8	1.0	.8	.8	.8	.6
Total concentrates		40.4	42.5	39.2	42.3	41.0	41.6
Hay		24.9	25.0	24.5	31.1	30.9	33.2
Silage		15.7	13.1	17.9	.0	.0	.0
Pasture		19.0	19.4	18.4	26.6	28.1	25.2
Total roughages		59.6	57.5	60.8	57.7	59.0	58.4

^{a/} Farms were grouped according to the total returns from cattle per \$100 feed fed. Only farms having five or more

Items	Your herd	Feeder cattle bought			Beef cow herds		
		Average of all herds	One-third best	One-third poorest	Average of all herds	One-third best	One-third poorest
Number of herds		96	32	32	41	14	14
Number of cows in herd		3.4	3.2	3.5	18.6	18.2	15.2
Number of cows milked		2.1	2.0	2.2	2.5	2.4	2.6
Total animal units in herd		55.4	41.0	67.4	28.0	28.3	24.8
Percent of cattle units milked		3.8	4.9	3.3	8.9	8.4	10.4
Total feed to cattle	\$	\$3295	\$2200	\$4239	\$ 998	\$ 937	\$ 991
Total returns from cattle		4312	3613	4670	1460	1697	1079
Total returns at average rate		4312	2882	5553	1460	1368	1447
Cattle efficiency index		100	125	84	100	124	75
Returns per \$100 feed	\$	\$ 131	\$ 164	\$ 110	\$ 146	\$ 181	\$ 109
Total pounds of beef produced		38972	30532	43093	14362	15704	11916
Total pounds of milk produced		13680	12575	14330	14551	14060	16324
Pounds of beef per cow in herd		--	--	--	771	864	785
Pounds of milk per cow in herd		4071	3937	4139	781	773	1075
Pounds of milk per cow milked		6419	6220	6505	5826	5911	6331
Price paid per 100 lb. cattle bought	\$	\$ 8.88	\$ 8.85	\$ 8.79	\$ 8.58	\$ 10.27	\$ 6.93
Price received per 100 lb. cattle sold		9.57	9.75	9.40	9.03	9.32	7.93
Returns per 100 lb. milk produced		1.31	1.32	1.29	1.17	1.24	1.07
Feed charge per 100 lb. beef or 1000 lb. milk		8.17	6.92	9.52	6.31	5.47	7.31
Returns per 100 lb. beef or 1000 lb. milk		10.69	11.36	10.49	9.23	9.92	7.97
Percent of feed value that was:							
Grain		62.1	64.2	60.0	38.8	37.4	40.8
Protein supplement		13.0	11.8	15.1	3.8	4.7	1.7
Salt and minerals . . . . .		.6	.7	.4	.5	.6	.5
Total concentrates		75.7	76.7	75.5	43.1	42.7	43.0
Hay		9.1	10.3	9.4	20.6	16.7	23.4
Silage		9.8	6.0	10.7	6.6	9.4	7.4
Pasture		5.4	7.0	4.4	29.7	31.2	26.2
Total roughages		24.3	23.3	24.5	56.9	57.3	57.0

(Continued from page 14)

Sheep. Only farms having three or more animal units in sheep and keeping complete records were used in the comparisons shown in Table 7, page 15. The average native flock paid well for the feed at the prices charged; especially since more than 75 percent of their feed consisted of hay and pasture which have little or no market value. Feeder sheep paid a good return of \$136 for each \$100 of feed fed.

Cattle. Only farms having five or more animal units in cattle and keeping complete records were used in the comparisons shown in Table 8, pages 16 and 17. The very wide spread in returns per \$100 feed between the one-third best and one-third poorest herds is very apparent for each class of cattle.

Dairy herds returned an average of \$204 for each \$100 feed fed. Relatively low feed costs, good returns for dairy products, and high production per cow were important in causing the difference of \$272 per \$100 feed for the 55 most profitable herds and only \$147 per \$100 feed for the 55 least profitable herds (Table 8, page 16).

Feeder cattle gains appeared to be more dependent on low feed costs per 100 pounds gain than on the quality of cattle fed and the spread between buying and selling prices. The 32 most profitable herds, as compared with the 32 least profitable, had \$2.60 lower feed charges per 100 pounds, but only \$.29 more spread (Table 8, page 17).

Dual purpose and beef cow herds paid well for their feed in 1939, even when they were charged with hay at market value and pasture at \$.05 per day--\$1.50 per month. The 10 most profitable dual purpose herds returned a very nice profit as compared with that of the 10 least profitable herds, due partly to a higher production of both beef and milk per cow in the herd but due more to the very low feed costs of only \$4.20 per 100 pounds of beef or 1000 pounds of milk (Table 8, page 16).

Improving the quality of the breeding stock will increase the returns for feed fed to many dual purpose and beef cow herds.

Hogs. Only farms producing 10,000 pounds or more of pork were used in the comparisons shown in Table 9. Hogs proved very profitable in 1939 because of low feed requirements. One-third of the farms reported an average feed cost of only \$3.14 per 100 pounds of pork produced, but another one-third reported feed costs of \$4.40 per 100 pounds. This difference of \$1.26 per 100 pounds of pork produced was much more important than was the difference of \$.29 per 100 pounds in the average prices received.

Poultry. Flocks having 50 or more hens were used in the comparisons in Table 10. Low egg production per hen and high feed costs are evidently responsible for much of the low returns per \$100 feed fed on the farms having the poorest flocks.

Table 9.--Hog Enterprise ^{a/}

Items	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of farms		474	158	158
Total feed to hogs	\$	\$ 1471	\$ 1122	\$ 1656
Total returns from hogs		2112	2037	1912
Total returns at average rate		2112	1616	2385
Hog efficiency index		100	126	80
Returns per \$100 feed	\$	\$ 144	\$ 181	\$ 116
Total pounds of pork produced		38878	35702	37641
Returns per 100 lb. pork produced	\$	\$ 5.43	\$ 5.71	\$ 5.08
Feed cost per 100 lb. pork produced		3.78	3.14	4.40
Pigs farrowed per litter (206 farms)		7.8	7.8	7.8
Pigs weaned per litter		6.2	6.2	5.9
Pounds feed per 100 lb. pork		402	335	470
Pounds protein feed per 100 lb. feed		8.6	8.5	8.0
<u>Percent of feed value that was:</u>				
Grain		76.1	76.1	77.3
Protein supplement		20.4	20.0	19.4
Salt and minerals . . . . .		.9	.9	.9
Hay and pasture		2.6	3.0	2.4
Price received per 100 lb. sold	\$	\$ 6.38	\$ 6.53	\$ 6.24
Percent of sales for year on hand Jan. 1		42.3	40.0	46.0

a/ Farms were divided into groups according to the returns per \$100 feed fed to hogs. Only farms producing 10,000 pounds or more per farm were used in this comparison.

Table 10.--Poultry Enterprise ^{a/}

Items	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of farms		247	82	82
Total feed to poultry	\$	\$ 222	\$ 168	\$ 193
Total returns from poultry		432	440	269
Total returns at average rate		432	328	376
Poultry efficiency index		100	134	72
Returns per \$100 feed	\$	\$ 195	\$ 261	\$ 139
Average number of hens kept		135	132	124
Average eggs produced per hen		134	150	117
Total returns per hen	\$	\$ 3.20	\$ 3.32	\$ 2.17
Average price per dozen for eggs . . . . .		.18	.19	.17
Percent eggs laid in Oct., Nov., Dec.		23.3	25.8	18.3
Feed charge per 100 lb. feed	\$	\$ 1.34	\$ 1.15	\$ 1.18

a/ Farms were divided into groups according to the returns per \$100 feed fed to poultry. Only flocks having 50 or more hens were used in this comparison.

Table 11.--Amounts and Prices of Some Products Sold

Items	Your farm	Higher-valued-land farms			70
		All 545 farms	109 with highest earnings	109 with lowest earnings	lower-valued farms
<u>Amounts of products sold</u>					
Corn - bushels		2682	2521	2426	1062
Oats - bushels		781	786	789	272
Wheat - bushels		111	110	111	166
Soybeans - bushels		456	463	319	247
Beef - pounds		33841	34823	34947	24742
Pork - pounds		30251	36683	25510	28985
Mutton and wool - pounds		5700	3848	3818	4918
Milk - pounds produced		40889	35725	33900	65059
Eggs - dozens		898	1104	823	763
<u>Prices received</u>					
Corn - per bushel	\$	\$.52	\$.52	\$.51	\$.50
Oats - per bushel . . . . .		.27	.27	.27	.29
Wheat - per bushel . . . . .		.68	.68	.71	.60
Soybeans - per bushel . . . . .		.79	.79	.77	.83
Beef - per 100 pounds ^{a/}		9.28	9.60	9.48	9.31
Pork - per 100 pounds		6.40	6.53	6.20	6.32
Mutton and wool - per 100 pounds ^{a/}		8.42	8.46	8.51	8.31
Milk - per 100 pounds		1.41	1.44	1.38	1.37
Eggs - per dozen . . . . .		.18	.19	.18	.18
Value of above products	\$	\$8338	\$8754	\$7614	\$6485
Value if sold at average prices ^{a/}		8338	8578	7622	6485
Percent of average prices received		100	102	100	100

^{a/} The average selling prices of beef and mutton from the classes of cattle and sheep produced on the farm were used in calculating the value of products sold (page 14).

Influence of price on farm earnings. Price of products sold is, of course, one of the important factors that affect farm earnings. However, it is not as important as other factors in causing the great differences in earnings on farms of the same type during any one year or period of years. In individual cases, a specially good or poor price for the major products sold may be a very influential factor in determining the net farm income. Usually, however, each cooperator will find that production costs are much more effective in making incomes high or low than are the prices of products sold. If his prices are consistently low from year to year, each cooperator may well study the reasons for such low prices.

Table 12.--Labor and Power and Machinery Costs

Items	Your farm	Higher-valued-land farms			70
		All 545 farms	109 with highest earnings	109 with lowest earnings	lower-valued farms
Total days of productive work		388.2	395.2	363.1	398.3
Days on crops		164.2	156.9	157.2	148.1
Days on livestock		224.0	238.3	205.9	250.2
Labor					
Average number of men for 12 mos.		1.99	1.92	2.01	1.99
Days of productive work per man		195.1	205.8	180.6	200.2
Labor charge per month of labor	\$	\$ 53.44	\$ 53.00	\$ 54.81	\$ 53.95
Total labor charge		1272	1219	1321	1284
Labor charge at normal rate		1272	1279	1209	1299
Labor accomplishment index		100.0	104.9	91.5	101.2
Power and machinery					
Average number of work horses ,		3.1	3.0	3.4	3.1
Percent of farms with tractors		98.7	100.0	94.5	97.1
Percent of farms with trucks		53.0	54.1	47.7	45.7
Feed cost per workable horse	\$	\$ 41.29	\$ 39.67	\$ 41.76	\$ 42.58
Total horse and machinery cost		1047	914	1136	948
Total cost at normal rate		1145	1110	1100	1090
Horse and machinery accomplishment index		109.4	121.4	96.8	115.0
Expenses and net decreases					
Auto--only farm share	\$	\$ 128	\$ 114	\$ 137	\$ 118
Truck--only farms with trucks		120	85	116	157
Tractor--only farms with tractors		288	247	334	270
Other machinery--all farms		427	375	466	351
Income from use of machinery ^{a/}	\$	\$ 130	\$ 159	\$ 75	\$ 118

^{a/} This figure includes the automobile.

Labor costs. Labor costs were slightly lower on the 109 farms with the higher valued land and with the highest earnings than on the average of farms with the same amount of work on crops and livestock. Despite lower labor costs, the most profitable farms produced better-than-average yields of crops and had better-than-average returns from feed fed to livestock (Table 3, page 4). On the other hand, labor costs were \$126 higher per farm on the 109 least profitable farms with the higher valued land even though they had low crop yields and low returns from feed fed to livestock.

Power and machinery costs. Low power and machinery costs for the amount of work done increased the net farm earnings on many farms. The average cost of \$914 per farm on the 109 most profitable farms with the higher valued land was \$169 less than was the average cost on farms having about the same amount of work on crops and livestock.

Anyone who finds his power and machinery costs particularly high may locate the source of such high costs in his auto, truck, tractor, or other machinery accounts by comparing his record with that of the average of farms similar to his. In making such a comparison, the size of farm and the amount of tillable land need to be considered.

Table 13.--Size of Higher-Valued-Land Farms^a

Items	Your farm	60-99 acres per farm	100-139 acres per farm	140-179 acres per farm	180-219 acres per farm	220-259 acres per farm	260-299 acres per farm	300-339 acres per farm	340-419 acres per farm	420 or more acres per farm
Number of farms.		10	27	97	85	90	59	70	52	55
Total acres in average-sized farm.		79.1	123.6	159.1	199.1	239.5	279.7	319.0	373.2	557.8
Total days of productive work.		198.6	235.0	296.1	322.3	363.1	390.7	447.6	476.6	641.4
Average number of men for 12 months.		1.16	1.26	1.52	1.67	1.86	2.00	2.28	2.42	3.21
Rate earned on investment.		8.87	9.29	9.44	9.55	9.37	10.00	9.73	9.28	9.14
Operator's labor and management earnings	\$	1118	1526	1979	2270	2517	3074	3420	3434	4664
Crop system rating		68.2	66.2	66.0	65.1	65.7	66.5	66.1	66.2	67.2
Percent of tillable land in biennial and perennial legumes	\$	26.6	23.8	22.3	23.7	20.9	23.6	20.2	20.2	18.6
Feed per acre.	\$	14.27	11.79	14.60	11.99	9.97	10.76	11.45	10.31	10.51
Crop yield index		108.2	98.0	103.4	101.2	99.8	102.7	102.8	101.2	101.2
All livestock efficiency index		106.9	109.7	98.2	102.8	101.8	103.7	102.1	97.7	95.2
Price index.		100.5	101.6	100.6	100.2	100.0	99.5	101.1	100.4	99.4
Labor cost per day of productive work. Horse and machinery cost per day of productive work.	\$	3.48	3.29	3.17	3.24	3.19	3.34	3.28	3.34	3.43
Tenant farms only - Number		4	16	55	54	44	26	37	17	18
Tenant's capital	\$	3457	4148	5366	6336	6860	7781	8989	10428	14871
Tenant's earnings.		1253	1889	1995	2488	2640	3082	3633	3754	5351
Landlord's capital		13325	18854	26485	32045	39181	41133	51483	56486	86620
Landlord's earnings.		880	1031	1611	1850	2462	2475	3089	3622	5599
Landlord's rate earned		6.60	5.47	6.08	5.77	6.28	6.02	5.00	6.41	6.46

^a The distribution of all farms according to size and the rate earned on the investment is shown on the chart on page 10.

Table 14.---Source of Farm Income on Higher-Valued-Land Farms^{a/}

Items	Your farm	Grain farms		Hog farms	Cattle farms	Dairy farms	General farms	
		60% or more grain	40% to 59% grain				General livestock	Mixed income
Number of farms		69	148	61	56	10	75	126
Percent of total earnings from								
Horse income . . . . .		.1	.1	.1	.1	.1	.1	.2
Productive livestock income:								
Cattle income		6.2	10.9	16.8	54.9	9.4	23.7	15.8
Dairy sales income		2.0	4.8	3.1	1.1	52.9	8.1	7.4
Hog income		5.6	13.3	53.3	18.1	9.4	26.2	20.5
Sheep income . . . . .		.3	1.1	.6	1.5	.2	5.1	2.4
Poultry and egg income		1.8	2.4	2.8	1.9	3.5	7.2	3.6
Total productive livestock income		15.9	32.5	76.6	77.5	75.4	70.3	49.7
Farm products used in household .		2.6	3.5	3.5	2.4	3.6	3.7	4.0
Feed and grain		69.1	49.6	8.8	8.4	11.5	13.1	30.8
Labor, off farm and miscellaneous		.9	1.0	.9	.7	.6	.7	1.3
Soil conservation payments		11.4	13.3	10.1	10.9	8.8	12.1	14.0
Rate earned on total investment . .	%	9.47%	9.68%	10.11%	9.20%	9.73%	9.39%	9.09%
Size of farm--total acres		324.5	277.0	228.0	347.8	177.1	246.2	237.6
Total days of productive work . . .		310.2	342.9	440.6	546.3	476.4	432.1	355.4
Crop system rating		66.8	66.1	66.1	66.6	70.5	65.8	65.6
Percent of tillable land in								
biennial and perennial legumes . .		15.8	20.1	24.4	21.4	29.3	23.4	23.3
Feed fed per acre--value	\$	3.29	6.65	18.89	21.40	14.11	15.67	10.32
Crop yield index--all grain crops .		99.7	99.7	105.2	109.8	109.5	100.9	99.4
All livestock efficiency index . . .		99.9	101.0	101.1	98.3	127.5	99.9	98.9
Price index		97.6	97.9	100.5	101.3	123.3	102.2	99.0
Labor cost per day of prod. work . .		3.94	3.43	2.87	3.26	3.14	3.08	3.23
Horse and mach'y cost per day of work		3.74	2.99	2.16	2.81	2.01	2.14	2.59
Tenant farms only--Number		36	75	28	17	2	45	68
Tenant's capital	\$	6719	7057	7237	12841	5723	7744	6575
Tenant's earnings		2930	2789	2643	4211	2691	2954	2524
Lendlord's capital		45022	39440	33390	59954	34715	58079	35939
Lendlord's earnings		2914	2465	2265	3381	2559	2175	2121
Lendlord's rate earned	%	6.47%	6.25%	6.78%	5.64%	7.37%	5.71%	5.90%

^{a/} The distribution of all farms according to the source of income and rate earned on investment is shown on the Chart, page 11.

Influence of Price Changes on Illinois Farm Incomes

All feed and grain, livestock, and other farm property on accounting farms must be valued at both the beginning and the end of the year. Prices at inventory time, therefore, have a marked influence on farm earnings. The influence is greatest where large stocks or supplies are on hand at inventory time; for example, a much larger supply of farm products was found on Illinois farms December 31, 1939, than a year earlier. In fact, grain and livestock inventories have been increasing on Illinois farms since the drouth of 1936 as a result of three years of exceptionally high crop yields and the influence of Agricultural Adjustment Programs which have caused farmers to grow more hay and pasture and to store corn on farms under seal. According to estimates made by the Bureau of Agricultural Economics, U.S.D.A., 356 million bushels of corn were on Illinois farms January 1, 1940, as compared with 325 million bushels January 1, 1939.

Livestock numbers on Illinois farms increased sharply in 1939 even though 62 million bushels of 1937 and 1938 corn were placed under seal at the end of the year and 83 million bushels of 1939 corn were sealed by March 31, 1940. The following data indicate the percentage increase in livestock numbers on 2520 accounting farms in Illinois from the beginning to the end of 1939: dairy cows, 2 percent; beef cows, 21 percent; feeder cattle, 17 percent; feeder lambs, 24 percent; brood sows, 4 percent; spring pigs, 38 percent; summer pigs, 23 percent; and fall pigs, 28 percent. Hog numbers have been increasing since 1935 and have now attained record levels; for example, 13.5 sows farrowed per farm on accounting farms in 1939 as contrasted with 9.9 sows farrowed per farm in 1938. The increase in beef cattle numbers is a part of the general up-swing taking place over the entire United States, and it may be expected to continue for several years.

These data indicate that supplies of both feed and livestock were greater at the time the 1939 closing inventory was taken than at any other inventory period in several years, and price changes, therefore, are important in interpreting farm earnings for the state and for farming-type areas in 1939.

Prices of important farm products.--Prices for all crops as well as for beef cattle and sheep were higher at the end of 1939 than they were at the beginning, whereas prices for horses, hogs, and poultry were lower. Most of these price increases occurred during the last four months of the year.

December 15, Illinois Farm Prices

	<u>1938</u>	<u>1939</u>	<u>Increase</u>	<u>Decrease</u>
Corn, bu.	\$.42	\$.47	\$.05	\$ --
Oats, bu.	.24	.35	.11	--
Wheat, bu.	.57	.88	.31	--
Soybeans, bu.	.65	.95	.30	--
Hay, tons	6.20	6.50	.30	--
Horses, hd.	88.00	85.00	--	3.00
Hogs, cwt.	7.00	5.10	--	1.90
Beef cattle, cwt.	7.70	8.30	.60	--
Sheep, cwt.	3.45	3.60	.15	--
Chickens, lb.	.13	.11	--	.02

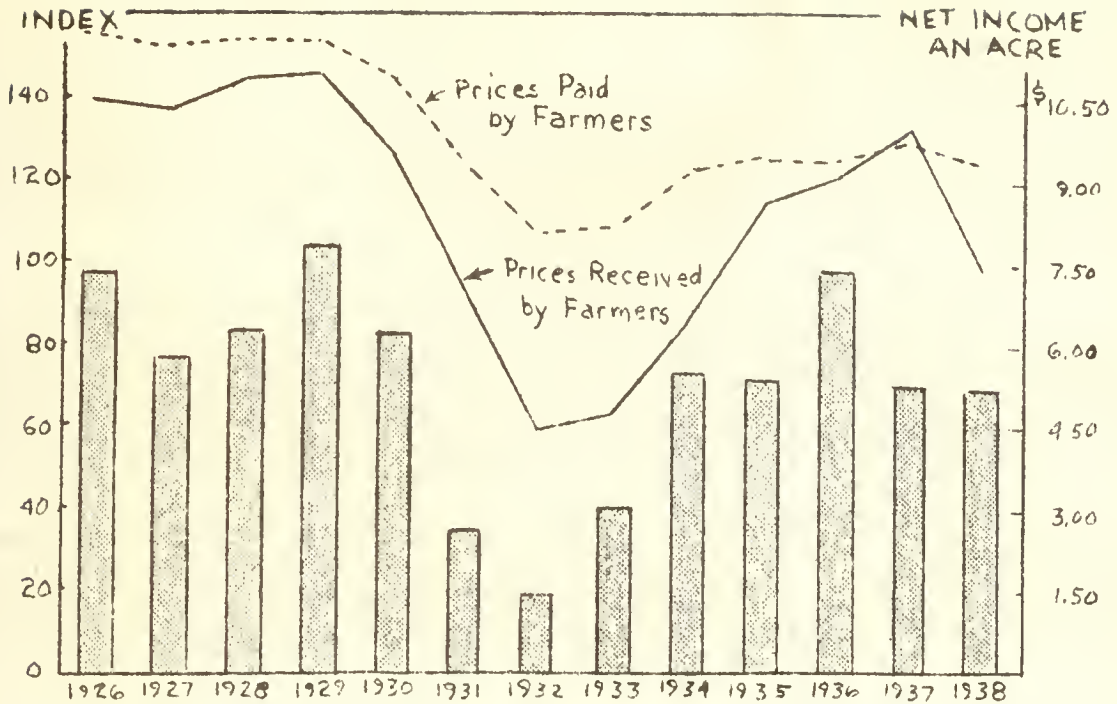


Fig. 1.--Average net cash income an acre (unpaid labor deducted) on Illinois accounting farms, prices paid by farmers in the United States, and prices received by Illinois farmers, 1926-1938.

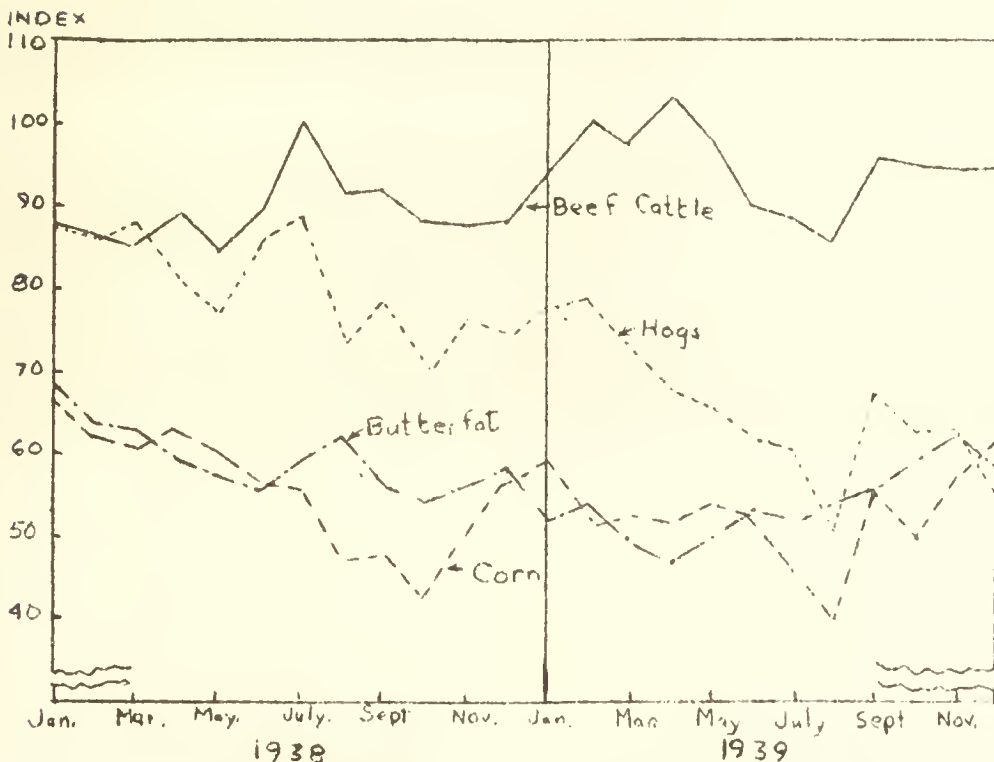


Fig. 2.--Monthly price indexes of the average farm prices of corn, hogs, beef cattle, and butterfat, 1938 and 1939. (1924-1929 = 100)

Farm earnings are influenced by the average price received for farm products during the year as well as by the values at inventory time. Although nearly all commodities were higher in price at the end of the year than at the beginning, prices received for the following commodities averaged lower in 1939 than in 1938 by these amounts: corn, 2 cents per bushel; wheat and soybeans, 1 cent per bushel; hogs, \$1.50 per hundred; butterfat, 2 cents per pound; eggs, 3 cents per dozen; and chickens, 2 cents per pound. The prices for other commodities averaged higher in 1939 than in 1938 by the following amounts: oats, 4 cents per bushel; beef cattle, 50 cents per hundred; lambs, 42 cents per hundred; wool, 4 cents per pound; and apples, 12 cents per bushel.

Variation in earnings between the various type-of-farming areas is influenced by the relative prices of grains, livestock, and livestock products. In 1939 as in 1938 livestock had a price advantage over grain, but the advantage was not as marked as it was in 1938. The prices for meat animals dropped from 116 to 110 percent of the 1910-14 average, grains from 74 to 72 percent, chickens and eggs from 106 to 94 percent, and dairy products from 106 to 104 percent.

The corn-hog ratio also narrowed during the year to the disadvantage of the hog enterprise. The amount of corn equal in value to 100 pounds of hogs dropped from 19 bushels in February to 11 bushels in December (based on farm prices). Unfavorable feeding ratios will discourage expansion in hog numbers in 1940.

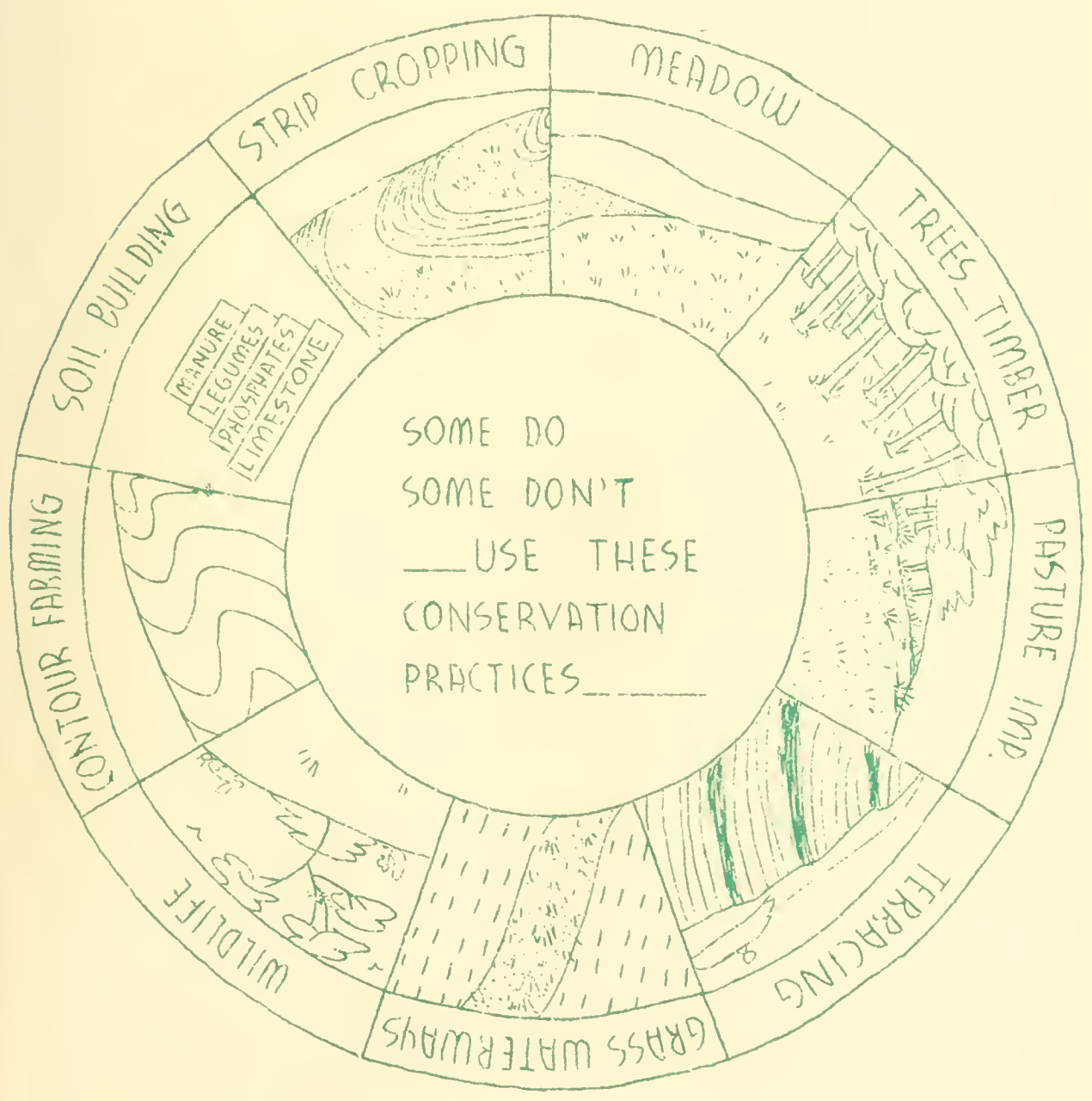
Crop Yields in Illinois, 1939

Crop yields in Illinois in 1939, as in 1938 and 1937, were unusually high. The weighted average yield of corn, oats, wheat, and soybeans was 133 percent of the 10-year average, 1929-1938. Corn contributed more than did any other crop to the high average yields. The yields of the various crops expressed in percentages of the 1929-1938 averages were: corn, 150; soybeans, 129; wheat, 121; and oats, 97.

Crop yields in all counties except Massac were above the 10-year average (1929-1938 = 100), but wide variations in yields occurred between individual counties and groups of counties. Four counties along the Ohio River had crop yield indexes under 105. In contrast to these counties, 31 were over 136. Many of the counties with the highest yields were in two groups, those located in southwestern and east north central Illinois. Crop yield indexes were adversely affected in southeastern Illinois by the wheat crop and in northern Illinois by low oat yields. Fifty-five counties, which were well-distributed over the state, had crop yield indexes from 121 to 135.

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SUMMARY OF FARM ACCOUNT RECORD STUDY ON 90 FARMS
IN EDWARDSVILLE SOIL CONSERVATION AREA,
MADISON AND ST. CLAIR COUNTIES, ILLINOIS, 1939.



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Table of Contents

	Page
Summary-----	1
Introduction-----	4
Comparison of Soil Conservation Cooperating and Noncooperating Farms-----	5
Inventory Changes, Cash Income, and Cash Expenses-----	7
Soil Rating Related to Investments, Receipts, Expenses, Earnings, Land Use, Crop Yields, and Other Factors-----	7
Size of Farm and Soil Rating Related to Land Use and Other Factors	9
Tenure Related to Land Use, Yields, and Other Factors-----	10
Livestock Related to Soil Conservation-----	10
Use of Roughage Related to Livestock Returns-----	11
Dairy Enterprise-----	11
Beef Enterprise-----	12
Sheep Enterprise-----	13
Hog Enterprise-----	13
Poultry Enterprise-----	13
Cost of Producing Milk in Relation to Conservation-----	14
Tables-----	17

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United States Department of Agriculture
Cooperating

June 1940

S U M M A R Y

In drawing conclusions from the information in this report on the Edwardsville Soil Conservation Area, the reader should remember that these data represent results for only one year and that the farm plans of the conservation cooperators have not been in operation for sufficient time to reflect much change in crop yields or to permit the completion of necessary adjustments in the live-stock enterprises. However, the data do exhibit certain trends and facts which serve as indicators and which might be stated as general conclusions.

1. Although the conservation cooperating farms were still in a transition stage, their average incomes were comparable to those on the noncooperating farms. With the better land use and greater emphasis on soil conservation and soil improvement found on the cooperating farms, incomes on these farms should increase in relation to those on the noncooperating farms as time passes and as the farm business becomes adjusted to the increased production of erosion-control and soil-improvement crops. In the meantime, these conservation cooperating farms are maintaining their soil resources as a heritage for future generations.

2. The conservation program entails additional expenses for items such as limestone, phosphate, fertilizer, legume seeds, fencing, terraces, and other necessary means of erosion control and soil improvement. Nevertheless, the total farm expenses in this area average no higher on the conservation cooperating farms than on the noncooperating farms, in large part due to the fact that the conservation cooperating farmers have made an effort to do much of the work in connection with the conservation program during their spare time and without additional outlays and to the fact that they apparently have curtailed expenditures for other items in order to achieve the goal of soil conservation and soil improvement on their farms.

3. On the bases of soil rating, size of farm, and proportion of land tillable, the conservation cooperators have made considerable advancement in the

adjustment of their land use to their soil resources, especially in comparison with the noncooperating farms.

4. A wide variation exists in size of farm and quality of soil resources available on these farms, and in order to have an income sufficient for a good standard of living, the operators of the small, rough land farms must do an especially good job of adjusting their land use to their soil resources and, furthermore, must utilize efficiently the crops grown on the farm.

5. Evidently the operators on farms of medium soil ratings have not recognized their soil-conservation and soil-erosion problems to the extent that farmers on the farms with low soil ratings have, and the former have not adjusted their land use and system of farming accordingly because the net earnings in 1939 were consistently lower on the farms with medium soil ratings than on the farms with low soil ratings.

6. Tenure problems in this area center primarily on the rented-land farms, on the part-owner-operated farms, and on the unrelated-tenant-operated farms. Field renting is common on the part-owner-operated farms; and the field or fields operated in addition to the farm on which the operator resides are cropped unsparingly, are rapidly depleted of their natural resources, and are subject to serious erosion problems. Many of the tenant farmers who are not related to the owner of the farm do not have sufficient equipment to meet the legal regulations to permit them to produce milk for the fluid milk market. As a result their farms tend to be operated as grain farms, and insufficient erosion-resisting crops are grown to control erosion and to maintain or improve soil fertility.

7. In the analysis of the total livestock enterprise, large quantities of good-quality legume and nonlegume roughage were utilized efficiently by livestock on many farms, and earnings on these farms were maintained at a high level.

8. Dairy cattle made more efficient use of roughages in this area than did beef cattle. Dairy cattle are more adaptable, and the dairy enterprise itself results in higher net farm incomes than the beef cattle enterprise. This area is adjacent to a whole milk market; farms are small and soils require the production of large quantities of roughage in order to control erosion and conserve the land.

9. The dairy cost analysis indicates that, by careful selection and culling of the herd, high milk production per cow can be secured on a high roughage ration and that milk can be produced at a relatively low cost, especially from the standpoint of "out-of-pocket" costs. Based on the herds studied, milk was produced more efficiently and at lower costs by the high roughage-consuming herds.

10. More consideration might be given to the use of native flocks of sheep in order to utilize some of the roughages produced as a result of the adoption of the conservation program, particularly on the rougher lands.

11. The products of the well-planned conservation program, that is, good-quality legume hays and legume and nonlegume pastures, can be utilized profitably through well-managed livestock enterprises with the result that soil resources will be protected and desirable farm incomes will follow.

SUMMARY OF FARM ACCOUNT RECORD STUDY ON 90 FARMS
IN EDWARDSVILLE SOIL CONSERVATION AREA,
MADISON AND ST. CLAIR COUNTIES, ILLINOIS, 1939^{1/}

By E. L. Sauer, C. H. Krusa, F. J. Reiss, and H. C. M. Case^{2/}

This report for the year 1939 is the first of a planned series of annual reports based on complete farm account records of farmer cooperators in the Edwardsville Soil Conservation Area.^{3/} These farm account records are from farmers who have signed agreements with the Soil Conservation Service to operate their farms in accordance with a planned program of soil conservation and erosion control and from farmers who are operating farms not under agreement with the Soil Conservation Service.

Madison and St. Clair counties are located in Illinois Type-of-Farming Area 6, which is classified as the wheat, dairy, and poultry section in Illinois Bulletin 403, "Types of Farming in Illinois." Wheat is the major crop, and dairying is the major livestock enterprise. The land in these two counties ranges from level land with no erosion problems to rough rolling land with serious erosion problems. Timber, prairie, and bottomland soils are found on the farms included in this study, but timber soils are predominant.

^{1/} The Department of Agricultural Economics, University of Illinois College of Agriculture, the Madison and St. Clair County Farm Bureaus, the Soil Conservation Service, and the Bureau of Agricultural Economics, United States Department of Agriculture cooperated in this study.

^{2/} T. W. May, farm adviser in Madison county, and B. W. Tillman, farm adviser in St. Clair County, cooperated in the organization and supervision of the farm account record study.

^{3/} These farm account records were kept in the Illinois Farm Account Book under the supervision of C. H. Krusa of the Operations Division of the Soil Conservation Service. The accounts contained a record of the inventory taken at the beginning and end of the year on land, buildings, livestock, machinery, equipment, feed, and grains and a record secured from the farm during the year on receipts, expenditures, land use, crop production, livestock production, feeds used for each class of livestock, and contributions to family living.

The farm account record analysis which follows is primarily statistical, and the data are summarized in tabular form. Detailed conservation survey maps were made of each farm included in the study, and a soil rating was computed for each farm. This soil rating is a composite measure of soil type, percent of slope, and degree of erosion as related to productivity. Its use makes possible a comparison of farms having comparable physical soil resources. Detailed dairy cost account records were secured on 54 of the farms included in this study, and an analysis of these records is included in this report.

Comparison of Soil Conservation Cooperating and Noncooperating Farms

A comparison of 51 conservation cooperating farms with 35 noncooperating farms is made in Tables 1 and 2, pages 17 and 18. Some of the 35 farms not cooperating with the Soil Conservation Service have been following for many years a sound system of farming, including good land use and the use of soil conservation practices, and still others of these 35 farms are located on level land, and, generally speaking, do not have a serious soil-erosion problem. On the other hand, most of the 51 conservation cooperating farms are in a transition stage, and full benefits of the adoption of the conservation plan will not be evident for several years.^{1/}

Generally speaking, investments, receipts, expenses, and earnings were similar on the 51 conservation cooperating farms and the 35 noncooperating farms (Table 1, page 17). The investment in land and buildings was higher on the 51 cooperating farms, but the livestock investment was lower on these farms. The two groups of farms were comparable in size, the 51 cooperating farms averaging 163 acres and the 35 noncooperating farms averaging 161 acres. Soil ratings were about the same for the two groups of farms, the 35 noncooperating farms having a slight advantage (Table 2, page 18). (The soils are rated from 1, the best, to 10, the poorest.)

^{1/} The Soil Conservation plan was initiated on 4 farms in 1935, 11 farms in 1936, 15 farms in 1937, 15 farms in 1938, and 6 farms in 1939.

Land Use: The 51 conservation cooperating farms had a slightly smaller percentage of their land area tillable, a smaller percentage of the tillable land in oats and nonlegume hay and pasture, and a larger percentage of the tillable land in corn, wheat, soybeans, other crops, and legume hay and pasture than did the 35 noncooperators. The 51 conservation cooperators had 33.0 percent of their tillable land in soil-building legumes as compared with 25.8 percent on the farms of the 35 noncooperators (Table 2, page 18). This percentage indicates that the 51 cooperators not only are conserving their present soil resources but also are attempting to build up the fertility level of their farms.

Crop Yields: Due to extremely favorable growing conditions in 1959, crop yields averaged approximately 45 percent above normal for all farms in this area. However, the yields of different crops were influenced in varying degrees, and a possible distortion of the relationship of the crop yield index to soil productivity may have resulted. Nevertheless, crop yields were about the same on the two groups of farms, with the 51 cooperators having a slight advantage (Table 2, page 18). The conservation program has not been under way long enough, however, for the improved land treatment and land use to have a significant effect on crop yields.

Livestock: The 35 noncooperating farms fed more feed to livestock but had lower returns per \$100 feed fed to productive livestock than did the 51 cooperators (Table 2, page 18). Because the farm plans of the conservation cooperators are in a transition stage, these cooperators have not adjusted their livestock enterprise to their changed land use and have not increased their forage-consuming livestock sufficiently to utilize all of the added roughage that will be produced as a result of the adoption of the Soil Conservation plan.

Expenses: Horse and machinery costs and man-labor costs a crop acre were lower on the 51 cooperating farms than on the 35 noncooperating farms

(Table 2, page 18). During 1939 the 51 cooperators spent \$100 per farm for limestone, phosphate, fertilizer, and soil-building legume seeds, as compared with only \$50 per farm spent for these items on the farms of the 35 noncooperators. Total farm expenses were \$10.40 an acre on the cooperators' farms and \$11.03 an acre on the noncooperators' farms.

Earnings: Net farm incomes were \$1,608 per farm, or \$9.87 an acre, on the 51 cooperating farms, as compared with \$1,587 per farm, or \$9.84 an acre, on the 35 noncooperating farms.

Inventory Changes, Cash Income, and Cash Expenses

A summary of the inventory changes, cash income, and cash expenses and a summary for all the account-keeping farms in this area for the past four years is presented in Table 3, page 19. Net earnings per farm and per acre were higher in 1939 than in any of the three previous years.

Soil Rating Related to Investments, Receipts, Expenses, Earnings, Land Use, Crop Yields, and Other Factors

After being divided between conservation cooperators and noncooperators, the 86 farms were classified into three groups, according to soil ratings, as follows: the best soils, or those having a rating under 4.75; the average soils, or those having a rating from 4.75 to 6.25; and the poorest soils, or those having a rating over 6.25. An analysis of the resulting six groups of farms is presented in Tables 4 and 5, pages 20 and 21.

The farms of the conservation cooperators in each soil-rating group are smaller in size and have larger investments an acre in land and in the total farm business than do the corresponding noncooperators. Furthermore, within each group the farms with the higher soil ratings are smaller in size and are inventoried at a higher valuation an acre than are the farms with the lower soil ratings. Total farm receipts and net inventory increases are highest on the cooperating farms

with high soil ratings and are lowest on the cooperating farms with low soil ratings (Table 4, page 20). Of the total farm income for the two groups, the proportion secured from productive livestock is higher for the noncooperators with the medium and the low soil ratings and is lower for the noncooperators with the high soil ratings. This proportion further indicates that the conservation cooperators, for the most part, have not as yet increased their livestock to correspond with the increased roughage produced as a result of the conservation program.

Expenses for limestone, phosphate, fertilizer, and soil-building legume seeds were higher on the farms of the conservation cooperators, and this fact indicates that they are building up their farms for future production. For both groups net earnings an acre were highest on the farms with the high soil ratings and lowest on the farms with the medium soil ratings (Table 4, page 20).

Land use followed a rather uniform pattern--the farms on the best soils tended to have a larger proportion of their farms in grain crops and a smaller proportion in legumes, particularly soil-building legumes, and the conservation cooperators tended to have a larger proportion of their farms in soil-building legumes than did the noncooperators. The smaller proportion of tillable land was found on farms with the medium soil ratings rather than on farms with the low soil ratings, but this situation is accounted for by the fact that a considerable proportion of the land on the farms of low productivity consists of level, impervious soils of rather low productivity.

For the most part crop yields were higher on the farms of the conservation cooperators than on those of the noncooperators. The crop yield index tended to follow the same trend as did the soil rating, and therefore a closer relationship between soil rating and crop yield index was found on conservation cooperators' farms than on the noncooperators' farms (Table 5, page 21).

Livestock efficiency was somewhat higher on each of the three groups of cooperators' farms than on the corresponding noncooperators' farms (Table 5, page 21).

Size of Farm and Soil Rating Related to Land Use and Other Factors

In an attempt to compare farms of similar size as well as similar soil ratings, the six groups treated in the previous section were further subdivided into those farms which were smaller than average in size and those farms which were larger than average in size. The data from the resulting twelve groups of farms are presented in Table 6, page 22 and 23. The size of the sample in the various groups is rather small, and since the data represent only one year, no attempt will be made to draw conclusions from the material in this table. However, this analysis does show the wide variation and lack of uniformity which exist even between farms in a given area, and it also shows certain general tendencies and certain principles of farm management, such as the importance of high crop yields, efficient livestock, and low operating expense, which are applicable regardless of size or type of farm. Furthermore, this analysis will enable the individual farmer to compare his farm with farms of similar size and similar soil ratings.

On the basis of the proportion of the tillable land in the various crops, the conservation cooperators in both size groups have more nearly adjusted their land use to their soil resources than have the noncooperators (Table 6, pages 22 and 23). The noncooperating farms in both size groups, and particularly those with low soil ratings, apparently did not have an adequate acreage of soil-building legumes to maintain or to improve their present soil resources. Although crop yields varied considerably, yields tended to correspond with soil ratings, and the smaller farms tended to have higher yields than did the larger farms.

Livestock accounted for a higher proportion of the farm income on the farms with the lower soil ratings than on the farms with the higher soil ratings.

Operating expenses per acre and per crop acre were higher on the smaller farms than on the larger farms, and they also tended to be higher on the noncooperators' farms than on the cooperators' farms. Although earnings varied considerably, they tended to be higher on the larger farms, but some of the smaller farms had fairly high incomes, particularly on the "per-acre" basis. The farms with the medium soil ratings in each group tended, however, to have lower earnings than did the farms in the other soil-rating groups.

Tenure Related to Land Use, Yields, and Other Factors

The conservation cooperating and noncooperating farms were divided into owner-operated, part-owner-operated, and tenant-operated farms on the basis of tenure (Table 7, page 24).

Based on soil ratings and land values an acre, the tenant-operated farms were better farms than were the owner-operated or part-owner-operated farms. The tenant-operated farms were also smallest in size, but the part-owner-operated farms were largest in size. Because of the field-renting system in which a farmer will rent one or more fields in addition to the land he owns, the rented land on the part-owner-operated farms is usually cropped rather "hard," and the proportion of legumes on the total area operated on these farms is usually lower than it is for the owner- or tenant-operated farms. A high proportion of the tenant operators in this area are related to the owners; and, in part at least, this relationship accounts for the land use on these farms being comparable to the land use on the owner-operated farms. When the soil ratings are taken into consideration, crop yields are found to be much lower on the tenant-operated farms than on the owner-operated farms. However, the owner-operated farms fed more livestock than did the tenant-operated or part-owner-operated farms.

Expenses for soil conservation and soil improvement (limestone, phosphate, fertilizer, and legume seeds) were much higher on the conservation cooperating farms which were tenant-operated and part-owner-operated than on the corresponding noncooperating groups. On the other hand, net farm earnings were highest on the owner-operated farms and lowest on the part-owner-operated farms.

Livestock Related to Soil Conservation

Livestock occupies an important position in a Soil Conservation program since such a program frequently calls for the production of hay and pasture and since livestock offers the best means of utilizing these crops. Therefore, an economic study of soil conservation as it applies to the farm would not be complete without some consideration of the livestock enterprises which utilize the products of a conservation program. Detailed feed records were kept on the several livestock enterprises on the farms included in this study. An analysis of these livestock enterprises follows.

Use of Roughages Related to Livestock Returns

An analysis, including all classes of livestock, was made of the relation of the use of roughages to livestock returns. Roughages, as used in this report, include hay, straw, pasture, silage, fodder, and stover. The 90 farms were divided into two groups based on the value of roughages fed as compared with the total value of feed fed. On 45 farms roughages constituted 42 percent or more of the value of all feed fed to all livestock, and these farms are compared with 45 farms on which roughages accounted for less than 42 percent of the total value of all feed fed to all livestock. The two groups fed about the same total value of feed to all livestock, but the high-roughage group fed \$1,090 of feed to cattle and sheep as compared with \$813 of feed fed to the same roughage-consuming livestock in the low-roughage group (Table 8, page 25). Roughages constituted 52

percent of the total value of feed fed on the high-roughage group of farms and 32 percent on the low-roughage group. The quality of roughages was better on the high-roughage farms. Total livestock returns and returns per \$100 feed fed to all livestock were slightly higher on the high-roughage farms. The high-roughage farms had lower soil ratings, less tillable land, and fewer total acres than did the low-roughage farms, but the low-roughage farms had higher net farm incomes, both on a total farm and on a "per-acre" basis (Table 8, page 25). It is significant that these high-roughage feeding farms were able to market these roughages at a good price and that the livestock paid high returns after being charged for all feeds, including some otherwise unmarketable roughage. The utilization of the roughages resulted in higher farm incomes and also in soil improvement from the manure produced as a result of the livestock feeding operations.

Dairy Enterprise

On 73 of the 90 farms, dairying was a major livestock enterprise. For analyzing purposes the dairy farms were classified according to the proportion of their total feed value that was roughage. On 41 of the farms, 60 percent or more of the total feed costs (an average of 65 percent) was roughages, and on 32 of the farms, less than 60 percent of the total feed costs (an average of 51.8 percent) was roughages (Table 9, page 26). The high-roughage herds were somewhat larger, were fed slightly more feed, and had \$10 higher returns per \$100 of feed fed than did the low-roughage herds. Milk production was 459 pounds less per cow in the high-roughage herds, but the total cost of feed fed the entire dairy herd averaged 4 cents less per 100 pounds of milk produced on these farms than it was in the low-roughage herds. The high-roughage farms had slightly lower soil ratings, fewer acres, and a slightly higher net income an acre. Since they fed more high-quality roughages and less grain and protein supplement, they had less "out-of-pocket" costs in connection with their dairy enterprise than did the low-roughage farms.

Beef Enterprise

The beef enterprise was a major livestock enterprise on only 16 of the 90 farms included in this study. The type of beef enterprise was variable, ranging from feeder cattle to beef-breeding herds, and one or more milk cows were also kept on most of these farms. The larger beef enterprises were more successful than were the smaller ones (Table 10, page 27). Feeder cattle made up a larger proportion of the beef enterprise on the best herds than on the poorest herds, and roughages accounted for a smaller proportion of the total feed cost of the best beef herds than of the poorest beef herds. Returns per \$100 feed fed beef cattle were \$151 for the best herds and only \$92 for the poorest herds. Based on the small sample of beef herds and the one year's data, the beef enterprise on the farms in this area did not offer as good an opportunity to market roughages advantageously as did the dairy enterprise, from the standpoint of either returns per \$100 feed fed or net income per farm and per acre (compare Tables 9 and 10, pages 26 and 27).

Sheep Enterprise

Native flocks of sheep were found on 16 of the 90 farms. The size of the flocks was small, but on the average the sheep made good returns for the feed fed, particularly when approximately 85 percent of the value of their feed was from roughages which have little or no market value. There was a wide variation in the efficiency with which the sheep enterprise was conducted, the 8 best flocks having returns of \$198 for each \$100 feed fed as compared with returns of \$77 for each \$100 feed fed to the 8 poorest flocks (Table 11, page 28).

Hog Enterprise

An analysis of the hog enterprise on 81 of the farms raising hogs and on the 27 farms having the most profitable hog enterprises and the 27 farms having

the least profitable hog enterprises is shown in Table 12, page 29. The most profitable hog enterprises were larger than the least profitable ones were, and the former apparently fed a better balanced ration and secured more efficient gains. Feed costs for the most profitable hog enterprises were \$3.54 for each 100 pounds of pork produced as compared with \$5.54 per 100 pounds of pork produced for the least profitable hog enterprises (Table 12, page 29).

Poultry Enterprise

In the analysis of the poultry enterprise, only those flocks were included to which \$50 or more of feed were fed during the year. An analysis of the one-third most profitable flocks, the one-third least profitable flocks, and an average of all flocks is shown in Table 13, page 30. Returns from the poultry enterprise varied widely. High egg production per hen combined with efficient feeding and other factors of good poultry management paid dividends on the best flocks.

Cost of Producing Milk Related to Conservation

In connection with the general farm account records, detailed dairy cost of production records were kept on 54 of the 90 farms included in this study. After the elimination of those records which were not comparable because of size of herd and because of incomplete monthly feed records, 48 records were left, and they are included in the dairy cost analysis presented here. In order to study the relationship between the use of roughages, that is, the products of a conservation program, the cost of milk production, and other pertinent factors, the 48 records were divided into two equal groups based on the proportion that roughages were of the total value of feed fed the milk cows. Grains, hay, fodder, stover, and silage were valued at average farm prices, and pasture was valued at 6 cents per pasture day. There were 24 herds for which roughages accounted for over 69

percent of the total value of feed fed (an average of 74 percent) and 24 herds for which roughages accounted for less than 69 percent of the total value of feed fed (an average of 60 percent). All these herds are a select group, a majority of them being in the Dairy Herd Improvement Association, and they represent herds which are better than average. The higher roughage-consuming herds produced an average of 7,960 pounds of 3.5 milk per cow or only 88 pounds less than the 8,048 pounds of 3.5 milk per cow produced by the lower roughage-consuming herds.

The feed cost of producing 100 pounds of milk in 1939 was 65 cents on the higher roughage-consuming herds and 77 cents on the lower roughage-consuming herds. This feed cost was lower every month during 1939 on the higher roughage-consuming herds than on the lower roughage-consuming herds (Table 14, page 31). Likewise, the total cost of producing 100 pounds of milk was lower on the higher roughage-consuming herds. Therefore, feed cost and total net cost per cow were lower and net profits per cow were higher on the higher roughage-consuming herds (Table 14, page 31). The higher roughage-consuming herds were fed less grain and protein concentrates and more hay, silage, and pasture per cow than were the lower roughage-consuming herds. Corn silage was fed to 15 of the higher roughage-consuming herds and 18 of the lower roughage-consuming herds. However, much of the roughages fed the higher roughage-consuming herds consisted of high-quality legume hay and pasture as well as some legume silage. The millfeeds fed the higher roughage-consuming herds had a higher average protein content than did the millfeeds fed the lower roughage-consuming herds.

The monthly production of milk for the two groups of farms is shown in Table 15, page 32, and the quantities of feeds fed per cow per month for the two groups of farms are shown in Table 16, page 33. The proportion of the cows in milk in the herds each month was approximately the same for both groups of farms. Although a study of Tables 14, 15, and 16 shows that milk production per cow was

high and that feed cost per 100 pounds produced was low during the spring and early summer months when the cows were on good pastures, the records also show that these dairymen with the higher roughage-consuming herds found it profitable to feed some concentrates throughout the year. Although the above records cover a rather select sample and represent only one year's data, they do indicate that milk can be produced at a low cost with well-culled, high-producing herds by feeding a high proportion of good-quality legume roughages. Hence it appears that roughages, the products of a conservation program, can be utilized profitably by the dairy herd without resorting to large "out-of-pocket" costs for concentrates.

Table 1.--Investments, Receipts, Expenses, and Earnings, Soil Conservation Cooperating and Noncooperating Farms, Edwardsville Project Area, Madison and St. Clair Counties, Illinois, 1939

Items	Your farm	Average of all farms	51 farms cooperating	35 farms not cooperating
Number of farms - - - - -	--	86	51	35
Capital Investments				
Land- - - - -	\$	\$ 9 418	\$ 9 819	\$ 8 826
Farm improvements - - - - -		2 716	2 777	2 624
Horses- - - - -		435	387	506
Productive livestock: Cattle- - -		1 090	1 015	1 198
Hogs- - -		233	215	261
Sheep - - -		18	15	22
Poultry - - -		140	113	179
<u>Total productive livestock- - -</u>	()	(1 481)	(1 358)	(1 660)
Feed and grain- - - - -		1 266	1 179	1 394
Machinery and equipment - - - -		1 540	1 632	1 405
Automobile (farm share) - - - -		141	159	116
Totals- - - - -	\$	\$16 997	\$17 311	\$16 531
Receipts and Net Increases				
Horses - - - - -	\$	\$ --	\$ --	\$ --
Productive livestock: Cattle- - -		387	418	341
Dairy sales		1 071	975	1 209
Hogs- - -		365	365	365
Sheep - - -		15	14	15
Poultry - - -		64	61	70
Egg sales - - -		167	178	152
<u>Total productive livestock- - -</u>	()	(2 069)	(2 011)	(2 152)
Farm products used in household -		254	237	279
Feed and grain- - - - -		817	850	767
Labor off farm- - - - -		46	45	48
Miscellaneous - - - - -		19	27	9
AAA payments- - - - -		125	134	111
Totals- - - - -	\$	\$ 3 330	\$ 3 304	\$ 3 366
Expenses and Net Decreases				
Farm improvements - - - - -	\$	\$ 132	\$ 123	\$ 145
Horses - - - - -		12	14	10
Productive livestock- - - - -		--	--	--
Feed and grain- - - - -		--	--	--
Machinery and equipment - - - -		296	288	306
Automobile (farm share) - - - -		69	66	72
Hired labor - - - - -		251	259	239
Miscellaneous - - - - -		22	22	23
Crop expense- - - - -		80	82	77
Livestock expense - - - - -		37	33	43
Taxes - - - - -		149	149	150
Totals- - - - -	\$	\$ 1 048	\$ 1 036	\$ 1 065
Receipts less expenses- - - - -	\$	\$ 2 282	\$ 2 268	\$ 2 301
Family labor- - - - -		246	243	249
Returns for labor, capital, mgt.		2 036	2 025	2 052
Operator's labor- - - - -		436	417	465
Returns for capital and mgt.- -		1 600	1 608	1 587
Rate Earned on Investment - - - -	%	9.41%	9.29%	9.60%
Interest on investment- - - - -	\$	\$ 850	\$ 866	\$ 827
Labor and Management Earnings - - -		1 186	1 159	1 225
Percent Participation in AAA Program		84.4%	85.2%	83.3%

Table 2.--Factors Helping to Analyze the Farm Business, Soil Conservation Cooperating and Noncooperating Farms, Edwardsville Project Area, Madison and St. Clair Counties, Illinois, 1939

Items	Your farm	51 farms cooperating	35 farms not cooperating
Soil rating ^{a/} - - - - -		6.14	5.99
Acres in farm - - - - -		163.0	161.3
Gross receipts per acre - - - - -	\$	\$ 20.27	\$ 20.87
Total expense per acre - - - - -		10.40	11.03
Net receipts per acre - - - - -		9.87	9.84
<u>Investments</u>			
Value of land per acre - - - - -	\$	\$ 60	\$ 55
Total investments per acre - - - - -		108	102
<u>Land Use</u>			
Percent of land area tillable - - - - -	%	78.0 %	83.3 %
Percent of tillable land in crops - - - - -		81.8	80.5
Percent of tillable land in:			
Corn - - - - -		22.1	21.0
Oats - - - - -		5.2	9.2
Wheat - - - - -		24.8	23.5
Soybeans - - - - -		1.3	.8
Other crops - - - - -		14.3	11.6
Legume hay and pasture - - - - -		22.0	19.3
Nonlegume hay and pasture - - - - -		10.3	14.6
Soil-building legumes ^{b/} - - - - -		33.0	25.8
<u>Crop Yields</u>			
Corn - - - - -		61.7	59.5
Oats - - - - -		26.7	26.8
Wheat - - - - -		24.8	25.8
Soybeans - - - - -		21.2	15.8
Crop yield index - - - - -		100	99.7
<u>Livestock Factors</u>			
Value of feed fed to prod. L.S. - - - - -	\$	\$1 314	\$1 529
Returns per \$100 feed fed prod. L.S. - - - - -		165	153
Returns per \$100 feed fed poultry - - - - -		204	150
Number of litters farrowed - - - - -		5	6
Returns per \$100 feed fed hogs - - - - -	\$	\$ 140	\$ 136
Average number of cows milked - - - - -		9.9	11.5
Returns per \$100 feed fed cattle - - - - -	\$	\$ 167	\$ 160
<u>Expense Factors</u>			
Horse and mach. cost per crop acre - - - - -	\$	\$ 4.86	\$ 5.10
Man labor cost per crop acre - - - - -		8.45	8.66
Man labor cost per \$100 gross income - - - - -		27	28
Purchases of limestone, phosphate, fertilizer, and legume seeds - - - - -	\$	\$ 100	\$ 50

a/ Based on soil type, percent of slope, and degree of erosion. The most productive soil types, on level topography and with no erosion, are rated 1. Soil ratings range from 1, the best, to 10, the poorest,

b/ Include all biennial and perennial legumes and also soybeans and first-year sweet clover plowed under as a green manure crop.

Table 3.--Inventory Changes, Cash Income, and Cash Expenses, Soil Conservation Cooperating and Noncooperating Farms, Edwardsville Project Area, Madison and St. Clair Counties, Illinois, 1936-1939

Items	Your farm	Average of all farms in area			
		1939	1938	1937	1936
Number of farms- - - - -	--	86	53	53	47
Inventory Changes					
Farm improvements- - - - -	\$	\$ 54	\$ 75	\$ 27	\$ 48
Livestock- - - - -		110	92	46	70
Feed and grain - - - - -		380	-307	219	334
Machinery and equipment ^a / - - - - -		23	200	251	189
Automobile (farm share)- - - - -		4	9	--	--
Totals - - - - -	\$	\$ 571	\$ 69	\$ 543	\$ 641
Cash Receipts					
Farm improvements- - - - -	\$	\$ 10	\$ 5	\$ --	\$ 6
Horses - - - - -		30	65	67	70
Productive livestock: Cattle - - - - -		466	441	365	280
Dairy sales- - - - -		1 071	968	1 059	874
Hogs - - - - -		396	506	543	577
Sheep- - - - -		20	10	25	31
Poultry- - - - -		115	115	280	314
Egg sales- - - - -		167	181	--	--
Total productive livestock - - - - -	()	(2 235)	(2 221)	(2 272)	(2 076)
Feed and grain - - - - -		785	941	1 232	805
Machinery and equipment ^a / - - - - -		202	244	214	165
Automobile (farm share)- - - - -		22	32	--	--
Labor off farm - - - - -		46	79	82	53
Miscellaneous- - - - -		19	8	4	2
AAA payments - - - - -		125	41	84	134
Totals - - - - -	\$	\$3 474	\$3 636	\$3 955	\$3 311
Cash Expenses					
Farm improvements- - - - -	\$	\$ 196	\$ 241	\$ 187	\$ 186
Horses - - - - -		24	43	62	62
Productive livestock: Cattle - - - - -		227	198	161	52
Hogs - - - - -		59	37	39	26
Sheep- - - - -		1	2	2	5
Poultry- - - - -		27	26	22	29
Total productive livestock - - - - -	()	(294)	(263)	(224)	(112)
Feed and grain - - - - -		348	276	402	356
Machinery and equipment ^a / - - - - -		521	769	747	573
Automobile (farm share)- - - - -		95	113	--	--
Hired labor- - - - -		251	210	245	153
Miscellaneous- - - - -		22	26	22	22
Crop expense - - - - -		80	81	221	153
Livestock expense- - - - -		37	38	29	19
Taxes- - - - -		149	145	163	148
Totals - - - - -	\$	\$2 017	\$2 205	\$2 302	\$1 784
Summary					
Cash balance - - - - -	\$	\$1 457	\$1 431	\$1 653	\$1 527
Farm products used in household ^b / - - - - -		254	260	--	--
Total inventory change - - - - -		571	69	543	641
Receipts less expenses - - - - -		2 282	1 760	2 196	2 168
Total unpaid labor - - - - -		682	669	742	702
Net earnings per farm- - - - -	\$	\$1 600	\$1 091	\$1 454	\$1 466
Net earnings per acre- - - - -	\$	\$ 9.86	\$ 7.01	\$ 9.00	\$ 9.46

a/ Includes farm share of automobile for 1936 and 1937.

b/ Not included as income for 1936 and 1937.

Table 4.--Soil Rating Related to Investments, Receipts, Expenses, and Earnings, Soil Conservation Cooperating and Noncooperating Farms, Edwardsville Area, Madison and St. Clair Counties, Illinois, 1939

Items	Farms cooperating				Farms not cooperating				
	High soil rating (under 4.75)	Medium soil rating (4.75-6.25)	Low soil rating (over 6.25)	High soil rating (under 4.75)	Medium soil rating (4.75-6.25)	Low soil rating (over 6.25)	High soil rating (under 4.75)	Medium soil rating (4.75-6.25)	Low soil rating (over 6.25)
Number of farms	6	22	23	9	10	16	3.76	5.83	6.86
Average soil rating ^a	4.23	5.66	7.05						
<u>Investments</u>									
Land	\$13 076	\$10 642	\$ 8 189	\$ 9 157	\$ 9 664	\$ 8 118			
Farm improvements	2 350	2 835	2 836	1 602	3 199	2 840			
Total farm investment	20 360	18 368	15 514	14 940	18 147	16 418			
Value of land per acre	90	64	50	82	53	46			
Total investment per acre	\$ 139	\$ 111	\$ 94	\$ 135	\$ 100	\$ 92			
<u>Receipts and Net Increases</u>									
Cattle	\$ 1 570	\$ 1 194	\$ 1 539	\$ 968	\$ 1 350	\$ 2 003			
Hogs	753	336	291	286	528	308			
Sheep	--	26	6	5	11	24			
Poultry	229	215	263	144	206	274			
Total productive livestock	2 552	1 771	2 099	1 403	2 095	2 609			
Feed and grain	1 072	1 109	545	1 316	629	545			
Total farm receipts and net increases	\$ 4 240	\$ 3 290	\$ 3 072	\$ 3 126	\$ 3 177	\$ 3 627			
Percent of income from productive l.s.	60.2	53.8	68.3	44.9	65.9	71.9			
Percent of income from feed and grain	25.3	33.7	17.7	42.1	19.8	15.0			
<u>Expenses</u>									
Cost of limestone, phosphate, fertilizer, and legume seeds	\$ 77	\$ 110	\$ 98	\$ 57	\$ 56	\$ 44			
Horse and machinery cost per crop acre	3.12	5.60	4.62	6.19	4.53	4.99			
Man-labor cost per crop acre	8.28	8.78	8.19	10.60	9.70	7.11			
<u>Earnings</u>									
Returns for capital and management	\$ 2 648	\$ 1 399	\$ 1 534	\$ 1 345	\$ 1 300	\$ 1 901			
Rate earned on investment	13.0%	7.6%	9.9%	9.0%	7.19%	11.58%			
Gross receipts per acre	\$ 29.04	\$ 19.82	\$ 18.66	\$ 28.16	\$ 17.56	\$ 20.41			
Total expenses per acre	10.90	11.39	9.34	16.04	10.37	9.71			
Net receipts per acre	\$ 18.14	\$ 8.43	\$ 9.32	\$ 12.12	\$ 7.19	\$ 10.70			

^a/ Ranges from 1, the best, to 10, the poorest.

Table 5.--Soil Rating Related to Land Use, Crop Yields, and Other Factors, Soil Conservation Cooperating and Noncooperating Farms, Edwardsville Area, Madison and St. Clair Counties, Illinois, 1939

Items	Your farm	Farms cooperating			Farms not cooperating		
		High soil rating (under 4.75)	Medium soil rating (4.75-6.25)	Low soil rating (over 6.25)	High soil rating (under 4.75)	Medium soil rating (4.75-6.25)	Low soil rating (over 6.25)
Number of farms		6	22	23	9	10	16
Average soil rating ^a		4.23	5.66	7.05	3.76	5.83	6.86
Acres in farm		146	166	164.6	111.0	180.9	177.7
<u>Land Use</u>							
Percent of land area tillable		93.2	75.9	76.5	97.1	76.7	82.5
Percent tillable land in							
Corn		28.2	22.1	20.5	21.3	21.3	20.4
Oats		2.7	4.2	6.8	5.2	5.8	13.0
Wheat		27.0	26.6	22.3	32.0	22.3	21.1
Soybeans		.6	2.2	.5	.7	1.0	.8
Other crops		8.4	18.7	11.9	9.5	15.1	9.8
Legume hay and pasture		17.6	18.3	26.5	17.3	24.0	19.1
Nonlegume hay and pasture		15.5	7.9	11.5	13.9	10.5	15.9
Soil-building legumes		27.1	30.7	36.1	21.6	33.3	24.5
<u>Crop Yields</u>							
Corn		72.0	61.9	56.7	65.8	60.5	56.0
Oats		37.6	29.6	23.6	29.6	28.0	25.9
Wheat		26.5	25.9	22.9	25.0	25.7	26.3
Soybeans		25.0	24.3	11.7	16.2	10.0	22.5
Crop yield index		113.1	105	90.0	103.0	98.8	98.6
<u>Livestock Factors</u>							
Value of feed fed to productive livestock		\$1 579	\$1 183	\$1 372	\$1 014	\$1 597	\$1 778
Feed fed per acre to productive livestock		10.81	7.13	8.33	9.14	8.83	10.01
Returns per \$100 feed fed livestock		172	163	164	160	142	158
Returns per \$100 feed fed cattle		183	163	167	154	154	165
Dairy returns per cow		111	101	104	108	98	116
Returns per \$100 feed fed hogs		155	138	135	151	142	123

^a/ Ranges from 1, the best, to 10, the poorest.

Table 6.--Size of Farm and Soil Rating Related to Land Use and Other Factors, Soil Conservation Cooperating and Noncooperating Farms, Edwardsville Area, Madison and St. Clair Counties, Illinois, 1939

Items	Your farm	Farms below average in size		
		Farms cooperating		
		High soil rating (under 4.75)	Medium soil rating (4.75-6.25)	Low soil rating (over 6.25)
Number of farms- - - - -		3	8	11
Acres in farm- - - - -		111.0	108.6	117.0
Average soil rating ^a / - - - - -		4.57	5.68	6.92
<u>Land Use</u>				
Percent land area tillable - - - - -		92.9	73.8	79.1
Percent tillable land in crops - - - - -		78.3	82.8	82.3
Percent tillable land in				
Corn - - - - -		27.2	24.2	18.4
Oats - - - - -		4.2	3.2	7.3
Wheat- - - - -		25.2	19.8	26.8
Soybeans - - - - -		--	3.5	.3
Other crops- - - - -		8.0	15.8	9.7
Legume hay and pasture - - - - -		23.5	27.2	29.3
Nonlegume hay and pasture- - - - -		12.0	6.2	8.2
Soil-building legumes- - - - -		30.6	34.3	39.1
<u>Crop Yields</u>				
Corn - - - - -		92.4	56.1	53.5
Oats - - - - -		47.9	31.2	23.7
Wheat- - - - -		29.3	24.8	24.5
Soybeans - - - - -		--	23.6	--
Crop yield index - - - - -		137.9	98.2	92.7
<u>Livestock Factors</u>				
Value of feed fed productive livestock		\$ 966	\$ 885	\$ 984
Feed fed per acre to productive l.s. -		8.70	8.15	8.41
Returns per \$100 feed fed livestock -		187	168	157
Percent income from productive l.s.- -		46.3	58.1	63.3
<u>Expense Factors</u>				
Horse and machinery cost per crop acre- - - - -		\$ 3.44	\$ 5.66	\$ 3.69
Man-labor cost per crop acre - - - - -		11.21	10.83	9.66
Cost of limestone, phosphate, fertilizer, and legume seeds- - - - -		87	51	87
<u>Investments</u>				
Value of land per acre - - - - -		\$ 75	\$ 54	\$ 56
Value of improvements per acre - - - - -		17	24	20
Total investment per acre- - - - -		127	111	104
<u>Earnings</u>				
Returns for capital and management - -		\$2 111	\$ 963	\$ 998
Rate earned on investment- - - - -		15.02%	7.95%	8.17%
Gross receipts per acre- - - - -		\$ 31.59	\$ 22.02	\$ 18.93
Total expenses per acre- - - - -		12.57	13.15	10.40
Net receipts per acre- - - - -		\$ 19.02	\$ 8.87	\$ 8.53

a/ Ranges from 1, the best, to 10, the poorest.

Table 6.--Size of Farm and Soil Rating Related to Land Use and Other Factors, Soil Conservation Cooperating and Noncooperating Farms, Edwardsville Area, Madison and St. Clair Counties, Illinois, 1939 (continued)

Farms below average in size			Farms above average in size					
Farms not cooperating			Farms cooperating			Farms not cooperating		
High soil rating (under 4.75)	Medium soil rating (4.75-6.25)	Low soil rating (over 6.25)	High soil rating (under 4.75)	Medium soil rating (4.75-6.25)	Low soil rating (over 6.25)	High soil rating (under 4.75)	Medium soil rating (4.75-6.25)	Low soil rating (over 6.25)
8	5	7	3	14	12	1	5	9
103.8	139.0	130.4	181.0	198.8	208.2	164.0	222.8	214.4
3.77	5.79	7.04	4.03	5.65	7.12	3.87	5.86	6.78
97.0	73.0	85.8	93.4	76.5	75.2	98.2	79.0	80.9
82.9	73.9	81.1	84.9	83.8	78.8	85.1	81.4	80.5
21.6	24.1	20.6	28.6	21.4	21.6	19.9	19.6	20.3
4.6	2.4	13.3	1.8	4.5	6.6	8.4	7.7	12.7
32.3	15.8	23.1	27.9	28.7	19.9	30.7	26.0	19.6
.6	--	.2	1.0	1.8	.5	1.6	1.6	1.2
11.1	12.9	7.6	10.1	19.5	13.0	1.6	16.4	11.4
15.9	21.9	20.6	19.4	15.6	24.8	23.0	20.9	18.2
13.9	23.0	14.6	11.2	8.4	13.6	14.9	7.7	16.6
21.1	31.3	22.1	30.2	29.7	34.2	21.7	30.3	25.6
64.9	68.6	61.5	60.4	64.2	58.6	70.0	55.0	53.1
28.0	7.5	32.3	24.3	29.1	23.4	34.1	31.6	22.7
24.1	28.9	27.8	25.1	26.1	21.7	30.3	24.6	25.6
15.0	--	35.0	23.5	24.6	13.7	25.0	9.6	21.0
100.0	105.8	110.0	99.6	106.5	90.8	119.9	95.7	93.6
\$ 885	\$1 619	\$1 452	\$2 194	\$1 352	\$1 728	\$2 053	\$1 576	\$2 032
8.53	11.65	11.13	12.12	6.81	8.30	12.52	7.07	9.48
157	132	155	166	161	168	169	151	160
40.8	77.7	72.6	69.8	52.2	70.9	63.4	58.1	71.5
\$ 6.49	\$ 6.28	\$ 5.45	\$ 2.95	\$ 5.58	\$ 5.14	\$ 4.93	\$ 3.58	\$ 4.75
11.28	13.76	7.56	6.78	8.20	7.37	7.63	7.58	6.70
\$ 64	\$ 79	\$ 32	\$ 68	\$ 142	\$ 107	\$ --	\$ 73	\$ 53
\$ 79	\$ 50	\$ 56	\$ 99	\$ 67	\$ 46	\$ 100	\$ 56	\$ 41
15	20	16	16	15	16	11	16	16
132	104	108	147	110	89	153	98	85
\$1 149	\$ 784	\$1 394	\$3 190	\$1 651	\$2 026	\$2 895	\$1 820	\$2 293
8.41%	5.42%	9.90%	11.9%	7.52%	10.95%	11.50%	8.33%	12.6%
\$ 28.07	\$ 18.33	\$ 21.67	\$ 27.36	\$ 19.19	\$ 18.58	\$ 29.84	\$ 17.33	\$ 19.85
17.00	12.69	10.94	9.93	10.83	8.25	12.19	8.91	9.15
\$ 11.07	\$ 5.64	\$ 10.69	\$ 17.62	\$ 8.30	\$ 9.73	\$ 17.65	\$ 8.17	\$ 10.70

Table 7.--Relation of Tenure to Land Use, Yields, and Other Factors, Soil Conservation Cooperating and Noncooperating Farms, Edwardsville Project Area, Madison and St. Clair Counties, Illinois, 1939

Items	Your farm	Farms cooperating			Farms not cooperating		
		Owner-operated farms	Part-owner-operated farms	Tenant-operated farms	Owner-operated farms	Part-owner-operated farms	Tenant-operated farms
Number of farms	24	14	12	11	12	12	
Soil ratings ^a	6.34	6.38	5.57	6.08	6.12	5.75	
Acres in farm	150.9	183.3	164.7	141.7	193.6	146.9	
Land Use							
Percent of land area tillable	75.5	81.5	76.6	76.7	79.3	94.1	
Percent of tillable land in							
Corn	20.4	22.3	24.4	23.5	18.9	21.2	
Small grains	28.0	30.3	34.4	25.0	33.0	37.8	
Other crops	3.3	3.5	8.5	6.3	4.6	5.7	
Hay and pasture	48.2	43.8	32.7	45.1	43.4	35.2	
Soil-building legumes	31.8	24.0	31.3	24.4	27.9	23.1	
Crop Yields							
Corn	63.3	59.6	67.0	67.3	58.0	54.9	
Wheat	25.3	23.0	25.9	25.4	25.8	26.1	
Crop yield index	104.0	93.3	104.1	106.0	99.1	98.4	
Value of feed fed productive livestock	\$1 330	\$1 530	\$1 104	\$1 807	\$1 495	\$1 311	
Returns per \$100 feed productive l.s.	177	151	158	151	153	157	
Percent farm income from productive l.s.	64.4	62.5	48.8	70.1	58.8	59.7	
Percent farm income from grains	20.5	23.0	37.8	16.6	25.9	27.9	
Gross receipts per acre	\$ 22.73	\$ 18.58	\$ 20.04	\$ 25.22	\$ 18.40	\$ 21.65	
Total expenses per acre	11.73	9.99	10.47	14.32	9.92	10.96	
Net income per acre	11.00	8.59	9.57	10.90	8.48	10.69	
Value of land per acre	\$ 59	\$ 60	\$ 64	\$ 50	\$ 52	\$ 62	
Total investment per acre	111	101	104	109	93	109	
Tenant's earnings ^b	--	\$1 382	\$1 070	--	\$1 425	\$1 165	
Landlord's earnings ^b	\$1 660	\$ 193	\$ 506	\$1 544	\$ 216	\$ 405	
Total farm rate earned on investment	9.95%	8.49%	9.19%	9.96%	9.07%	9.83%	
Purchase of limestone, phosphate, fertilizer, and legume seeds							
Number tenants related to owners of farm	52	129	164	57	49	47	
	--	6	8	--	5	6	

^a/ Ranges from 1, the best, to 10, the poorest.
^b/ Refers to returns for capital and management.

Table 8.--Use of Roughages Related to Livestock Returns, Edwardsville Project Area, Madison and St. Clair Counties, Illinois, 1939

Items	Your farm	Average of all farms	Percent of total feed value that was roughages	
			42 percent or more	Less than 42 percent
Number of farms- - - - -		90	45	45
<u>Percent of Total Feed Value That Was</u>				
Grain- - - - -		34.6	29.2	40.3
Protein supplement - - - - -		22.8	18.6	27.3
Total concentrates - - - - -		57.4	47.8	67.6
Hay- - - - -		20.2	23.6	16.7
Silage - - - - -		8.5	12.4	4.5
Legume pasture - - - - -		4.5	5.7	3.2
Nonlegume pasture- - - - -		9.4	10.5	8.0
Total pasture- - - - -		13.9	16.2	11.2
Total roughages- - - - -		42.6	52.2	32.4
<u>Value of Feed Fed</u>				
All cattle - - - - -		\$ 940	\$1 078	\$ 803
Hogs - - - - -		304	215	393
Sheep- - - - -		11	12	10
Poultry- - - - -		157	105	208
All livestock- - - - -		\$1 412	\$1 410	\$1 414
<u>Total Returns From</u>				
All cattle - - - - -		\$1 569	\$1 777	\$1 361
Hogs - - - - -		423	285	560
Sheep- - - - -		14	16	12
Poultry- - - - -		280	224	335
All livestock- - - - -		\$2 286	\$2 302	\$2 268
<u>Returns per \$100 Feed Fed</u>				
All cattle - - - - -		\$ 167	\$ 165	\$ 169
Hogs - - - - -		139	132	142
Sheep- - - - -		128	135	121
Poultry- - - - -		178	213	161
All livestock- - - - -		\$ 162	\$ 163	\$ 160
Net receipts from farm - - - - -		\$1 600	\$1 650	\$1 551
Acres in farm- - - - -		164.3	159.2	169.4
Net receipts per acre- - - - -		\$ 9.74	\$ 10.36	\$ 9.16
Total tillable acres - - - - -		131.1	123.7	138.5
Percent of farm tillable - - - - -		79.8	77.7	81.7
Average soil rating ^{a/} - - - - -		6.08	6.29	5.90

a/ Ranges from 1, the best, to 10, the poorest.

Table 9.--Dairy Enterprise, Edwardsville Project Area, Madison and St. Clair Counties, Illinois, 1939

Items	Your farm	Average of all farms	Percent of total feed value that was roughages	
			60 percent or more	Less than 60 percent
Number of herds- - - - -		73	41	32
Number of cows milked- - - - -		12.2	12.8	11.3
Total animal units in herd - - - -		15.8	16.6	14.8
Percent of cattle units milked - -		77.2	77.1	77.3
Value of feed fed- - - - -		\$ 978	\$ 989	\$ 963
Dairy sales- - - - -		1 319	1 395	1 221
Total returns from cattle- - - - -		1 708	1 772	1 626
Returns per \$100 feed fed- - - - -		175	179	169
Percent of total cattle returns from dairy sales- - - - -		77.2	78.7	75.1
Pounds of milk per cow - - - - -		7 884	7 734	8 193
Dairy sales per 100 lb. milk produced- - - - -		\$ 1.37	\$ 1.41	\$ 1.32
Feed cost per 100 lbs. milk produced- - - - -		1.02	1.00	1.04
Percent of total feed value that was				
Grain- - - - -		17.0	15.0	19.6
Protein supplement - - - - -		23.7	20.0	28.6
Total concentrates - - - - -		40.7	35.0	48.2
Hay- - - - -		29.8	32.6	26.1
Silage - - - - -		11.3	12.8	9.3
Legume pasture - - - - -		5.1	5.8	4.2
Nonlegume pasture- - - - -		13.1	13.8	12.2
Total pasture- - - - -		18.2	19.6	16.4
Total roughages- - - - -		59.3	65.0	51.8
Net farm income- - - - -		\$1 673	\$1 662	\$1 687
Net farm income per acre - - - - -		10.02	10.09	9.94
Acres in farm- - - - -		167.0	164.7	169.8
Percent of farm tillable - - - - -		79.7	80.3	79.1
Average soil rating ^a / - - - - -		6.15	6.21	6.08

^a/ Ranges from 1, the best, to 10, the poorest.

Table 10.--Beef Enterprise, Edwardsville Project Area, Madison and St. Clair Counties, Illinois, 1939

Items	Your herd	Average of all herds	Best herds	Poorest herds
Number of herds- - - - -		16	8	8
Number of animal units - - - - -		13.2	16.7	9.8
Total feed fed cattle- - - - -		\$784	\$ 829	\$739
Returns from beef- - - - -		665	900	430
Total returns from cattle- - - - -		977	1 254	700
Returns per \$100 feed fed cattle -		\$121	\$ 151	\$ 92
Percent of total cattle returns from beef - - - - -		68.1	71.8	61.4
Percent of total feed value that was				
Grain- - - - -		39.2	43.2	34.1
Protein supplement - - - - -		11.0	10.6	11.5
Total concentrates - - - - -		50.2	53.8	45.6
Hay- - - - -		20.7	14.7	28.0
Silage - - - - -		13.4	15.2	11.2
Legume pasture - - - - -		7.4	6.1	9.3
Nonlegume pasture- - - - -		8.3	10.2	5.9
Total pasture- - - - -		15.7	16.3	15.2
Total roughages- - - - -		49.8	46.2	54.4
Net farm income- - - - -		\$1 362	\$1 777	\$946
Net farm income per acre - - - - -		8.71	10.00	7.01
Acres in farm- - - - -		156.0	177.6	135.0
Percent of farm tillable - - - - -		81.6	78.8	85.3
Average soil rating ^a / - - - - -		5.74	5.63	5.88

a/ Ranges from 1, the best, to 10, the poorest.

Table 11.--Sheep Enterprise, Edwardsville Project Area, Madison and St. Clair Counties, Illinois, 1939

Items	Your flock	Average of all flocks	Best flocks	Poorest flocks
Number of flocks- - - - -		16	8	8
Value of feed fed sheep - - - - -		\$ 61	\$ 51	\$ 71
Total returns from sheep- - - - -		78	101	55
Returns per \$100 feed fed - - - - -		128	198	77
Percent of total feed value that was				
Grain - - - - -		14.1	10.8	16.5
Protein supplement- - - - -		1.0	.2	1.6
Total concentrates- - - - -		15.1	11.0	18.1
Hay - - - - -		28.6	34.2	24.5
Silage- - - - -		2.0	--	3.5
Legume pasture- - - - -		13.2	13.2	13.1
Nonlegume pasture - - - - -		41.1	41.6	40.8
Total pasture - - - - -		54.3	54.8	53.9
Total roughages - - - - -		84.9	89.0	81.9
Acres in farm - - - - -		181.5	177.2	185.9
Percent of farm tillable- - - - -		83.0	87.0	79.1
Average soil rating ^{a/} - - - - -		6.34	6.39	6.29

a/ Ranges from 1, the best, to 10, the poorest.

Table 12.--Hog Enterprise, Edwardsville Project Area, Madison and St. Clair Counties, Illinois, 1939

Items	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of farms- - - - -		81	27	27
Total feed fed hogs- - - - -		\$ 337	\$ 411	\$ 274
Total returns from hogs- - - - -		466	702	260
Returns per \$100 feed fed- - - - -		138	171	95
Pounds of pork produced- - - - -		7 937	11 625	4 946
Returns per 100 lb. pork produced-		\$ 5.87	\$ 6.04	\$ 5.26
Feed cost per 100 lb. pork produced-		4.25	3.54	5.54
Number of pigs farrowed- - - - -		53	72	38
Number of pigs weaned- - - - -		41	56	27
Number of litters farrowed - - - - -		6	9	4
Number of pigs weaned per litter - - - - -		6.8	6.2	6.8
Percent of total feed value that was				
Grain- - - - -		80.0	78.6	83.4
Protein supplement - - - - -		16.5	17.8	13.2
Total concentrates - - - - -		96.5	96.4	96.6
Hay and pasture- - - - -		3.5	3.6	3.4
Total purchases of hogs- - - - -		\$ 41	\$ 38	\$ 32
Total sales of hogs- - - - -		432	636	252

Table 13.--Poultry Enterprise, Edwardsville Project Area, Madison and St. Clair Counties, Illinois, 1939

Items	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of flocks - - - - -		69	23	23
Total feed fed poultry - - - - -		\$ 181	\$ 168	\$ 199
Total returns from poultry - - - - -		348	443	264
Returns per \$100 feed fed- - - - -		192	264	133
Average number of hens - - - - -		149	153	150
Total eggs produced- - - - -		17 113	20 352	14 160
Eggs per hen - - - - -		115	133	94
Feed cost per hen- - - - -		\$ 1.21	\$ 1.10	\$ 1.33
Total returns per hen- - - - -		2.34	2.90	.89

Table 14.--Monthly Cost of Milk Production and Other Selected Factors, Dairy Cost Study, Edwardsville Area, Madison and St. Clair Counties, Illinois, 1939

Items	Your farm	Average of all farms	Percent of feed value that was roughages	
			69 percent or more	Less than 69 percent
Number of farms- - - - -		48	24	24
<u>Feed Cost per 100 lb. Milk Produced</u>				
January- - - - -		\$ 0.92	\$ 0.85	\$ 0.97
February - - - - -		.92	.84	.99
March- - - - -		.85	.79	.91
April- - - - -		.74	.65	.82
May- - - - -		.44	.41	.46
June - - - - -		.47	.42	.52
July - - - - -		.51	.45	.55
August - - - - -		.55	.49	.60
September- - - - -		.63	.57	.68
October- - - - -		.74	.64	.82
November - - - - -		.88	.81	.94
December - - - - -		.93	.90	.97
Average for year - - - - -		\$ 0.71	\$ 0.65	\$ 0.77
<u>Total Cost per 100 lb. Milk Produced</u>				
January- - - - -		\$ 1.74	\$ 1.68	\$ 1.80
February - - - - -		1.77	1.69	1.84
March- - - - -		1.66	1.62	1.70
April- - - - -		1.51	1.41	1.60
May- - - - -		1.10	1.08	1.11
June - - - - -		1.25	1.21	1.28
July - - - - -		1.32	1.29	1.34
August - - - - -		1.41	1.38	1.43
September- - - - -		1.56	1.53	1.59
October- - - - -		1.65	1.59	1.69
November - - - - -		1.83	1.78	1.87
December - - - - -		1.82	1.79	1.84
Average for year - - - - -		\$ 1.54	\$ 1.49	\$ 1.58
Net cost per cow - - - - -		\$ 123.81	\$ 120.70	\$ 126.42
Value of milk per cow- - - - -		139.30	138.58	139.91
Net profit per cow - - - - -		15.49	17.88	13.49
Pounds of milk produced per cow- -		8 047	8 101	8 006
Pounds of 3.5 milk equivalent per cow - - - - -		8 008	7 960	8 048
<u>Pounds of Feed Fed per Cow</u>				
Grain- - - - -		1 728	1 355	2 053
Millfeeds- - - - -		583	353	774
Hay- - - - -		4 677	4 861	4 508
Silage - - - - -		4 066	4 649	3 563
Pasture days - - - - -		192	198	186
<u>Percent of Feed Value That Was</u>				
Concentrates - - - - -		34.1	25.8	40.1
Roughages- - - - -		65.9	74.2	59.9
Feed cost per cow- - - - -		\$ 57.26	\$ 52.47	\$ 61.28

Table 15.--Monthly Milk Production and Other Factors, Dairy Cost Study, Edwardsville Area, Madison and St. Clair Counties, Illinois, 1939

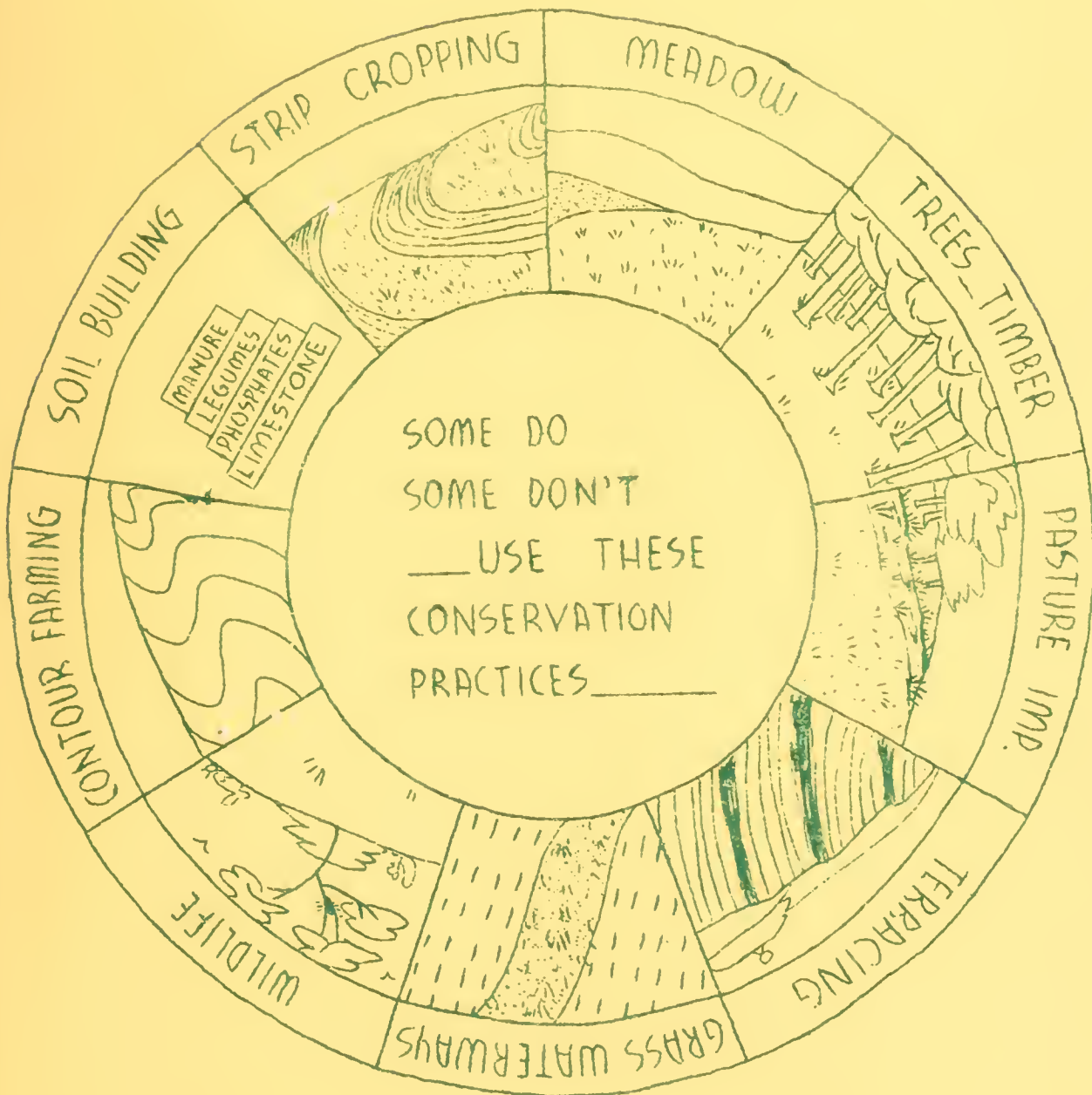
Items	Average of all farms	Percent of feed value that was roughages	
		69 percent or more	Less than 69 percent
Number of farms- - - - -	48	24	24
Pounds of milk produced per cow			
January- - - - -	725	722	728
February - - - - -	675	684	668
March- - - - -	744	746	742
April- - - - -	750	788	718
May- - - - -	829	849	812
June - - - - -	684	711	662
July - - - - -	641	654	630
August - - - - -	609	602	615
September- - - - -	552	549	556
October- - - - -	589	574	602
November - - - - -	576	564	587
December - - - - -	673	658	686
Total for the year - - - - -	8 047	8 101	8 006
Acres per farm - - - - -	176.2	163.9	188.6
Percent of farm tillable - - - - -	81.0	79.6	82.1
Average soil rating ^{a/} - - - - -	6.36	6.34	6.38
Average number of cows per farm- - -	13.6	12.5	14.8

a/ Ranges from 1, the best, to 10, the poorest.

Table 16.--Feeds Fed by Months, Dairy Cost Study, Edwardsville Area,
Madison and St. Clair Counties, Illinois, 1939

Items	Average 24 farms - roughages 69 percent or more of total feed cost				Average 24 farms - roughages less than 69 percent of total feed cost			
	Concen- trates (lb.)	Hay (lb.)	Silage (lb.)	Pasture days	Concen- trates (lb.)	Hay (lb.)	Silage (lb.)	Pasture days
Feed per cow								
January- - - - -	203	898	768	--	319	749	665	--
February - - - - -	199	866	712	--	295	722	603	--
March- - - - -	203	832	714	--	314	746	602	--
April- - - - -	178	541	540	11.3	291	548	413	7.8
May- - - - -	111	77	96	30.6	157	31	47	31.0
June - - - - -	79	19	91	30.0	151	14	--	29.9
July - - - - -	73	34	61	31.0	148	35	6	30.8
August - - - - -	80	36	68	31.0	168	59	20	30.1
September- - - - -	83	119	173	29.8	169	100	28	29.1
October- - - - -	119	240	205	28.6	227	367	130	21.9
November - - - - -	168	466	481	6.1	278	465	418	5.2
December - - - - -	212	733	740	--	310	672	631	--
Total for the year - - - - -	1 708	4 861	4 649	198.4	2 827	4 508	3 563	185.8

SUMMARY OF FARM ACCOUNT RECORD STUDY ON 110 FARMS
 IN LEROY SOIL CONSERVATION AREA,
 McLEAN COUNTY, ILLINOIS, 1939



SUMMARY OF FARM ACCOUNT RECORD STUDY ON 110 FARMS
 IN LEROY SOIL CONSERVATION AREA,
 MCLEAN COUNTY, ILLINOIS, 1939

Table of Contents

	Page
Summary-----	1
Introduction-----	5
Comparison of Soil Conservation Cooperating and Non- cooperating farms-----	6
Inventory Changes, Cash Income, and Cash Expenses-----	8
Soil Rating Related to Investments, Receipts, Expenses, Earnings, Land Use, Crop Yields, and Other Factors-----	8
Size of Farm and Soil Rating Related to Land Use and Other Factors-----	11
Tenure Related to Land Use, Yields, and Other Factors-----	12
Livestock Related to Soil Conservation-----	13
Use of Roughages Related to Livestock Returns-----	13
Dairy Enterprise-----	14
Beef Enterprise-----	15
Dual-Purpose Cattle Enterprise-----	15
Sheep Enterprise-----	16
Hog Enterprise-----	16
Poultry Enterprise-----	17
Crop Yields, Contour Cultivation Compared With Usual Field System on Same Farms-----	17
Tables-----	19

Department of Agricultural Economics
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 and
 Soil Conservation Service and Bureau of Agricultural Economics
 United States Department of Agriculture
 Cooperating

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S U M M A R Y

In drawing conclusions from the information in this report on the LeRoy Soil Conservation Area, the reader should remember that these data represent results for only one year and that the farm plans of the conservation cooperators, for the most part, have not been in operation for sufficient time to reflect the improvement expected in crop yields or to permit the completion of necessary adjustments in the livestock enterprises. However, the data exhibit certain trends and facts which serve as indicators and which can be stated as general conclusions.

1. Although the conservation cooperators were still in a transition stage, their average incomes were higher than were those on the noncooperating farms. With the better land use and greater emphasis on soil conservation and soil improvement found on the cooperating farms, the present incomes on these farms should increase in relation to those on the noncooperating farms as time passes and as the farm business becomes adjusted to the increased production of erosion-control and soil-improvement crops. In the meantime, these conservation cooperating farms are maintaining their soil resources as a heritage for future generations.

2. Crop yields on farms with comparable soil ratings were consistently higher on the farms of conservation cooperators than on those of noncooperators. These higher yields indicated that the sound land-use program on these farms, which includes approximately twice as large a proportion of soil-building legumes, is paying dividends and will continue to pay them.

3. Operating expenses, such as man labor and horse and machinery costs per crop acre, were somewhat higher on the cooperating farms than on the noncooperating farms because the cooperating farms had fewer crop acres. However, the total farm expenses per acre in this area averaged no higher on the conservation cooperating farms than on the noncooperating farms, in large part due to the

fact that the conservation cooperating farmers have made an effort to do much of the work in connection with the conservation program during their spare time and without additional expenditure.

4. On the bases of soil rating, size of farm, and proportion of land tillable, the conservation cooperators have made considerable advancement in the adjustment of their land use to their soil resources, especially in comparison with the noncooperating farms. The land-use pattern on the noncooperating farms is such that soil resources on these farms are rapidly being depleted, and such that progressively lower yields and farm incomes are likely to follow.

5. In this cash-grain type-of-farming area, the size of farm was smallest on the poorer lands, and this fact indicates the need for land-use adjustments in these poorer areas. Farmers tended to crop these poorer lands rather hard in order to obtain a living from them. A wide variation exists in size of farm and quality of soil resources available on the farms in this area, and in order to have an income sufficient for a good standard of living, the operators of the small, rough land farms must do an especially good job of adjusting their land use to their soil resources and, furthermore, must utilize efficiently the crops grown on the farm.

6. Tenure problems in this area center primarily on the rented-land farms and on the part-owner-operated farms. The proportion of tenancy in this area is very high, and the major proportion of the tenants are not related to the owners of the farms. Part-owner operators tend to crop the land which they rent unsparingly. Similarly, the tenant operators tend to crop their farms unsparingly because, for the most part, these tenants have short-term leases (usually only one year) and because they know that if they have to move, they will not be compensated for any improvements or soil-conservation or erosion-control measures which they might adopt. The "toll" which is being exacted on these tenant-operated and

part-owner-operated farms is evidenced by the crop yields on these farms which average lower than those on owner-operated farms with similar soil ratings. In addition to tenant farmers and part-owner-operators cropping their land "harder," they are feeding less livestock and consequently have less manure to return to the soil.

7. The conservation cooperators have more livestock than do noncooperators, and a larger proportion of their livestock is of the roughage-consuming type. A considerable expansion of the livestock enterprises has accompanied the adoption of the conservation program in this cash-grain type-of-farming area.

8. In the analysis of the total livestock enterprise, large quantities of good-quality legume and nonlegume roughage were utilized efficiently by livestock on some farms, and earnings on these farms were maintained at a high level. Strictly speaking, the problem of soil conservation is one of land use, and most good land-use programs in this area call for more grasses and legumes and other forage and hay crops. Since the farm is an economic unit, in many instances a market must be found for the products of these soil-conservation and soil-improvement crops. Efficient roughage-consuming livestock offer one of the best markets for these products of the conservation program, particularly if good livestock management is practiced because milk, meat, and wool can be produced at a relatively low cost, especially from the standpoint of "out-of-pocket" costs.

9. More consideration might well be given to increased efficiency of the livestock enterprises on some of the farms in this area, and more attention should be given to the roughage-consuming types of livestock. In this area where most farms sell considerable quantities of grain, feed purchases may well be limited largely to high protein supplements.

10. The products of the well-planned conservation program, that is, good-quality legume hays and legume and nonlegume pastures, can be utilized

profitably through well-managed livestock enterprises with the result that soil resources will be protected and desirable farm incomes will follow.

11. Contour farming on undulating and rolling land is a sound conservation practice which can be performed in this area at no apparent increase in the total farm operating expense and which results not only in the maintenance of soil and water resources but also in higher crop yields.

SUMMARY OF FARM ACCOUNT RECORD STUDY ON 110 FARMS
IN LEROY SOIL CONSERVATION AREA,
MCLEAN COUNTY, ILLINOIS, 1939^{1/}

By E. L. Sauer, C. C. Morgan, F. J. Reiss, and H. C. M. Case

This report for the year 1939 is the fifth in a series of annual reports based on farm account records of farmer cooperators in the LeRoy Soil Conservation Area; however, it is the first in a planned series of annual reports based on complete farm account records.^{2/} These farm account records are (1) from farmers who have signed agreements with the Soil Conservation Service to operate their farms in accordance with a planned program of soil conservation and erosion control and (2) from farmers who are operating farms not under agreement with the Soil Conservation Service.

McLean county is located in Illinois Type-of-Farming Area 4a, which is classified as the cash-grain section in Illinois Bulletin 403, "Types of Farming in Illinois." Corn, oats, and soybeans are the major crops, and grain sales constitute the major source of income. Approximately 75 percent of the area is either undulating or gently rolling prairie land, 14 percent is level land which lies along the drainage ways, and the remaining 11 percent is either rolling or gently rolling timberland, much of which has been cleared of the native timber. Erosion is evident on all of the slopes in this area and is particularly noticeable in the areas which were formerly timbered. Continuous cropping with soil-

^{1/} The Department of Agricultural Economics, University of Illinois College of Agriculture, the Soil Conservation Service, and the Bureau of Agricultural Economics, United States Department of Agriculture, cooperated in this study.

^{2/} These farm account records were kept in the Illinois Farm Account Book under the supervision of C. C. Morgan of the Operations Division of the Soil Conservation Service. The accounts contained a record of the inventory taken at the beginning and end of the year on land, buildings, livestock, machinery, equipment, feed, and grains and a record secured from the farm during the year on receipts, expenditures, land use, crop production, livestock production, feeds used for each class of livestock, and contributions to family living.

depleting and clean-tilled crops has so depleted organic matter and available soil fertility in most of the area, that erosion is progressing at an increasing rate.

The farm account record analysis which follows is primarily statistical, and the data are summarized in tabular form. Detailed conservation survey maps were made of each farm included in the study, and a soil rating was computed for each farm. This soil rating is a composite measure of soil type, percent of slope, and degree of erosion as related to productivity. Its use makes possible a comparison of farms having comparable physical soil resources.

Comparison of Soil Conservation Cooperating and Noncooperating Farms

A comparison of 71 conservation cooperating farms with 39 noncooperating farms is made in Tables 1 and 2, pages 19 and 20. Most of the 71 conservation cooperating farms are still in a transition stage, and full benefits of the adoption of the conservation plan will not be evident for several years.^{1/} Although a comparison between two groups of farms sorted on the basis of cooperation with the Soil Conservation Service may have its weaknesses and limitations, such a comparison serves to present a condensed picture of fundamental differences between the two groups.

Physical Factors: The conservation cooperating farms averaged 21 acres larger in size than did the noncooperating farms, and the cooperating farms had a total farm investment which was \$8.00 an acre higher. On the basis of the average soil ratings, the conservation cooperating farms were slightly poorer than were the noncooperating farms; the former had an average soil rating of 2.53 and the latter an average soil rating of 2.18 (Table 2, page 20). (The soils are rated from 1, the best, to 10, the poorest.)

^{1/} The Soil Conservation plan was initiated on 7 farms in 1934, 21 farms in 1935, 18 farms in 1936, 10 farms in 1937, 11 farms in 1938, and 4 farms in 1939.

Land Use: The conservation cooperators had 90.4 percent of their land area tillable and had 77.6 percent of this tillable land in crops; the noncooperating farms had 92.6 percent of the land area tillable and had 82.5 percent of this tillable land in crops. The conservation cooperators devoted 28.7 percent of their tillable land to hay and pasture as compared with 22.9 percent devoted to hay and pasture on the noncooperating farms. These percentages indicate more intensive land use on the noncooperating farms. The conservation cooperating farms devoted one-fifth of all of their tillable land to soil-building legumes, and the noncooperating farms used less than half as many acres for the same purpose (Table 2, page 20). This land use suggests that the 71 cooperators are attempting to conserve their present soil resources and are also trying to build up the fertility level of their farms.

Crop Yields: Due to extremely favorable growing conditions in 1939, crop yields averaged approximately 35 percent above normal for all farms in this area. The conservation cooperating farms had significantly higher average yields of the principal grain crops than did the noncooperating farms (Table 2, page 20). The higher crop yields on the cooperators' farms were achieved in spite of the fact that the noncooperators had the higher soil ratings. These higher yields are an indication of good farm management, conservation practices, and the use of soil-building legumes and are not due to any inherent differences in soil productivity.

Livestock: Investments in cattle and hogs averaged over twice as large on cooperating farms as on noncooperating farms (Table 1, page 19). The cooperating farms fed \$1,572 of feed to productive livestock and had returns of \$144 per \$100 of feed fed; in contrast, the noncooperating farms fed \$822 of feed and had returns of \$163. The lower average returns per \$100 of feed fed on the

cooperating farms is largely due to differences in the kind of livestock to which the feed was fed and is not necessarily an indication of lower livestock efficiency.^{1/}

Expenses: Horse and machinery costs and man-labor costs per crop acre were higher on the cooperating farms than on the noncooperating farms. Total farm expenses an acre were comparable, however--those on the cooperators' farms were \$10.44 and those on the noncooperators' farms were \$10.33 (Table 2, page 20).

Earnings: Net farm incomes were \$2,510 per farm, or \$11.10 an acre, on the 71 cooperating farms, as compared with \$1,756 per farm, or \$8.56 an acre, on the 39 noncooperating farms (Tables 1 and 2, pages 19 and 20). These figures show that the conservation cooperators received dividends from their land-use program and had higher crop yields and larger livestock numbers.

Inventory Changes, Cash Income, and Cash Expenses

The average inventory changes, cash income, cash expenses, and a summary of earnings for all of the account-keeping farms in this area for the past four years is presented in Table 3, page 21. Cash receipts and net farm earnings were higher in 1939 than in 1938 or 1937, and inventory increases and cash farm expenses were higher in 1939 than in any of the three previous years. The large inventory increase in the feed and grain account was the result of higher crop yields and above-average prices for soybeans at the end of the year plus large amounts of sealed corn on the farms.

Soil Rating Related to Investments, Receipts, Expenses, Earnings, Land Use, Crop Yields, and Other Factors

After being divided between conservation cooperators and noncooperators, the 110 farms were classified into three groups according to soil ratings. The

^{1/} A detailed analysis of the several livestock enterprises is given in Tables 9, 10, 11, 12, 13, and 14.

three groups are as follows: the best soils, or those having a rating under 2.00; the average soils, or those having a rating from 2.00 to 3.00; and the poorest soils, or those having a rating over 3.00. An analysis of the resulting six groups of farms is presented in Tables 4 and 5, pages 22 and 23.

The normal influence of soil productivity is apparent within the two groups of farms (cooperators and noncooperators). Higher land values and larger total farm investments an acre are associated with the higher soil ratings. The conservation cooperators have both higher land values an acre and higher total farm investments an acre for each soil-rating class than do the noncooperators. Evidently the conservation cooperating farmers have done a better job of maintaining those factors which enhance the value of their farms.

In each soil-rating class the conservation cooperators had larger receipts from productive livestock and larger total farm receipts than did the noncooperators. The poorer farms, both cooperators and noncooperators, had a larger proportion of their total farm receipts from livestock and a smaller proportion from grains than did the better farms. In each soil group cooperators received a larger proportion of their income from livestock than did noncooperators (Table 4, page 22).

Expenses for limestone, phosphate, fertilizer, and legume seeds were higher on the noncooperators' farms with medium and low soil ratings than on the corresponding cooperators' farms. This situation is accounted for by the fact that limestone and phosphate have been applied in previous years on the cooperators' farms and that, since a majority of the farms participated in the AAA program in 1939, many of the noncooperators found it necessary to apply limestone and phosphate to grow legumes in order to qualify for AAA payments. Although costs per crop acre for horses and machinery and for man labor tended to be higher on the cooperators' farms, the total farm expenses an acre were comparable on corresponding cooperators' and noncooperators' farms.

Within each soil-rating class gross receipts an acre and net receipts an acre followed a general trend in favor of the better soils and in favor of the cooperating farms. The advantage in favor of the cooperating farms ranged from a net of \$2.32 an acre on the poorest soils to a net of \$4.83 an acre on the best soils.

On both the cooperators' and the noncooperators' farms, the farms with the highest soil rating were largest in size, and those with the poorest soil rating were smallest in size.

Land use for all farms was definitely related to soil productivity as expressed by soil ratings. The better farms had a larger proportion of their tillable land in cultivated crops than did the poorer farms. In each group the conservation cooperators tended to have a smaller proportion of their tillable land in soil-depleting crops and a larger proportion in soil-building legumes than did the noncooperators. The noncooperating farms with low soil ratings had only 5 percent of their tillable land in soil-building legumes (Table 5, page 23).

The crop yield index tended to follow the same trend as did the soil rating. All crop yields were consistently higher on the farms of the conservation cooperators than on those of the noncooperators (Table 5, page 23).

The conservation cooperators fed a much larger volume of feed to livestock but received lower returns per \$100 fed than did the noncooperators. The lower returns per \$100 feed fed to livestock on the cooperators' farms was, for the most part, due to the following factors: (1) the feeding of more roughage (which would have little or no market value except as livestock feed); (2) inexperience in handling the larger volume of livestock; and (3) the type of livestock fed.

Size of Farm and Soil Rating Related to Land Use and Other Factors

In order to compare farms of similar size as well as of similar soil ratings, the six groups treated in the previous section were further subdivided into those farms which were smaller than average in size and those farms which were larger than average in size. (The average size of the 110 farms was 218.6 acres.) The data from the resulting twelve groups of farms are presented in Table 6, pages 24 and 25.

The size of the sample in the various groups is rather small, and since the data represent only one year, the statistical limitations of this analysis can be easily recognized. However, this analysis does show the wide variation and lack of uniformity which exist even between farms in a given area, and it also shows certain general tendencies and certain principles of farm management, such as the importance of good land use, high crop yields, efficient livestock, and low operating expenses, which are applicable regardless of size or type of farm. Furthermore, this breakdown on the basis of size of farm reveals the consistency of the data because the same general relationships exist between cooperators and noncooperators within comparable groups (Table 6, pages 24 and 25).

On the basis of the proportion of the tillable land in the various crops, the conservation cooperators in both size groups have more nearly adjusted their land use to their soil resources than have the noncooperators (Table 6, pages 24 and 25). The noncooperating farms in both size groups did not have an adequate acreage of soil-building legumes to maintain or to improve their soil resources. Although crop yields varied considerably, they tended to correspond with soil ratings, and the conservation cooperators consistently had higher crop yields.

Under comparable conditions of general soil productivity and size of farm, the conservation cooperators have higher land values, better land use,

more soil-building legumes, higher crop yields, more livestock, and larger gross receipts than do the noncooperators, and as a result all of these factors add up to higher net farm incomes.

Tenure Related to Land Use, Yields, and Other Factors

The conservation cooperating and noncooperating farms were divided into owner-operated, part-owner-operated, and tenant-operated farms on the basis of tenure (Table 7, page 26).

The same differences noted before between the cooperating and noncooperating farms appear in the respective tenure classes. Regardless of cooperation with the Soil Conservation Service program, both part-owners and tenants cropped their land harder than did the owner-operators. From owner-operators to part-owners to tenant operators, a progressive increase is found in the proportion of tillable land in cultivated crops and a decrease is found in the proportion in hay and pasture. In each tenure class a sounder system of land use and higher crop yields were found on the farms of conservation cooperators than on those of noncooperators. As evidenced by the crop yield indexes, crop yields corresponded to the systems of land use on the different groups of farms, and the "toll" of the heavier cropping systems was evident on the noncooperators' farms and on the part-owner-operated and tenant-operated farms.

Less livestock was fed on the part-owner-operated and tenant-operated farms than on the owner-operated farms; however, the two former types of farms received the higher returns per \$100 feed fed because they fed less beef cattle and because feed normally constitutes a higher proportion of the total cost of producing beef cattle than other classes of livestock. Cooperating farms in each tenure group fed more livestock than did the noncooperators.

Part-owners and tenants had higher net incomes than did owner operators; however, within the respective tenure groups, the cooperating farms had the higher returns. Since the owner operators followed a sounder system of land use and had more livestock and higher farm expenses, they are apparently more nearly maintaining their farm resources than are the part-owners or tenants.

Livestock Related to Soil Conservation

Livestock occupies an important position in a Soil Conservation program since such a program frequently calls for the production of hay and pasture and since livestock offers the best means of utilizing these crops. Therefore, an economic study of soil conservation as it applies to the farm would not be complete without some consideration of the livestock enterprises which utilize the products of a conservation program. Detailed feed records were kept on the several livestock enterprises on the farms included in this study. An analysis of these livestock enterprises follows.

Use of Roughages Related to Livestock Returns

An analysis, including all classes of livestock, was made of the relation of the use of roughages to livestock returns. Roughages, as used in this report, include hay, straw, pasture, silage, fodder, and stover. The 97 farms that had detailed feed records were divided into two groups based on the value of roughages fed as compared with the total value of feed fed. On 49 farms roughages constituted 30 percent or more of the total value of all feed fed to all livestock, and these farms are compared with 48 farms on which roughages accounted for less than 30 percent of the total value of all feed fed to all livestock. The high-roughage group fed \$985 of feed to all livestock and had returns of \$155 for each \$100 of feed fed as compared with \$1,693 of feed fed to all livestock and \$143 of returns for each \$100 of feed fed in the low-roughage

group (Table 8, page 27). Roughages constituted 37 percent of the total value of feed fed on the high-roughage group of farms and 18 percent on the low-roughage group. The quality of roughages was better on the high-roughage farms. The high-roughage farms had lower soil ratings, less tillable land, and fewer total acres than did the low-roughage farms, but the low-roughage farms had slightly higher net farm incomes due to larger amounts of livestock, somewhat higher crop yields, and better soils. It is significant that these high-roughage feeding farms were able to market these roughages at a good price and that the livestock paid high returns after being charged for all feeds, including some otherwise unmarketable roughage. By utilizing these roughages, the farmer is able to convert the products and byproducts of a soil conservation cropping system into a higher farm income, and he is also able to improve the soil with the manure produced as a result of the livestock-feeding operations.

Dairy Enterprise

On 34 of the 110 farms, dairying was a major cattle enterprise. For purposes of analysis, these dairy herds were classified according to the proportion of their total feed value that was roughage. On 17 of the farms, 65 percent or more of the total feed costs (an average of 78 percent) was roughages, and on 17 other farms, less than 65 percent of the total feed costs (an average of 56 percent) was roughages (Table 9, page 28). The high-roughage herds had returns per \$100 of feed fed which were \$23 higher than those for the low-roughage herds. Milk production was 421 pounds less per cow in the high-roughage herds, but the total cost of feed fed the entire dairy herd averaged 36 cents less per 100 pounds of milk produced on these farms than it was in the low-roughage herds. The high-roughage farms had lower soil ratings, fewer tillable acres, and consequently slightly lower net farm incomes than did the low-roughage farms. Since the high-

roughage farms fed more high-quality roughages and less grain and protein supplement, they had less "out-of-pocket" costs in connection with their dairy enterprise than did the low-roughage farms.

Beef Enterprise

Beef was a major cattle enterprise on 31 of the farms included in this study. On 16 of these farms (the high-roughage group), roughages accounted for an average of 59 percent of the total feed cost as compared with 26 percent on 15 of the farms (the low-roughage group). The type of beef enterprise was variable, ranging from feeder cattle to beef-breeding herds, and one or more cows were milked on most of these farms. The low-roughage herds fed more steers and fattening cattle than did the high-roughage herds, and their beef enterprise was much larger in size, averaging 51.3 animal units as compared with 20.2 animal units for the high-roughage herds. Returns per \$100 feed fed beef cattle were \$147 for the high-roughage herds and \$120 for the low-roughage herds (Table 10, page 29). These data indicate that farmers have not yet taken full advantage of the use of cattle as a means of marketing roughages produced under a soil conservation program.

Dual-Purpose Cattle Enterprise

On 32 of the farms, the cattle enterprise was of a dual-purpose nature. On the basis of the proportion of the total feed value that was roughages the herds were divided into two groups of 16 each. The size of herds was small, and the milk production per cow milked was relatively low. On the average, 34 percent of the cattle returns was from dairy sales, 37 percent from cattle sales, and the balance from inventory increases. The high-roughage herds had higher milk production per cow and higher returns per \$100 feed fed than did the low-roughage herds (Table 11, page 30). The returns from these herds indicate that a few farmers have used this class of livestock to good advantage as a market for roughages.

However, this class of livestock might be used to greater advantage in utilizing roughages produced as a result of a conservation program than is shown by the data in Table 11, page 30.

Sheep Enterprise

Sheep were raised or fed on 20 of the 110 farms. The size of flocks was small, but on the average the sheep made good returns for the feed fed, particularly when approximately 70 percent of the value of their feed was from roughages which have little or no market value. The efficiency with which the sheep enterprise was conducted varied widely; the 10 best flocks had returns of \$252 for each \$100 feed fed as compared with returns of \$98 for each \$100 feed fed to the 10 poorest flocks (Table 12, page 51). The best flocks were primarily native flocks, but considerable numbers of feeder sheep were purchased on farms with the poorest paying flocks. Sheep are especially adapted to utilize low-value roughages and pasture; therefore, efficient feeding of these feeds is an important factor in conducting a successful sheep enterprise.

Hog Enterprise

Hogs utilize comparatively small amounts of roughages, but, when hogs are properly managed, they can be used to advantage to increase the returns from feed grains, particularly in this surplus grain-producing area. Factors that make for successful hog enterprises are: (1) efficient feeding; (2) proper sanitation; (3) large numbers of pigs saved per litter; and (4) adaptation of the feeding and farrowing program to meet the normal seasonal price movements for hogs. The use of rotation legume pastures for the breeding herd, the sows with pigs, and the growing pigs is a profitable practice. An analysis of the hog enterprise on 84 of the farms raising hogs and on the 28 farms having the most profitable hog enterprises and the 28 farms having the least profitable hog enterprises is shown in Table 13, page 32.

Poultry Enterprise

In the analysis of the poultry enterprise, only those flocks were included to which \$40 or more of feed were fed during the year. An analysis of the one-third most profitable flocks, the one-third least profitable flocks, and an average of all flocks is shown in Table 14, page 33. Returns from the poultry enterprise varied widely. The possibilities of the poultry enterprise and its contributions to family living and the farm income are underestimated by many farmers with the result that the poultry enterprise is often not conducted as efficiently as it might be. High egg production per hen combined with efficient feeding and other factors of good poultry management paid dividends on the best flocks.

Crop Yields, Contour Cultivation Compared With Usual Field System on Same Farms

On a limited number of farms crop yields for corn, oats, and soybeans were secured on both contoured fields and on fields under the usual field system. Although the sample of farms is small and although the data represent only one year, these data are presented in Table 15, page 34, with the thought that they do give some interesting and pertinent considerations as well as some indication of results that might be expected under contour cultivation.

The data for the 3 crops are presented by soil-rating groups and are presented for all farms (Table 15, page 34). Corn yields for all of the farms averaged 4 bushels an acre more when they were planted and worked on the contour than when they were planted in the usual field system. On 11 farms, oats which were grown on the contour yielded an average of 7 bushels more per acre than did the oats grown without regard to contour. Soybeans yielded higher on the contour on the better soils and as high on the medium soils; but, due to the weighting

caused by the acreage of soybeans in the different groups, the average soybean yields for the 8 farms were 2 bushels an acre less when they were seeded on the contour than when they were seeded in the usual field system.

The results of crop yields on the contour compared with the usual field system (Table 15, page 54) might well be viewed in light of the following considerations: (1) Contour cropping has not been practiced long enough to obtain maximum effects; (2) fields cropped on the contour do not contain the best soils on the farm; (3) no information is available on the previous treatment of the fields under contour cultivation or of the fields farmed in the usual fashion; (4) the better soils appear to respond more rapidly to contour cultivation than do the poorer soils; and (5) on a majority of the farms yields for all of the crops in all three of the soil-rating groups were higher under contour cultivation than under the usual field system.

Table 1.--Investments, Receipts, Expenses, and Earnings, Soil Conservation Cooperating and Noncooperating Farms, LeRoy Project Area, McLean County, Illinois, 1939

Items	Your farm	Average of all farms	71 farms cooperating	39 farms not cooperating
Number of farms - - - - -		110	71	39
<u>Capital Investments</u>				
Land- - - - -	\$	\$20 346	\$21 226	\$18 744
Farm improvements - - - - -		3 638	3 777	3 386
Horses- - - - -		399	396	405
Productive livestock: Cattle- - - - -		1 060	1 294	634
Hogs- - - - -		443	541	264
Sheep - - - - -		42	42	41
Poultry - - - - -		86	86	87
<u>Total productive livestock- - - - -</u>	()	(1 631)	(1 963)	(1 026)
Feed and grain- - - - -		2 342	2 523	2 012
Machinery and equipment - - - - -		1 526	1 651	1 299
Automobile (farm share) - - - - -		159	177	126
Totals- - - - -	\$	\$30 041	\$31 713	\$26 998
<u>Receipts and Net Increases</u>				
Horses- - - - -	\$	\$ --	\$ --	\$ --
Productive livestock: Cattle- - - - -		620	803	287
Dairy sales - - - - -		255	260	247
Hogs- - - - -		705	836	465
Sheep - - - - -		43	48	36
Poultry - - - - -		56	55	58
Egg sales - - - - -		86	92	74
<u>Total productive livestock- - - - -</u>	()	(1 765)	(2 094)	(1 167)
Farm products used in household - - - - -		239	242	234
Feed and grain- - - - -		2 136	2 097	2 211
Labor off farm- - - - -		31	37	19
Miscellaneous - - - - -		5	6	1
AAA payments- - - - -		341	395	243
Totals- - - - -	\$	\$ 4 517	\$ 4 871	\$ 3 875
<u>Expenses and Net Decreases</u>				
Farm improvements - - - - -	\$	\$ 206	\$ 213	\$ 195
Horses- - - - -		13	14	12
Productive livestock- - - - -		--	--	--
Feed and grain- - - - -		--	--	--
Machinery and equipment - - - - -		478	507	424
Automobile (farm share) - - - - -		97	104	83
Hired labor - - - - -		208	228	171
Miscellaneous - - - - -		21	21	19
Crop expense- - - - -		119	122	114
Livestock expense - - - - -		32	38	22
Taxes - - - - -		318	330	299
Totals- - - - -	\$	\$ 1 492	\$ 1 577	\$ 1 339
Receipts less expenses - - - - -	\$	\$ 3 025	\$ 3 294	\$ 2 536
Family labor- - - - -		221	221	222
Returns for labor, capital, mgt.- - - - -		2 804	3 073	2 314
Operator's labor- - - - -		561	563	558
Returns for capital and mgt.- - - - -		2 243	2 510	1 756
<u>Rate Earned on Investment - - - - -</u>	%	7.47%	7.91%	6.50%
Interest on investment- - - - -	\$	\$ 1 502	\$ 1 585	\$ 1 350
Labor and Management Earnings - - - - -		1 302	1 488	964
Percent participation in AAA program-		85.6	87.3	75.9

Table 2.--Factors Helping to Analyze the Farm Business, Soil Conservation Cooperating and Noncooperating Farms, LeRoy Project Area, McLean County, Illinois, 1939

Items	Your farm	71 farms cooperating	39 farms not cooperating
Soil ratings ^{a/} - - - - -		2.53	2.18
Acres in farm- - - - -		226	205
Gross receipts per acre- - - - -	\$	\$ 21.54	\$ 18.89
Total expense per acre - - - - -		10.44	10.33
Net receipts per acre- - - - -		11.10	8.56
Investments			
Value of land per acre - - - - -	\$	\$ 94	\$ 91
Total investments per acre - - - - -		140	132
Land Use			
Percent of land area tillable- - - - -		90.4	92.6
Percent of tillable land in crops- - - - -		77.6	82.5
Percent of tillable land in:			
Corn - - - - -		37.6	39.9
Oats - - - - -		18.6	19.1
Wheat- - - - -		2.0	1.0
Soybeans - - - - -		7.1	8.3
Other crops- - - - -		6.0	8.8
Legume hay and pasture - - - - -		17.0	11.4
Nonlegume hay and pasture- - - - -		11.7	11.5
Soil-building legumes ^{b/} - - - - -		20.0	10.2
Crop Yields			
Corn - - - - -		61.4	55.2
Oats - - - - -		30.5	24.4
Soybeans - - - - -		25.4	23.6
Crop yield index - - - - -		104.6	91.7
Livestock Factors			
Value of feed fed to prod. L. S. - - - - -	\$	\$1 572	\$ 822
Returns per \$100 feed fed prod. L.S. - - - - -		144	163
Returns per \$100 feed fed poultry- - - - -		221	200
Number of litters farrowed - - - - -		13	7.3
Returns per \$100 feed fed hogs - - - - -	\$	\$ 141	\$ 150
Average number of cows milked- - - - -		5.2	5.6
Returns per \$100 feed fed cattle - - - - -	\$	\$ 138	\$ 160
Expense Factors			
Horse and mach. cost per crop acre - - - - -	\$	\$ 4.52	\$ 3.85
Man labor cost per crop acre - - - - -		6.14	5.95
Man labor cost per \$100 gross income - - - - -		20	24
Purchases of limestone, phosphate, fertilizer, and legume seeds- - - - -	\$	\$ 79	\$ 75

a/ Based on soil type, percent of slope, and degree of erosion. The most productive soil types, on level topography and with no erosion, are rated 1. Soil ratings range from 1, the best, to 10, the poorest.

b/ Include all biennial and perennial legumes and also soybeans and first-year sweet clover plowed under as a green manure crop.

Table 3.--Inventory Changes, Cash Income, and Cash Expenses, Soil Conservation Cooperating and Noncooperating Farms, LeRoy Project Area, McLean County, Illinois, 1939

Items	Your farm	Average of all farms in area			
		1939	1938	1937	1936
Number of farms- - - - -	--	110	72	123	164
Inventory Changes					
Farm improvements- - - - -	\$	\$ 124	\$ 77	\$ 69	\$ 56
Livestock- - - - -		313	89	138	5
Feed and grain - - - - -		615	159	398	-7
Machinery and equipment ^a / - - - - -		12	88	271	214
Automobile (farm share)- - - - -		1	-12	--	--
Totals - - - - -	\$	\$1 065	\$ 401	\$ 876	\$ 268
Cash Receipts					
Farm improvements- - - - -	\$	\$ 5	\$ 15	\$ 13	\$ 8
Horses - - - - -		59	61	65	100
Productive livestock: Cattle - - - - -		945	438	446	389
Dairy sales- - - - -		255	238	273	286
Hogs - - - - -		792	845	675	811
Sheep- - - - -		40	70	67	62
Poultry- - - - -		81	94	90	86
Egg sales- - - - -		86	89	83	79
Total productive livestock - - - - -	()	(2 199)	(1 774)	(1 634)	(1 713)
Feed and grain - - - - -		1 836	1 619	1 911	2 722
Machinery and equipment ^a / - - - - -		172	135	193	135
Automobile (farm share)- - - - -		19	15	--	--
Labor off farm - - - - -		31	24	35	38
Miscellaneous- - - - -		5	3	2	--
AAA payments - - - - -		341	33	--	108
Totals - - - - -	\$	\$4 667	\$3 679	\$3 853	\$4 824
Cash Expenses					
Farm improvements- - - - -	\$	\$ 335	\$ 266	\$ 234	\$ 214
Horses - - - - -		31	24	51	68
Productive livestock: Cattle - - - - -		689	204	203	103
Hogs - - - - -		56	29	28	42
Sheep- - - - -		22	29	4	21
Poultry- - - - -		21	23	19	23
Total productive livestock - - - - -	()	(788)	(285)	(254)	(189)
Feed and grain - - - - -		315	203	184	147
Machinery and equipment ^a / - - - - -		662	636	831	635
Automobile (farm share)- - - - -		117	102	--	--
Hired labor- - - - -		208	214	224	188
Miscellaneous- - - - -		21	18	15	13
Crop expense - - - - -		119	116	186	170
Livestock expense- - - - -		32	28	23	20
Taxes- - - - -		318	293	288	278
Totals - - - - -	\$	\$2 946	\$2 185	\$2 290	\$1 922
Summary					
Cash balance - - - - -	\$	\$1 721	\$1 494	\$1 563	\$2 902
Farm products used in household ^b / - - - - -		239	277	--	--
Total inventory change - - - - -		1 065	401	876	268
Receipts less expenses - - - - -		3 025	2 172	2 439	3 170
Total unpaid labor - - - - -		782	829	795	802
Net earnings per farm- - - - -	\$	\$2 243	\$1 343	\$1 644	\$2 368
Net earnings per acre- - - - -	\$	\$10.25	\$ 6.56	\$ 8.34	\$11.86

a/ Includes farm share of automobile for 1936 and 1937.

b/ Not included as income for 1936 and 1937.

Table 4.---Soil Rating Related to Investments, Receipts, Expenses, and Earnings, Soil Conservation Cooperating and Noncooperating Farms, LeRoy Project Area, McLean County, Illinois, 1939

Items	Your farm	Farms cooperating			Farms not cooperating		
		High soil rating (under 2.00)	Medium soil rating (2.00 - 3.00)	Low soil rating (over 3.00)	High soil rating (under 2.00)	Medium soil rating (2.00 - 3.00)	Low soil rating (over 3.00)
Number of farms	19	35	17	15	22	2	
Average soil rating	1.82	2.35	3.90	1.73	2.30	3.97	
<u>Investments</u>							
Land	\$24,793	\$22,481	\$14,653	\$19,781	\$18,607	\$12,480	
Farm improvements	3,928	4,006	3,137	3,746	3,172	3,046	
Total farm investment	36,971	33,072	23,033	28,579	26,664	18,842	
Value of land per acre	104	97	74	96	90	64	
Total investment per acre	\$ 155	\$ 142	\$ 116	\$ 139	\$ 130	\$ 96	
<u>Receipts and Net Increases</u>							
Cattle	\$ 1,527	\$ 812	\$ 1,059	\$ 439	\$ 563	\$ 909	
Hogs	1,044	843	593	484	480	156	
Sheep	15	64	52	22	48	--	
Poultry	176	126	156	118	139	167	
Total productive livestock	2,762	1,845	1,860	1,063	1,230	1,232	
Feed and grain	2,525	2,329	1,140	2,626	2,030	1,080	
Total farm receipts and net increases	\$ 5,988	\$ 4,903	\$ 3,559	\$ 4,166	\$ 3,777	\$ 2,748	
Percent of income from prod. l.s.	46.3	37.7	52.3	25.4	32.6	44.8	
Percent of income from feed and grain	42.0	47.5	32.0	63.0	53.7	39.3	
<u>Expenses</u>							
Cost of limestone, phosphate, fertilizer, and legume seeds	\$ 74	\$ 65	\$ 70	\$ 44	\$ 90	\$ 150	
Horse and machinery cost per crop A.	4.98	4.40	3.52	4.32	3.68	3.94	
Man-labor cost per crop acre	5.45	5.82	8.35	6.00	5.81	7.45	
<u>Earnings</u>							
Returns for capital and management	\$ 3,428	\$ 2,515	\$ 1,474	\$ 1,956	\$ 1,686	\$ 1,003	
Rate earned on investment	9.27%	7.60%	6.40%	6.84%	6.32%	5.32%	
Gross receipts per acre	25.14	21.06	17.97	20.28	18.36	14.02	
Total expenses per acre	10.79	10.26	10.53	10.76	10.16	8.90	
Net receipts per acre	\$ 14.35	\$ 10.80	\$ 7.44	\$ 9.52	\$ 8.20	\$ 5.12	

a/ Ranges from 1, the best, to 10, the poorest.

Table 5.--Soil Rating Related to land Use, Crop Yields, and Other Factors, Soil Conservation Cooperating and Noncooperating Farms, LeRoy Project Area, McLean County, Illinois, 1939

Items	Your farm	Farms cooperating			Farms not cooperating		
		High soil rating (under 2.00)	Medium soil rating (2.00 -3.00)	Low soil rating (over 3.00)	High soil rating (under 2.00)	Medium soil rating (2.00 -3.00)	Low soil rating (over 3.00)
Number of farms		19	35	17	15	22	2
Average soil ratings		1.82	2.35	3.90	1.78	2.30	3.97
Acres in farm		238.9	232.8	198.0	205.4	205.7	196
Land Use							
Percent of land area tillable		94.1	91.9	81.5	94.5	92.6	78.0
Percent tillable land in							
Corn		39.9	37.3	34.6	43.2	38.3	29.3
Oats		21.4	18.6	14.2	16.0	21.2	20.6
Wheat		4	1.6	5.3	1.1	1.1	--
Soybeans		6.4	8.8	3.5	10.6	7.0	3.5
Other crops		5.5	6.8	4.5	6.9	9.7	14.5
Legume hay and pasture		18.3	14.8	21.3	12.0	11.3	5.9
Nonlegume hay and pasture		8.1	12.0	16.7	10.2	11.4	26.2
Soil-building legumes		17.3	18.8	28.5	10.0	10.8	5.0
Crop Yields							
Corn		65.9	59.6	58.8	58.6	53.0	47.4
Oats		33.7	29.3	27.6	29.6	21.6	24.9
Soybeans		28.5	25.1	18.9	25.2	22.1	13.9
Crop-yield index		114.0	101.7	95.9	100.9	85.4	81.4
Livestock Factors							
Value of feed fed to productive l.s.	\$	\$2,055	\$1,355	\$1,481	\$ 790	\$ 864	\$ 592
Feed fed per acre to productive l.s.		8.60	5.82	7.48	3.85	4.20	3.02
Returns per \$100 feed fed livestock-		142	150	138	159	161	236
Returns per \$100 feed fed cattle		129	154	133	156	152	306
Dairy returns per cow-		71	64	61	57	61	46
Returns per \$100 feed fed hogs		155	139	123	156	145	170

a/ Ranges from 1, the best, to 10, the poorest.

Table 6.--Size of Farm and Soil Rating Related to Land Use and Other Factors,
Soil Conservation Cooperating and Noncooperating Farms, LeRoy
Project Area, McLean County, Illinois, 1939

Items	Your farm	Farms below average in size		
		Farms cooperating		
		High soil rating (under 2.00)	Medium soil rating (2.00-3.00)	Low soil rating (over 3.00)
Number of farms - - - - -		9	19	11
Average soil rating ^a / - - - - -		1.84	2.43	4.20
Acres in farm - - - - -		156.1	169.2	143.2
<u>Land Use</u>				
Percent land area tillable - - - - -		93.0	91.7	80.4
Percent tillable land in crops - - - - -		79.1	77.5	75.7
Percent tillable land in				
Corn - - - - -		39.5	37.4	34.1
Oats - - - - -		21.1	20.8	13.2
Wheat - - - - -		1.2	.8	6.7
Soybeans - - - - -		5.5	7.0	3.6
Other crops - - - - -		4.4	5.4	5.5
Legume hay and pasture - - - - -		20.9	16.1	16.8
Nonlegume hay and pasture - - - - -		7.3	12.4	20.2
Soil-building legumes - - - - -		22.5	21.3	18.2
<u>Crop Yields</u>				
Corn - - - - -		70.6	58.6	50.9
Oats - - - - -		35.4	29.9	23.8
Soybeans - - - - -		31.3	24.6	18.0
Crop yield index - - - - -		121.4	100.7	83.3
<u>Livestock Factors</u>				
Value of feed fed productive livestock \$		\$1 466	\$1 163	\$ 779
Feed fed per acre to productive l.s. -		9.39	6.87	5.45
Returns per \$100 feed fed livestock - \$		\$ 159	\$ 162	\$ 175
Percent income from productive l.s. - -		48.9	47.7	47.0
<u>Expense Factors</u>				
Horse and machinery cost per crop acre - - - - - \$		\$ 5.86	\$ 5.27	\$ 4.20
Man-labor cost per crop acre - - - - -		7.12	7.51	10.06
Cost of limestone, phosphate, fertilizer, and legume seeds - - - - \$		\$ 83	\$ 62	\$ 75
<u>Investments</u>				
Value of land per acre - - - - - \$		\$ 118	\$ 92	\$ 65
Value of improvements per acre - - - - -		18	20	19
Total investment per acre - - - - -		173	142	107
<u>Earnings</u>				
Returns for capital and management - - \$		\$2 456	\$1 555	\$ 848
Rate earned on investment - - - - - %		9.07%	6.49%	5.55%
Gross receipts per acre - - - - -		28.53	21.28	17.92
Total expenses per acre - - - - -		12.80	12.09	12.00
Net receipts per acre - - - - - \$		\$ 15.73	\$ 9.19	\$ 5.92

^a/ Ranges from 1, the best, to 10, the poorest.

Table 6.--Size of Farm and Soil Rating Related to Land Use and Other Factors, Soil Conservation Cooperating and Noncooperating Farms, LeRoy Project Area, McLean County, Illinois, 1939 (continued)

Farms below average in size			Farms above average in size					
Farms not cooperating			Farms cooperating			Farms not cooperating		
High soil rating (under 2.00)	Medium soil rating (2.00-3.00)	Low soil rating (over 3.00)	High soil rating (under 2.00)	Medium soil rating (2.00-3.00)	Low soil rating (over 3.00)	High soil rating (under 2.00)	Medium soil rating (2.00-3.00)	Low soil rating (over 3.00)
9	14	1	10	16	6	6	8	1
1.77	2.22	3.69	1.81	2.31	3.64	1.79	2.39	4.17
138.5	159.7	160.0	313.5	308.3	298.5	305.6	286.2	232.0
92.6	94.1	71.2	94.6	92.1	82.3	96.0	91.1	82.6
83.1	81.0	95.6	81.6	78.5	68.0	83.5	84.0	59.3
40.3	38.5	30.7	40.1	37.4	35.0	45.1	38.2	28.4
15.8	21.9	23.7	21.6	17.2	15.1	16.1	20.6	18.8
1.3	.9	--	--	2.1	4.2	.9	1.1	--
13.7	4.0	7.0	6.7	9.9	3.4	8.7	10.0	1.4
4.8	10.2	25.4	6.0	7.4	3.1	8.4	9.2	8.1
11.9	12.4	8.8	17.1	14.3	25.6	12.0	10.3	4.2
12.2	12.2	4.4	8.4	11.7	13.7	8.8	10.6	39.2
8.0	11.3	--	16.3	17.4	33.2	11.4	10.4	8.1
61.7	53.5	46.2	64.0	60.1	65.5	56.8	52.4	48.2
34.7	18.6	14.7	33.0	28.8	30.2	26.3	24.8	32.5
24.6	24.8	15.2	27.4	25.6	19.8	25.8	21.0	10.3
107.4	83.6	66.0	110.9	102.3	107.1	96.9	87.0	93.0
\$ 662	\$ 755	\$ 512	\$ 2 585	\$ 1 583	\$ 2 769	\$ 983	\$ 1 055	\$ 671
4.78	4.73	3.20	8.25	5.13	9.28	3.21	3.69	2.89
\$ 176	\$ 170	\$ 164	\$ 134	\$ 139	\$ 118	\$ 142	\$ 151	\$ 284
31.2	36.2	40.2	44.6	30.9	56.8	20.9	28.5	47.1
\$ 4.83	\$ 3.89	\$ 4.52	\$ 4.48	\$ 3.84	\$ 4.33	\$ 3.64	\$ 3.47	\$ 3.38
7.63	6.98	7.85	4.73	4.90	6.73	4.94	4.68	7.04
\$ 19	\$ 64	\$ 220	\$ 66	\$ 69	\$ 61	\$ 81	\$ 133	\$ 82
\$ 98	\$ 93	\$ 40	\$ 97	\$ 100	\$ 82	\$ 95	\$ 88	\$ 80
14	17	24	16	15	13	21	13	9
139	139	75	146	142	125	140	121	110
\$1 430	\$1 342	\$ -21	\$4 303	\$3 652	\$2 632	\$2 739	\$2 299	\$2 027
7.45%	6.05%	-0.17%	9.38%	8.32%	7.06%	6.41%	6.65%	7.91%
\$22.47	\$19.59	\$11.26	\$23.51	\$20.93	\$18.06	\$18.80	\$17.23	\$15.92
12.15	11.19	11.39	9.78	9.08	9.24	9.84	9.19	7.18
\$10.32	\$ 8.40	\$ -.13	\$13.73	\$11.85	\$ 8.82	\$ 8.96	\$ 8.04	\$ 8.74

Table 7.---Relation of Tenure to Land Use, Yields, and Other Factors, Soil Conservation Cooperating and Noncooperating Farms, LeRoy Project Area, McLean County, Illinois, 1939

Items	Your farm	Farms cooperating			Farms not cooperating		
		Owner-operated farms	Part-owner-operated farms	Tenant-operated farms	Owner-operated farms	Part-owner-operated farms	Tenant-operated farms
Number of farms		13	15	43	7	8	24
Soil rating ^a		2.83	2.44	2.83	2.20	2.03	2.26
Acres in farm		248.1	238.4	215.2	148.9	267.6	200.7
Land Use							
Percent of land area tillable		84.6	91.7	91.8	93.3	91.7	92.9
Percent of tillable land in							
Corn		35.6	36.3	38.7	37.2	39.5	40.5
Small grains		17.4	20.9	21.4	21.6	17.3	21.1
Soybeans		9.8	6.9	6.3	2.4	10.2	8.7
Other crops		3.8	6.0	6.7	12.5	13.4	6.1
Hay and pasture		33.5	29.8	26.8	26.2	19.6	23.6
Soil-building legumes		20.2	19.0	20.4	10.9	7.9	11.2
Crop Yields							
Corn		66.3	60.8	60.2	56.5	54.4	55.3
Soybeans		26.8	27.3	24.0	27.1	23.6	23.3
Crop-yield index		110.2	105.7	102.4	93.8	92.3	93.5
Value of feed fed productive livestock		\$2,263	\$1,636	\$1,339	\$959	\$762	\$801
Percent of total feed fed to							
beef cattle		50.3	11.3	30.6	12.3	8.3	8.7
Returns per \$100 feed fed prod. l.s.		125	143	155	146	175	166
Percent farm income from prod. l.s.		52.7	40.4	40.9	42.7	24.2	29.8
Percent farm income from grains		33.2	44.1	45.8	42.8	63.5	57.5
Gross receipts per acre		\$20.05	\$22.44	\$21.72	\$19.47	\$17.75	\$19.27
Total expenses per acre		11.47	10.01	10.25	12.67	9.52	10.18
Net income per acre		8.58	12.43	11.47	6.80	8.23	9.09
Value of land per acre		\$100	\$94	\$92	\$91	\$95	\$90
Total investment per acre		152	138	137	147	129	129
Tenant's earnings ^b /		--	\$2,237	\$1,116	--	\$1,546	\$612
Landlord's earnings ^b /		2,129	\$726	\$1,352	\$1,012	\$657	\$1,213
Total farm rate earned on investment		5.64%	9.01%	8.37%	4.61%	6.39%	7.02%
Purchase of limestone, phosphate, fertilizer, and legume seeds		\$66	\$70	\$70	\$30	\$65	\$92
Number tenants related to owners of farm		--	4	15	--	3	7

a/ Ranges from 1, the best, to 10, the poorest.
b/ Refers to returns for capital and management.

Table 8.--Use of Roughages Related to Livestock Returns, LeRoy Project Area, McLean County, Illinois, 1939

Items	Your farm	Average of all farms	Percent of total feed value that was roughages	
			30 percent or more	Less than 30 percent
Number of farms- - - - -		97	49	48
Percent of total feed value that was				
Grain- - - - -		62.4	53.1	68.0
Protein supplement - - - - -		12.3	9.5	14.0
Total concentrates - - - - -		74.7	62.6	82.0
Hay- - - - -		10.8	15.6	8.0
Silage - - - - -		1.0	1.6	.7
Legume pasture - - - - -		5.9	7.4	5.0
Nonlegume pasture- - - - -		7.5	12.8	4.3
Total pasture- - - - -		13.4	20.2	9.3
Total roughages- - - - -		25.2	37.4	18.0
Value of feed fed				
All cattle - - - - -	\$	\$ 702	\$ 580	\$ 828
Hogs - - - - -		519	303	740
Sheep- - - - -		26	36	15
Poultry- - - - -		88	66	110
All livestock- - - - -	\$	\$1 335	\$ 985	\$1 693
Total returns from				
All cattle - - - - -	\$	\$ 996	\$ 889	\$1 106
Hogs - - - - -		743	429	1 062
Sheep- - - - -		40	56	24
Poultry- - - - -		187	154	222
All livestock- - - - -	\$	\$1 966	\$1 528	\$2 414
Returns per \$100 feed fed				
All cattle - - - - -	\$	\$ 142	\$ 153	\$ 134
Hogs - - - - -		143	141	143
Sheep- - - - -		154	155	160
Poultry- - - - -		212	233	201
All livestock- - - - -	\$	\$ 147	\$ 155	\$ 143
Net farm income- - - - -	\$	\$2 220	\$2 078	\$2 364
Acres in farm- - - - -		216.2	212.3	220.2
Net farm income per acre - - - - -		\$ 10.27	\$ 9.78	\$ 10.74
Total tillable acres - - - - -		193.4	184.8	202.2
Percent of farm tillable - - - - -		89.4	87.0	91.8
Average soil rating ^a /- - - - -		2.43	2.56	2.29

a/ Ranges from 1, the best, to 10, the poorest.

Table 9.--Dairy Enterprise, LeRoy Project Area, McLean County, Illinois, 1939

Items	Your farm	Average of all farms	Percent of total feed value that was roughages	
			65 percent or more	Less than 65 percent
Number of herds- - - - -		34	17	17
Number of cows milked- - - - -		7.0	7.7	6.2
Total animal units in herd - - - -		10.4	10.6	10.2
Percent of cattle units milked - - -		67.3	72.6	60.8
Value of feed fed- - - - -	\$	\$ 356	\$ 321	\$ 392
Dairy sales- - - - -		405	399	412
Total returns from cattle- - - - -		678	651	706
Returns per \$100 feed fed- - - - -		190	203	180
Percent of total cattle returns from dairy sales - - - - -		59.7	61.3	58.4
Pounds of milk per cow - - - - -		4 678	4 523	4 944
Returns per 100 lb. milk produced- \$	\$	\$ 1.24	\$ 1.15	\$ 1.34
Feed cost per 100 lb. milk produced - - - - -		1.09	.92	1.28
Percent of total feed value that was				
Grain- - - - -		31.4	20.2	40.5
Protein supplement - - - - -		2.2	1.3	3.0
Total concentrates - - - - -		33.6	21.5	43.5
Hay- - - - -		35.9	41.6	31.4
Silage - - - - -		--	--	--
Legume pasture - - - - -		14.2	13.7	14.6
Nonlegume pasture- - - - -		16.2	23.2	10.5
Total pasture- - - - -		30.4	36.9	25.1
Total roughages- - - - -		66.4	78.5	56.5
Net farm income- - - - -	\$	\$2 051	\$1 934	\$2 167
Net farm income per acre - - - - -		10.29	9.67	10.92
Acres in farm- - - - -		199.3	200.0	198.5
Percent of farm tillable - - - - -		76.0	71.4	80.6
Average soil rating ^a / - - - - -		2.67	2.94	2.40

^a/ Ranges from 1, the best, to 10, the poorest.

Table 10.--Beef Enterprise, LeRoy Project Area, McLean County,
Illinois, 1939

Items	Your herd	Average of all herds	Percent of total feed value that was roughages	
			42 percent or more	Less than 42 percent
Number of herds- - - - -		31	16	15
Number of animal units - - - - -		35.3	20.2	51.3
Total feed fed cattle- - - - -	\$	\$1 513	\$ 682	\$2 399
Returns from beef- - - - -		1 668	835	2 556
Total returns from cattle- - - - -		1 913	1 003	2 884
Returns per \$100 feed fed cattle -	\$	\$ 126	\$ 147	\$ 120
Percent of total cattle returns from beef- - - - -		87.2	83.2	88.6
Percent of feed value that was				
Grain- - - - -		59.8	38.8	66.2
Protein supplement - - - - -		6.6	2.6	7.8
Total concentrates - - - - -		66.4	41.4	74.0
Hay- - - - -		13.5	22.3	10.9
Silage - - - - -		2.8	5.1	2.1
Legume pasture - - - - -		8.4	11.9	7.3
Nonlegume pasture- - - - -		8.9	19.3	5.7
Total pasture- - - - -		17.3	31.2	13.0
Total roughages- - - - -		33.6	58.6	26.0
Net farm income- - - - -	\$	\$3 168	\$3 013	\$3 334
Net farm income per acre - - - - -		12.22	13.05	11.50
Acres in farm- - - - -		259.3	230.9	289.7
Percent of farm tillable - - - - -		90.2	89.9	90.8
Average soil rating ^a / - - - - -		2.29	2.26	2.32

^a/ Ranges from 1, the best, to 10, the poorest.

Table 11.--Dual-Purpose Cattle Enterprise, LeRoy Project
Area, McLean County, Illinois, 1939

Items	Your herd	Average of all herds	Percent of total feed value that was roughages	
			55 percent or more	Less than 55 percent
Number of herds - - - - -		32	16	16
Number of cows milked - - - - -		4.5	5.2	3.8
Total animal units in herd - - - - -		8.9	9.6	8.1
Percent of cattle units milked - - - - -		50.6	54.2	46.9
Milk produced per cow (lbs.) - - - - -		3,554	3,895	3,087
Value of feed fed - - - - -	\$	\$ 285	\$ 290	\$ 280
Dairy sales - - - - -		152	160	145
Cattle sales - - - - -		167	176	158
Total returns from cattle - - - - -		446	463	429
Returns per \$100 feed fed - - - - -	\$	\$ 156	\$ 159	\$ 153
Percent of cattle returns from				
Dairy sales - - - - -		34.1	34.6	33.8
Cattle sales - - - - -		37.4	38.0	36.8
Percent of feed value that was				
Grain - - - - -		40.5	32.2	49.1
Protein supplement - - - - -		1.5	1.7	1.4
Total concentrates - - - - -		42.0	33.9	50.5
Hay - - - - -		26.9	30.0	23.8
Silage - - - - -		--	--	--
Legume pasture - - - - -		11.8	10.7	12.8
Nonlegume pasture - - - - -		19.2	25.3	12.8
Total pasture - - - - -		31.0	36.0	25.6
Total roughages - - - - -		57.9	66.0	49.4
Net farm income - - - - -	\$	\$1,481	\$1,283	\$1,679
Net farm income per acre - - - - -		7.71	7.54	7.81
Acres in farm - - - - -		192	170	215
Percent of farm tillable - - - - -		93.9	94.7	92.6
Average soil rating ^a / - - - - -		2.34	2.56	2.16

^a/ Ranges from 1, the best, to 10, the poorest.

Table 12.--Sheep Enterprise, LeRoy Project Area, McLean County, Illinois, 1939

Items	Your flock	Average of all flocks	Best flocks	Poorest flocks
Number of flocks- - - - -		20	10	10
Value of feed fed sheep - - - - -	\$	\$124	\$ 86	\$162
Total returns from sheep- - - - -		187	217	158
Returns per \$100 feed fed - - - - -		151	252	98
Percent of feed value that was				
Grain - - - - -		29.6	28.9	30.0
Protein supplement- - - - -		.4	1.0	--
Total concentrates- - - - -		30.0	29.9	30.0
Hay - - - - -		26.0	19.9	29.2
Silage- - - - -		--	--	--
Legume pasture- - - - -		8.0	2.9	10.8
Nonlegume pasture - - - - -		36.0	47.3	30.0
Total pasture - - - - -		44.0	50.2	40.8
Total roughages - - - - -		70.0	70.1	70.0
Total purchases of sheep- - - - -	\$	\$101	\$ 11	\$191
Total sales of sheep- - - - -		152	213	91
Net farm income - - - - -		\$2 802	\$2 483	\$3 122
Net farm income per acre- - - - -		11.00	11.55	10.57
Acres in farm - - - - -		254.8	214.9	294.8
Percent of farm tillable- - - - -		85.3	89.4	82.3
Average soil rating ^{a/} - - - - -		2.22	2.38	2.12

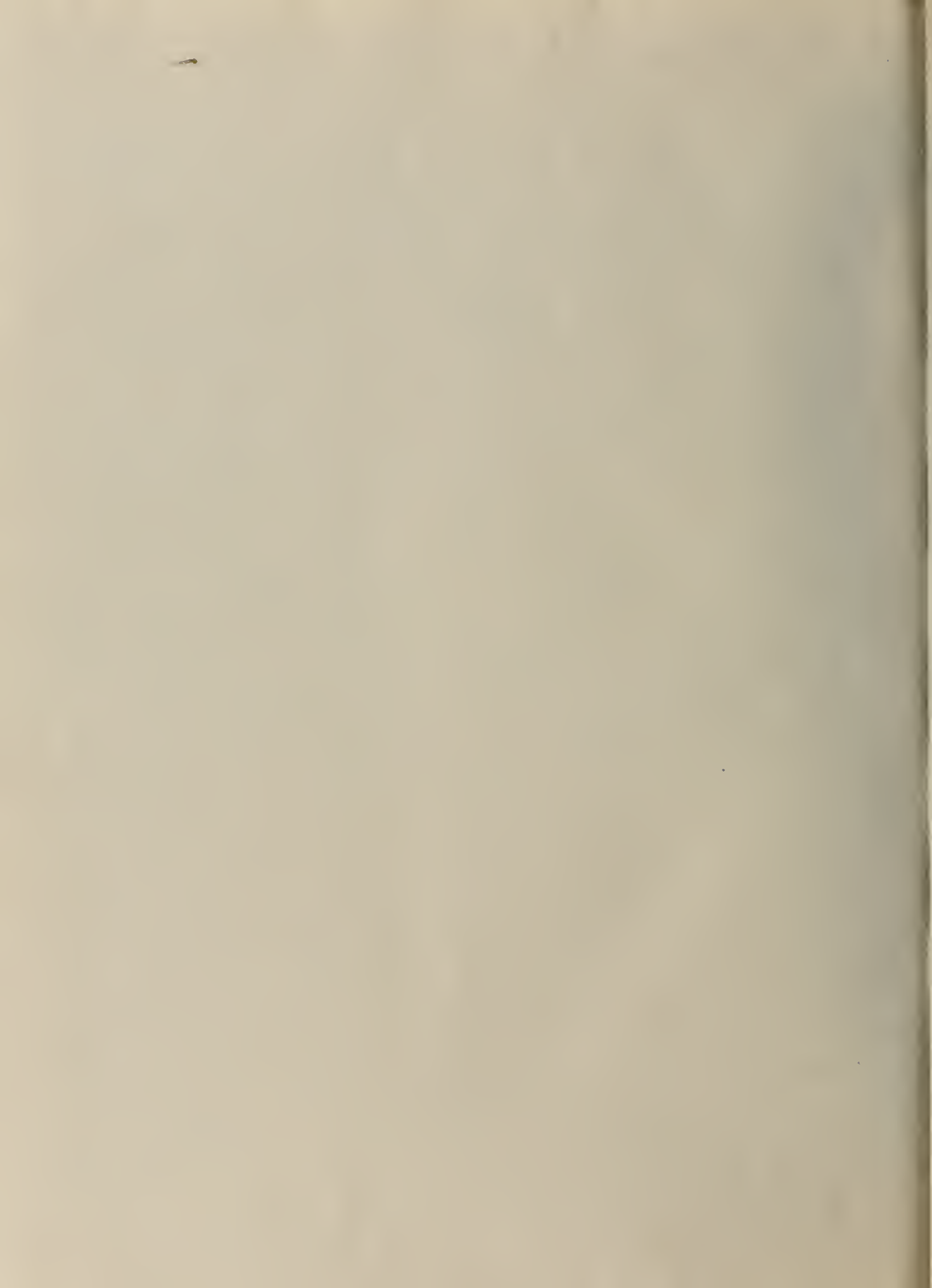
a/ Ranges from 1, the best, to 10, the poorest.

Table 13.--Hog Enterprise, LeRoy Project Area,
McLean County, Illinois, 1939

Items	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of farms- - - - -		84	28	28
Total feed fed hogs- - - - -	\$	\$ 592	\$ 558	\$ 602
Total returns from hogs- - - - -		834	1,052	853
Returns per \$100 feed fed- - - - -		141	188	142
Pounds of pork produced- - - - -		14,867	17,763	16,293
Returns per 100 lb. pork produced	\$	\$ 5.61	\$ 5.92	\$ 5.24
Feed cost per 100 lb. pork produced- - - - -		3.98	3.14	3.69
Number of pigs farrowed- - - - -		94	112	98
Number of pigs weaned- - - - -		76	92	77
Number of litters farrowed - - - - -		12	14	12
Number of pigs weaned per litter		6.2	6.6	6.2
Percent of total feed value that was				
Grain- - - - -		77.7	79.0	75.4
Protein supplement - - - - -		18.7	17.0	20.8
Total concentrates - - - - -		96.4	96.0	96.2
Hay and pasture- - - - -		3.6	4.0	3.8
Total purchases of hogs- - - - -	\$	\$ 58	\$ 25	\$ 37
Total sales of hogs- - - - -		892	964	929

Table 14.--Poultry Enterprise, LeRoy Project Area, McLean County,
Illinois, 1939

Items	Your farm	Average of all farms	Average of one-third best	Average of one-third poorest
Number of flocks - - - - -		77	26	26
Total feed fed poultry - - - - -		\$ 108	\$ 78	\$ 126
Total returns from poultry - - - - -		219	258	154
Returns per \$100 feed fed- - - - -		\$ 203	\$ 331	\$ 122
Average number of hens - - - - -		95	92	97
Total eggs produced- - - - -		7 956	8 719	6 463
Eggs per hen - - - - -		84	95	67
Feed cost per hen- - - - -	\$	\$ 1.14	\$.85	\$ 1.30
Total returns per hen- - - - -		2.31	2.80	1.59



11

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