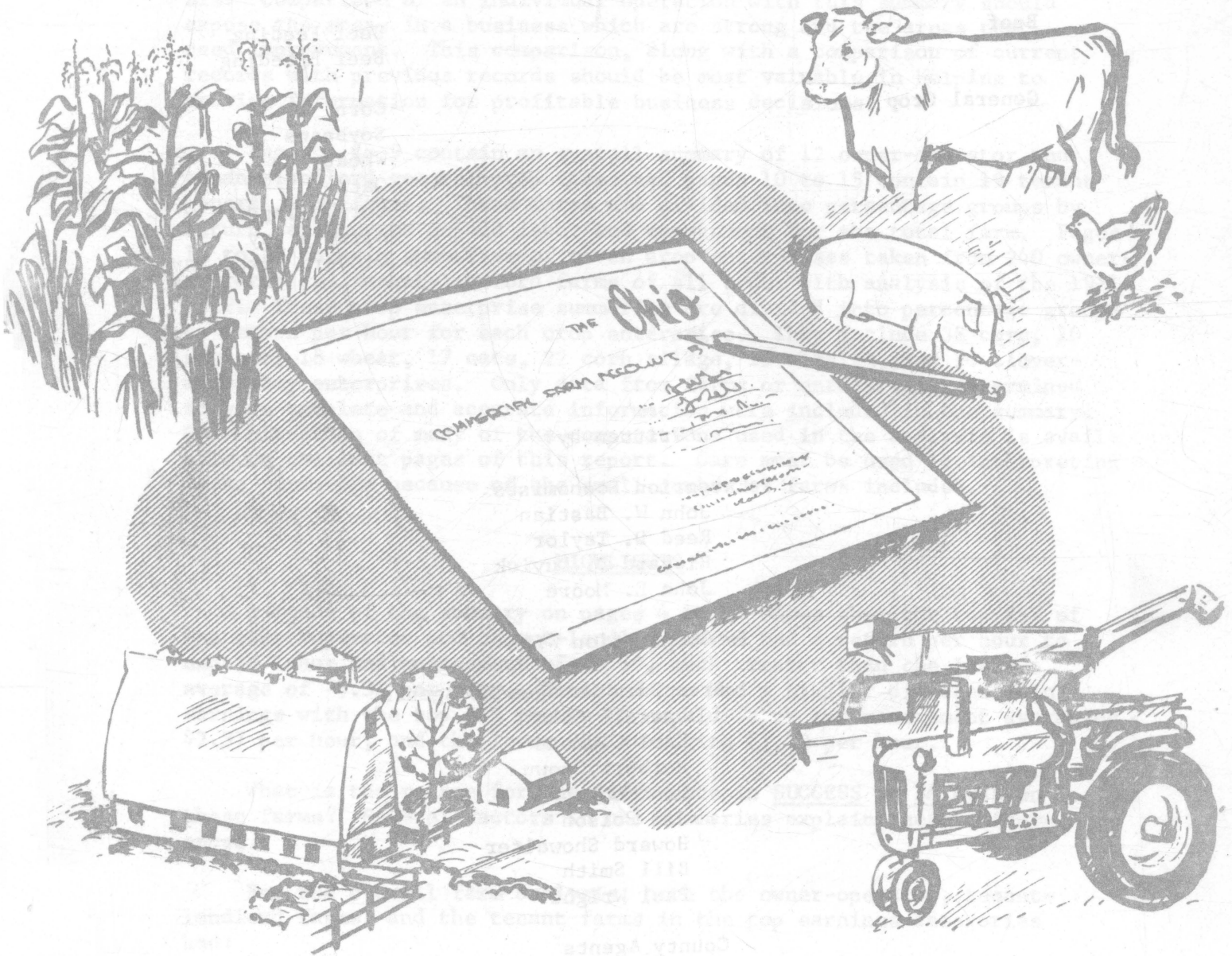


1971

Farm Business Analysis Report

General Crop Summary



Department of Agricultural Economics and Rural Sociology

COOPERATIVE EXTENSION SERVICE

THE OHIO STATE UNIVERSITY

Columbus, Ohio

SUMMARIES AVAILABLE FOR 1971

TOTAL FARM SUMMARIES

ENTERPRISE SUMMARIES INCLUDED

Dairy

Dairy
Milk

Swine

Swine

Beef

Beef Feeding
Beef Breeding

General Crop

Corn
Soybeans
Wheat
Oats
Corn silage
Alfalfa Hay
Clover, Mixed Hay

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1971 OHIO FARM BUSINESS ANALYSIS REPORT

GENERAL CROP SUMMARY

This summary is designed to help farm businessmen improve their income. Each section is divided into three groups composed of the top 25%, middle 50%, and lower 25% of the farms sorted by return per hour to unpaid labor and management. The report is arranged in a format similar to the computer printout received in the individual farm analysis. Comparison of an individual operation with this summary should expose the areas in a business which are strong and the areas that need improvement. This comparison, along with a comparison of current records with previous records should be most valuable in helping to provide information for profitable business decisions.

Pages 4 to 9 contain an overall summary of 12 owner-operator and tenant-landlord general crop farms and pages 10 to 15 contain 19 tenant general crop farms. These farms are divided into percentage groups by return per hour to unpaid labor and management for the total farm. Pages 16 to 29 contain summaries of seven crop enterprises taken from 240 owner-operator and tenant-landlord farms of all types with analysis of the 1971 year. These crop enterprise summaries are divided into percentage groups by return per hour for each crop enterprise. They include 38 corn, 10 soybean, 18 wheat, 17 oats, 22 corn silage, 15 alfalfa, and 10 clover-mixed hay enterprises. Only data from farms or enterprises determined to have complete and accurate information were included in the summary. An explanation of many of the computations used in the analysis is available on the last pages of this report. Care must be used in interpreting these summaries because of the small number of farms included.

HIGHLIGHTS

A study of the summary on pages 4 to 15 shows that the top 25% of the owner-operator and tenant-landlord farms had a return per hour to unpaid labor and management of \$9.69, much greater than the lower 25% average of -\$.31 per hour. Tenant farms had a similar difference in earnings with the top 25% return to unpaid labor and management averaging \$7.37 per hour, and the lower 25% averaging \$1.10 per hour.

What is the reason for the difference in SUCCESS or FAILURE on these farms? Several factors in the summaries explain these differences.

For the overall farm analysis, both the owner-operator, tenant-landlord farms, and the tenant farms in the top earnings categories had:

1. Lower overhead costs as a percent of gross income.

2. Lower machine investment per crop acre.
3. Greater gross farm income per farm (and when commuted, greater gross farm income per man).
4. Greater return per dollar of food fed.
5. Greater livestock income. (The top 25% and middle 50% averages for the owner-operator, tenant-landlord farm summary are similar.)
6. More crop acres.
7. More hired labor.
8. Greater gross income per \$1,000 invested. (Greater turnover)
9. Greater profit margin. (Management Income and Profit plus paid and unpaid interest ÷ Gross Income)
10. Greater percent return on investment. (Management Income and Profit plus paid and unpaid interest ÷ Total Investment)

The crop enterprises did not have as many clear-cut characteristics that separate top earnings per hour from low earnings per hour. However, several important points can be found. The oats enterprise lost money, even for the top 25% category. In nearly all cases, the top 25% in each of the crop enterprises had:

1. Relatively high yields while keeping costs in line.
2. Lower cost per bushel or per ton.
3. Greater number of acres of that particular enterprise.
4. Greater profit margin. (Management Income and Profit plus paid and unpaid interest ÷ Gross Income)
5. Greater turnover. (Gross Income per \$1,000 invested)
6. Greater percent return on investment. (Management Income and Profit plus paid and unpaid interest ÷ Total Investment)

SUCCESS or **FAILURE** depends on whether the business:

1. **IS MAKING A PROFIT** on each dollar of output.

Is the cropping program geared to produce maximum net return per crop acre?

Does the livestock operation produce maximum return per dollar of feed fed?

Are non-cash expenses per crop acre low enough to permit a profit?

2. HAS ENOUGH VOLUME.

Is there enough volume to provide a satisfactory income potential?

Is the business volume large enough to carry the investment and overhead cost in equipment, facilities and other capital resources?

Is the business large enough to provide productive and profitable employment for labor resources?

The high income operators out-performed their competition in both making a profit with each dollar of sales, and having enough volume for the amount of investment and labor available. They managed larger businesses, accomplished more per worker, and used capital resources more effectively. They excelled in the performance of their livestock enterprises and their crop enterprises.

No one factor can be singled out as the basic difference between high and low income farms. For each of the efficiency measures studied, some farms in the low income group ranked near the top. SATISFACTORY INCOMES were the result of above average performance "ACROSS THE BOARD", rather than outstanding achievement in only one or two departments.

1971 OHIO FARM BUSINESS ANALYSIS REPORT

OVERALL GENERAL CROP FARM SUMMARY

12 OWNER-OPERATOR & TENANT-LANDLORD GENERAL CROP FARMS

	Rank by Family Labor & Management Income/Hour to Farm			My Farm
	Top 25%	Middle 50%	Lower 25%	
Number of Farms	3	6	3	
<u>INCOME</u>				
Cash Receipts	\$137,364	\$ 46,878	\$ 27,253	
Capital Gains and Losses	888	940	27	
Inventory Changes	-400	-448	2,632	
- Feeder Livestock	-3,383	-462	-261	
Gross Farm Income	134,468	46,907	29,651	
<u>EXPENSES</u>				
Cash Expenses	78,652	30,459	20,012	
Depreciation	9,964	4,510	5,102	
Interest Not Charged	11,606	6,075	5,688	
Unpaid Operator & Family Labor	15,666	9,173	6,320	
- Feeder Livestock	-3,383	-462	-261	
Total Farm Expense	112,505	49,757	36,863	
<u>MANAGEMENT INCOME & PROFIT</u>				
Total	21,962	-2,849	-7,211	
As a Percent of Gross Income	16.3%	-6.1%	-24.3%	
<u>UNPAID OPERATOR & FAMILY LABOR</u>				
Total	15,666	9,173	6,320	
As a Percent of Gross Income	11.7%	19.6%	21.3%	
<u>OVERHEAD COSTS</u>				
Total	45,190	21,164	17,954	
As a Percent of Gross Income	33.6%	45.1%	60.6%	
<u>VARIABLE COSTS</u>				
Total	51,649	19,411	12,188	
As a Percent of Gross Income	38.4%	41.4%	42.5%	
<u>NET CASH INCOME</u>				
	58,711	16,418	7,240	
<u>NET FARM INCOME</u>				
	49,235	12,399	4,797	
<u>INVESTMENT</u>				
Total	\$331,588	\$155,754	\$154,135	
Return to Investment	41,857	6,495	2,036	
Percent Return on Investment	12.6%	4.2%	1.3%	
Gross Income Per \$1,000 Invested	405	301	192	
<u>LABOR EFFICIENCY FACTOR</u>				
	.674	.746	.458	
<u>TOTAL UNPAID LABOR & MANAGEMENT INCOME</u>				
Total	37,629	6,323	-890	
Hour	9.69	1.69	-.31	

1971 Ohio Farm Business Analysis Report

Overall Owner-Operator and Tenant-Landlord General Crop Farm Summary

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Farm</u>
<u>CASH RECEIPTS</u>				
Milk and Cream	\$ 5,738	\$	\$ 385	_____
General Crops	107,293	28,599	17,151	_____
Special Crops		494	208	_____
Cash Rent and Royalties	1,577	195	167	_____
Labor Off Farm	776		410	_____
Custom Work	890	946	2,552	_____
Other Livestock Products	56	967		_____
Tax Refund	215	34	103	_____
Patronage Dividend	413	21		_____
Miscellaneous Receipts	240	589	298	_____
Government Payments	318	541		_____
Government Crop Payments	10,447	1,874	1,205	_____
Market Livestock				_____
Swine		11,574	3,473	_____
Cattle	5,293	1,002	1,128	_____
Veal Calves	162		169	_____
Lambs	3,942	33		_____
Total Cash Receipts	137,364	46,878	27,253	_____
<u>CASH EXPENSES</u>				
Hired Labor	7,216	1,104	966	_____
Feed Purchased	2,420	4,843	2,120	_____
Farm Supplies	4,166	958	1,184	_____
Machinery Repairs	6,549	2,214	1,317	_____
Bldg., Fence, Tile, Etc. Repairs	955	173	221	_____
Fuel, Oil, and Grease	4,870	1,742	1,070	_____
Electricity (Farm Share)	509	334	325	_____
Telephone (Farm Share)	302	84	59	_____
Miscellaneous Expenses	1,041	206	278	_____
Seeds and Plants	6,324	1,413	1,249	_____
Fertilizer and Lime	14,162	5,248	3,375	_____
Machine Hire and Trucking	3,251	916	227	_____
Auto Expense (Farm Share)	550	113	349	_____
Interest on Notes and Mortgage	8,288	3,269	3,559	_____
Veterinary and Medicine	223	233	52	_____
Breeding Fees and Registration	61	5	13	_____
Feeder Livestock Purchase	3,383	462	261	_____
Taxes	3,220	1,053	1,159	_____
Cash Rent	10,177	5,633	2,038	_____
Insurance	978	448	186	_____
Total Cash Expenses	78,652	30,459	20,012	_____

1971 Ohio Farm Business Analysis Report

Overall Owner-Operator and Tenant-Landlord General Crop Farm Summary

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Pa</u>
<u>CAPITAL GAIN</u>				
Raised Breeding Stock	\$ 504	\$ 91	\$ 60	---
Purchased Breeding Stock	293	-66		---
Machinery and Equipment	90	92	-33	---
Total Capital Gain or Loss	888	940	27	---
<u>NET INVENTORY CHANGE</u>				
Raised Breeding Livestock	1,240	512	66	---
Market Livestock		160	-134	---
Grain, Hay, Supplement	-2,410	-1,107	2,687	---
Supplies and Fertilizer	769	-14	12	---
Total Inventory Change	-400	-448	2,032	---
<u>DEPRECIATION</u>				
Buildings, Fence, Etc.	1,198	1,067	1,403	---
Machinery and Equipment	8,558	3,377	2,699	---
Purchased Breeding Stock	206	66		---
Total Depreciation	9,964	4,510	5,102	---
<u>CAPITAL INVESTMENT</u>				
Purchased Breeding Stock	8,251	1,975		---
Raised Breeding Stock	8,263	2,209	516	---
Market Livestock		4,859	1,487	---
Grain and Hay	38,647	16,380	13,601	---
Supplies and Fertilizer	1,583	143	242	---
Machinery and Equipment	57,110	29,471	17,700	---
Buildings, Fence, Tile	14,574	22,966	15,775	---
Land (Current Ag. Value)	203,158	77,750	104,812	---
Total Capital Investment	331,588	155,754	154,135	---
<u>RATIO ANALYSIS</u>				
Profit Margin	.311	.138	.069	---
Turnover	.405	.301	.192	---
Return on Investment	.126	.042	.013	---

1971 Ohio Farm Business Analysis Report

Overall Owner-Operator and Tenant-Landlord General Crop Farm Summary

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Farm</u>
<u>LABOR EFFICIENCY</u>				
Reported Labor Used On Farm				
Operators Labor Used				
Hours	3,000.0	2,515.0	2,500.0	_____
Value/Hr	\$3.83	\$2.33	\$2.16	_____
Hours	800.0	600.0		_____
Value/Hr	\$5.00	\$1.75		_____
Unpaid Family Used				
Wife				
Hours		608.3	216.6	_____
Value/Hr		\$1.75	\$1.75	_____
Family Labor Over 14				
Hours		150.0	283.3	_____
Value/Hr		\$2.50	\$1.25	_____
Family Labor Under 14				
Hours	166.6	33.3		_____
Value/Hr	\$1.00	\$1.50		_____
Hired Labor				
Hours	3,350.0	643.5	466.6	_____
Value/Hr	\$2.15	\$1.72	\$2.07	_____
Number of Man Equivalent Hours Used	7,233	4,381	3,360	_____
Number of PMWU Used	723	438	336	_____
Number of Man-Year Equivalentents Used	2.41	1.46	1.12	_____
Value of Operators Labor Used	\$15,500	\$ 7,331	\$5,500	_____
Value of Unpaid Family Labor Used	166	1,841	820	_____
Value of Hired Labor Used	7,216	1,104	966	_____
Value of Total Labor	22,883	10,278	7,287	_____
Value of Labor Per Man				
Hour Equivalent	3.16	2.34	2.16	_____
Value of Labor Per PMWU	\$31.64	\$23.46	\$21.65	_____
Value of Labor Per Man-Year Equivalent	\$9,492	\$7,038	\$6,495	_____

1971 Ohio Farm Business Analysis Report

Overall Owner-Operator and Tenant-Landlord General Crop Farm Summary

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Farm</u>
<u>CROPS SUMMARY</u>				
Crop Production				
Corn				
Acres	412	158	86	
Yields	122.50	83.10	108.80	
Soybeans				
Acres	318	108	74	
Yields	31.90	30.10	32.70	
Oats				
Acres	57	24	19	
Yields	60.10	52.10	76.50	
Wheat				
Acres	104	33	8	
Yields	41.20	50.70	50.80	
Alfalfa				
Acres	6		1	
Yields	5.40		1.50	
Clover				
Acres	6	11	16	
Yields	4.00	2.50	2.40	
General Crop Acres	926	366	252	
Total Harvested Crop Acres	1,061	434	268	
Value of General Crops	\$ 98,635	\$32,686	\$22,261	
Value of All Crops	109,083	35,758	23,466	
General Crop Prod. Value/Acre	\$106.51	\$89.30	\$88.23	
All Crop Prod. Value/Acre	102.81	82.39	87.55	
Percent of Gen. Crops in Corn and Soybeans	80.2%	72.7%	63.5%	
Percent Total Tillable Acres in Corn and Soybeans	68.5%	60.5%	59.7%	
Fertilizer and Lime Cost Per Acre	\$ 13.06	\$11.93	\$12.59	
Machinery Investment Per Crop Acre	52.68	66.98	66.04	
Total Power and Machinery Cost	26,315	9,184	5,172	
Machinery Cost Per Crop Acre	24.28	20.88	19.30	

1971 Ohio Farm Business Analysis Report

Overall Owner-Operator and Tenant-Landlord General Crop Farm Summary

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Farm</u>
<u>LIVESTOCK SUMMARY</u>				
Total Value of Feed Fed to all Livestock Enterprises	\$6,005	\$7,541	\$3,152	_____
Value of Net Livestock Increase	\$13,451	\$13,026	\$4,672	_____
Returns Per \$ Feed Fed to all Livestock Enterprises	\$2.24	\$1.73	\$1.48	_____

1971 OHIO FARM BUSINESS ANALYSIS REPORT

OVERALL GENERAL CRO^D FARM SUMMARY

19 TENANT GENERAL CROP FARMS

	Rank by Family Labor & Management Income per Hour to Farm			My Farm
	Top 25%	Middle 50%	Lower 25%	
Number of Farms	4	9	6	
<u>INCOME</u>				
Cash Receipts	\$37,154	\$24,131	\$19,955	_____
Capital Gains	200	120	55	_____
Inventory Charges	9,512	5,794	-216	_____
- Feeder Livestock	-557	-502	-1,123	_____
Gross Farm Income	46,309	29,544	18,670	_____
<u>EXPENSES</u>				
Cash Expenses	20,156	13,599	12,706	_____
Depreciation	5,000	3,665	3,114	_____
Interest Not Charged	1,135	1,505	867	_____
Unpaid Operator and Family Labor	7,063	6,520	6,790	_____
- Feeder Livestock	-557	-502	-1,123	_____
Total Farm Expense	32,798	24,788	22,354	_____
<u>MANAGEMENT INCOME & PROFIT</u>				
Total	13,510	4,756	-3,683	_____
As a Percent of Gross Income	29.2%	16.1%	-19.7%	_____
<u>UNPAID OPERATOR & FAMILY LABOR</u>				
Total	7,063	6,520	6,790	_____
As a Percent of Gross Income	15.3%	22.1%	36.4%	_____
<u>OVERHEAD COSTS</u>				
Total	8,879	7,432	6,035	_____
As a Percent of Gross Income	19.2%	25.2%	32.3%	_____
<u>VARIABLE COSTS</u>				
Total	16,855	10,836	9,529	_____
As a Percent of Gross Income	36.4%	36.7%	51.0%	_____
<u>NET CASH INCOME</u>				
	16,997	10,532	7,248	_____
<u>NET FARM INCOME</u>				
	21,709	12,781	3,973	_____
<u>INVESTMENT</u>				
Total	46,132	31,630	24,496	_____
Return to Investment	16,278	6,653	-2,214	_____
Percent Return on Investment	35.3%	21.0%	-9.0%	_____
Gross Income Per \$1,000 Invested	1,004	934	762	_____
<u>LABOR EFFICIENCY FACTOR</u>				
	1.062	.766	.658	_____
<u>TOTAL UNPAID LABOR & MANAGEMENT INCOME</u>				
Total	20,574	11,276	3,106	_____
Hour	7.37	4.45	1.10	_____

1971 Ohio Farm Business Analysis Report

Overall Tenant General Crop Farm Summary

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Farm</u>
<u>CASH RECEIPTS</u>				
Milk and Cream			\$ 565	_____
General Crops	\$24,254	\$17,629	12,125	_____
Special Crops	1,741		632	_____
Labor Off Farm	475	28	8	_____
Custom Work	4,225	1,283	1,391	_____
Wool	1	175	29	_____
Tax Refund	132	96	50	_____
Patronage Dividend	19	11	42	_____
Miscellaneous Receipts	87	405	242	_____
Government Payments	74	234	24	_____
Government Crop Payments	1,690	1,566	1,188	_____
Market Livestock				_____
Swine	4,441	880	1,496	_____
Cattle		871	1,592	_____
Lambs	10	948	569	_____
Total Cash Receipts	37,154	24,131	19,955	_____
<u>CASH EXPENSES</u>				
Hired Labor	1,129	190	643	_____
Feed Purchased	1,231	908	919	_____
Farm Supplies	1,111	928	967	_____
Machinery Repairs	2,186	1,401	1,464	_____
Bldg., Fence, Tile, Etc. Repairs	48		10	_____
Fuel, Oil, and Grease	2,097	1,321	943	_____
Electricity (Farm Share)	152	146	96	_____
Telephone (Farm Share)	43	63	73	_____
Miscellaneous Expenses	282	200	250	_____
Seeds and Plants	1,431	1,371	1,120	_____
Fertilizer and Lime	4,146	3,426	2,829	_____
Machine Hire and Trucking	2,668	719	53	_____
Auto Expense (Farm Share)	194	125	66	_____
Interest on Notes and Mortgage	1,632	392	602	_____
Veterinary and Medicine	180	31	101	_____
Feeder Livestock Purchase	557	502	1,123	_____
Taxes	331	208	437	_____
Cash Rent		1,364	725	_____
Insurance	732	295	278	_____
Total Cash Expenses	20,156	13,599	12,706	_____

1971 Ohio Farm Business Analysis Report

Overall Tenant General Crop Farm Summary

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Farm</u>
<u>CAPITAL GAIN</u>				
Raised Breeding Stock	\$ 207	\$ 119	\$ 64	_____
Purchased Breeding Stock	-7	-10	-17	_____
Machinery and Equipment		12	8	_____
Total Capital Gain or Loss	200	120	55	_____
<u>NET INVENTORY CHANGE</u>				
Raised Breeding Livestock	573	22	103	_____
Market Livestock	948	482	-589	_____
Grain, Hay, Supplement	8,180	5,195	399	_____
Supplies and Fertilizer	-190	94	-129	_____
Total Inventory Change	9,512	5,794	-216	_____
<u>DEPRECIATION</u>				
Buildings, Fence, Etc.		19	28	_____
Machinery and Equipment	5,000	3,646	3,066	_____
Purchased Breeding Stock			20	_____
Total Depreciation	5,000	3,665	3,114	_____
<u>CAPITAL INVESTMENT</u>				
Purchased Breeding Stock	37	1,033	775	_____
Raised Breeding Stock	658	655	280	_____
Market Livestock	1,421	841	1,741	_____
Grain and Hay	20,359	9,002	5,601	_____
Supplies and Fertilizer	721	69	198	_____
Machinery and Equipment	22,746	19,408	14,793	_____
Buildings, Fence, Tile		620	940	_____
Land (Current Ag. Value)	187		166	_____
Total Capital Investment	46,132	31,630	24,496	_____
<u>RATIO ANALYSIS</u>				
Profit Margin	.352	.225	-.119	_____
Turnover	1.004	.934	.762	_____
Return on Investment	.353	.210	-.090	_____

1971 Ohio Farm Business Analysis Report
Overall Tenant General Crop Farm Summary

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Farm</u>
<u>LABOR EFFICIENCY</u>				
Reported Labor Used on Farm				
Operators Labor Used				
Hours	2,487.5	2,370.1	2,452.6	_____
Value/Hr	\$2.37	\$2.61	\$2.41	_____
Hours	225.0		226.3	_____
Value/Hr	\$3.00		\$2.00	_____
Unpaid Family Labor Used				
Wife				
Hours	29.0	199.5	112.6	_____
Value/Hr	\$1.50	\$1.75	\$1.83	_____
Family Labor Over 14				
Hours			66.6	_____
Value/Hr			\$2.00	_____
Family Labor Under 14				
Hours	110.0	8.8		_____
Value/Hr	\$2.00	\$2.00		_____
Hired Labor				
Hours	604.7	85.2	392.1	_____
Value/Hr	\$1.87	\$2.23	\$1.64	_____
Number of Man Equivalent Hours Used	3,395	2,619	3,214	_____
Number of PMWU Used	339	261	321	_____
Number of Man-Year Equivalentents Used	1.13	.87	1.07	_____
Value of Operators Labor Used	\$6,800	\$6,188	\$6,449	_____
Value of Unpaid Family Labor Used	263	332	340	_____
Value of Hired Labor Used	1,129	190	643	_____
Value of Total Labor	8,193	6,710	7,433	_____
Value of Labor Per Man Hour Equivalent	2.42	2.57	2.32	_____
Value of Labor Per PMWU	\$24.16	\$25.70	\$23.15	_____
Value of Labor Per Man-Year Equivalent	\$7,244	\$7,686	\$6,940	_____

1971 Ohio Farm Business Analysis Report

Overall Tenant General Crop Farm Summary

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Farm</u>
<u>CROPS SUMMARY</u>				
Crop Production				
(*Yields, returns, and costs are for tenant's share only)				
Corn				
Acres	294	164	140	
Yield*	62.4	69.0	48.5	
Soybeans				
Acres	150	122	99	
Yield*	21.3	23.1	15.8	
Oats				
Acres	24	15	18	
Yield*	49.0	51.5	42.4	
Wheat				
Acres	54	32	23	
Yield*	24.3	39.8	22.2	
Alfalfa				
Acres		1	6	
Yield*		3.0	1.6	
Clover				
Acres	25	9	17	
Yield*	1.4	1.7	.9	
Corn Silage				
Acres	7		3	
Yield*	21.6		3.0	
General Crop Acres	557	349	310	
Total Harvested Crop Acres	613	381	331	
Value of General Crops*	\$34,123	\$24,221	\$14,294	
Value of All Crops*	39,341	25,788	16,152	
General Crop Prod. Value/Acre*	\$ 61.26	\$ 69.40	\$ 46.10	
All Crop Prod. Value/Acre*	64.17	67.86	48.80	
Percent of Gen. Crops in Corn and Soybeans	81.0%	81.9%	78.1%	
Percent Total Tillable Acres in Corn and Soybeans	73.6%	75.1%	73.1%	
Fertilizer and Lime Cost Per Acre*	\$ 6.76	\$ 8.99	\$ 8.55	
Machinery Investment Per Crop Acre*	37.11	50.94	44.69	
Total Power and Machinery Cost*	9,285	7,094	5,089	
Machinery Cost Per Crop Acre*	15.15	18.62	15.37	

1971 Ohio Farm Business Analysis Report
 Overall Tenant General Crop Farm Summary

	<u>Top 25%</u>	<u>Middle 50</u>	<u>Lower 25%</u>	<u>My Farm</u>
<u>LIVESTOCK SUMMARY</u>				
Total Value of Feed Fed to all Livestock Enterprises	\$3,162	\$1,707	\$1,853	_____
Value of Net Livestock Increase	8,685	3,106	2,666	_____
Returns Per \$ Feed Fed to all Livestock Enterprises	\$2.75	\$1.82	\$1.44	_____

1971 Ohio Farm Business Analysis Report

38 Corn Enterprises

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My farm</u>
<u>NUMBER OF FARMS</u>	9	19	10	
<u>GENERAL INFORMATION</u>				
Number of Acres	168	109	55	_____
Value per bushel produced	\$1.10	\$1.10	\$1.10	_____
Cost per bushel produced	\$.98	\$1.19	\$1.54	_____
<u>PER ACRE INFORMATION</u>				
(The following information is on a per acre basis)	per acre	per acre	per acre	
Bushels Produced	116.8	88.4	91.1	_____
Productive Man Work Units	.50	.66	.73	_____
Value of Labor Used	\$11.98	\$15.00	\$13.84	_____
TOTAL VALUE OF PRODUCTION	\$128.51	\$97.26	\$100.22	_____
<u>Cash Expenses</u>				
Hired Labor	\$ 6.13	\$ 1.94	\$ 2.62	_____
Farm Supplies	8.23	3.22	3.22	_____
Machine Repairs	3.48	5.35	8.49	_____
Build, Fence, Etc.	.48	.23	1.84	_____
Fuel, Oil & Grease	5.79	4.23	4.44	_____
Electric	.46	.14	.15	_____
Telephone	.23	.10	.09	_____
Misc. Expense	1.22	1.22	.71	_____
Seeds & Plants	6.18	5.73	8.49	_____
Fertilizer & Lime	20.58	21.59	34.70	_____
Machine Hire and Trk.	1.02	1.94	6.80	_____
Auto Expense	.26	.39	1.02	_____
Interest on Notes	4.64	4.89	6.69	_____
Taxes	4.86	3.82	3.84	_____
Rent	2.71	7.76	6.87	_____
Insurance	1.52	.28	1.07	_____
Total Cash Expenses	\$67.79	\$62.81	\$91.04	_____

1971 Ohio Farm Business Analysis Report

Corn Enterprise Summary (cont.)

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My farm</u>
Non-Cash Expenses				
Depreciation				
Bldg., Fence & Tile	\$ 2.39	\$ 1.24	\$ 1.15	_____
Machinery & Equip.	11.73	9.62	11.91	_____
Total Depreciation	14.12	10.86	13.05	_____
Unpaid Opr. and Fam. Labor	5.85	13.06	11.22	_____
Interest Not Charged	27.04	18.33	24.65	_____
Total Non-Cash Expenses	47.01	42.25	48.92	_____
TOTAL EXPENSES OF PRODUCTION	114.80	105.07	139.96	_____
Management Income and Profit	13.71	-7.82	-39.73	_____
Value of Production less Cash Expenses	60.72	34.45	9.18	_____
Total Investment	527.98	387.08	522.55	_____
Return on Investment	45.39	15.40	-8.38	_____
Percent Return on Investment	8.59%	3.98%	-1.60%	_____
Return to Unpaid Operator and Family Labor, Management and Profit				
Total Per Acre	19.56	5.25	-28.51	_____
Per Hour	\$8.74	\$.93	-\$5.46	_____
<u>RATIO ANALYSIS</u>				
Profit Margin	.353	.158	-.084	_____
Turnover	.243	.251	.192	_____
Return on Investment	.086	.040	-.016	_____

1971 Ohio Farm Business Analysis Report

10 Soybean Enterprises

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Farm</u>
<u>NUMBER OF FARMS</u>	3	5	2	
<u>GENERAL INFORMATION</u>				
Number of Acres	146	75	41	_____
Value per bushel produced	\$3.06	\$2.98	\$3.00	_____
Cost per bushel produced	2.37	3.03	4.60	_____
<u>PER ACRE INFORMATION</u>				
(The following information is on a per acre basis)	per acre	per acre	per acre	
Bushels produced	36.1	26.0	34.5	_____
Productive Man Work Units	.34	.48	.49	_____
Value of Labor Used	\$8.66	\$10.72	\$12.66	_____
TOTAL VALUE OF PRODUCTION	\$110.44	\$77.39	\$103.54	_____
Cash Expenses				
Hired Labor	\$ 3.53	\$ 2.16	\$ 2.07	_____
Farm Supplies	7.49	1.73	5.37	_____
Machine Repairs	2.93	3.81	9.44	_____
Build, Fence, Etc.	.09	.01	.42	_____
Fuel, Oil & Grease	4.18	3.23	10.24	_____
Electric	.11	.25	.73	_____
Telephone	.26	.17	.49	_____
Misc. Expense	.83	.33	.37	_____
Seeds and Plants	4.73	3.49	2.59	_____
Fertilizer and Lime	5.71	5.35	4.07	_____
Machine Hire and Trk.	.66	1.01	.02	_____
Auto Expense	.09	.41	.83	_____
Interest on Notes	1.71	11.68	10.95	_____
Taxes	4.45	3.09	8.76	_____
Rent		3.45		_____
Insurance	1.84	.61	1.88	_____
Total Cash Expenses	\$38.60	\$40.81	\$58.22	_____

1971 Ohio Farm Business Analysis Report

Soybean Enterprise Summary (cont.)

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Farm</u>
Non-Cash Expenses				
Depreciation				
Bldg., Fence, & Tile	\$ 1.26	\$ 1.19	\$ 9.10	_____
Machinery & Equip.	7.72	11.64	36.82	_____
Total Depreciation	8.98	12.83	45.92	_____
Unpaid Opr. and Fam. Labor	5.13	8.56	10.59	_____
Interest Not Charged	32.76	16.69	43.90	_____
Total Non-Cash Expenses	46.87	38.08	100.41	_____
TOTAL EXPENSES OF PRODUCTION	85.47	78.89	158.63	_____
Management Income and Profit	24.97	-1.51	-55.10	_____
Value of Production less				
Cash Expenses	71.84	36.57	45.32	_____
Total Investment	574.60	472.99	914.49	_____
Return on Investment	59.44	26.85	-.24	_____
Percent Return on Investment	10.3%	5.7%	.03%	_____
Return to Unpaid Operator and				
Family Labor, Management				
and Profit				
Total Per Acre	30.10	7.04	-44.51	_____
Per Hour	15.34	1.85	-11.47	_____
<u>RATIO ANALYSIS</u>				
Profit Margin	.538	.347	-.002	_____
Turnover	.192	.164	.113	_____
Return on Investment	.103	.057	-.0003	_____

1971 Ohio Farm Business Analysis Report

18 Wheat Enterprises

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>M</u>
<u>NUMBER OF FARMS</u>	4	3	3	
<u>GENERAL INFORMATION</u>				
Number of Acres	34	34	19	
Value per bushel produced*	\$1.32	\$1.31	\$1.26	—
Cost per bushel produced	1.34	1.80	2.70	—
<u>PER ACRE INFORMATION</u>				
(The following information is on a per acre basis)	per acre	per acre	per acre	
Bushels produced	43.8	47.3	43.5	—
Productive Man Work Units	.47	.56	.47	—
Value of Labor Used	10.47	11.24	11.58	—
TOTAL VALUE OF PRODUCTION	57.85	61.98	54.79	—
Cash Expenses				
Hired Labor	\$.44	\$ 3.59	\$ 5.21	—
Farm Supplies	.35	.47	.21	—
Machine Repairs	3.21	2.47	7.21	—
Fuel, Oil & Grease	2.59	2.82	6.32	—
Electric	.12	.44	.16	—
Telephone	.15	.12	.58	—
Misc. Expense	.12	.61	1.21	—
Seeds and Plants	1.88	4.50	8.53	—
Fertilizer and Lime	11.35	12.70	21.32	—
Machine Hire and Trk.	1.24	2.66	2.05	—
Auto Expense	.21	.47	1.05	—
Interest on Notes	2.35	4.85	1.00	—
Taxes	1.71	4.74	4.26	—
Rent		3.97	.47	—
Insurance	.32	.85	1.00	—
Total Cash Expenses	\$26.03	\$45.38	\$60.58	—

* No income from government payments included.

1971 Ohio Farm Business Analysis Report

Wheat Enterprise Summary (cont.)

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Farm</u>
Non-Cash Expenses				
Depreciation				
Bldg., Fence, & Tile	\$.56	\$ 3.50	\$ 1.26	_____
Machinery & Equip.	7.32	6.50	10.42	_____
Total Depreciation	7.88	10.00	11.68	_____
Unpaid Opr. and Fam. Labor	10.03	7.65	6.37	_____
Interest Not Charged	14.54	21.95	39.00	_____
Total Non-Cash Expenses	32.46	39.61	57.05	_____
TOTAL EXPENSES OF PRODUCTION	58.50	85.00	117.63	_____
Management Income and Profit	-.65	-23.03	-62.84	_____
Value of Production less				
Cash Expenses	31.82	16.59	-5.79	_____
Total Investment	281.85	446.97	666.84	_____
Return on Investment	16.24	3.76	-22.84	_____
Percent Return on Investment	5.76%	.84%	-3.4%	_____
Return to Unpaid Operator and Family Labor, Management and Profit				
Total Per Acre	9.38	-15.38	-56.47	_____
Per Hour	2.09	-5.32	-20.74	_____
<u>RATIO ANALYSIS</u>				
Profit Margin	.281	.061	-.417	_____
Turnover	.205	.139	.082	_____
Return on Investment	.058	.008	-.034	_____

1971 Ohio Farm Business Analysis Report

17 Oats Enterprises

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Farm</u>
<u>NUMBER OF FARMS</u>	4	9	5	
<u>GENERAL INFORMATION</u>				
Number of Acres	42	20	16	
Value per bushel produced	\$.70	\$.66	\$.76	
Cost per bushel produced	.96	1.08	1.38	
<u>PER ACRE INFORMATION</u>				
(The following information is on a per acre basis)	per acre	per acre	per acre	
Bushels produced	57.2	69.4	43.8	
Productive Man Work Units	.36	.30	.31	
Value of Labor Used	\$6.00	\$6.45	\$8.44	
TOTAL VALUE OF PRODUCTION	40.07	45.80	63.69	
<u>Cash Expenses</u>				
Hired Labor	\$	\$.40	\$ 4.44	
Farm Supplies	.31	.40	1.81	
Machine Repairs	3.26	6.25	4.88	
Build, Fence, Etc.		.20	.19	
Fuel, Oil & Grease	3.40	4.25	3.38	
Electric	.12	.15	.50	
Telephone	.29	.05	.19	
Misc. Expense	.07	.70	1.25	
Seeds and Plants	2.31	1.55	4.63	
Fertilizer and Lime	8.71	9.30	9.94	
Machine Hire and Trk.	4.14	4.25	2.81	
Auto Expense	.64	.35	1.31	
Interest on Notes	3.45	5.60	17.75	
Taxes	.98	2.80	6.25	
Rent	2.02		7.13	
Insurance	.31	.45	1.50	
Total Cash Expenses	\$30.02	\$36.71	\$68.00	

1971 Ohio Farm Business Analysis Report

Oats Enterprise Summary (cont.)

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Farm</u>
Non-Cash Expenses				
Depreciation				
Bldg., Fence & Tile	\$.79	\$.55	\$ 2.50	_____
Machinery & Equip.	7.21	16.21	7.63	_____
Total Depreciation	8.00	16.76	10.13	_____
Unpaid Opr. and Fam. Labor	6.00	6.06	4.00	_____
Interest Not Charged	10.74	15.36	33.81	_____
Total Non-Cash Expenses	24.74	38.18	47.94	_____
 TOTAL EXPENSES OF PRODUCTION	 54.76	 74.86	 115.94	 _____
Management Income and Profit	-14.69	-29.06	-52.25	_____
Value of Production less				
Cash Expenses	10.05	9.10	-4.31	_____
Total Investment	236.67	349.40	860.38	_____
Return on Investment	-.50	-8.10	-.69	_____
Percent Return on Investment	-.21%	-2.31%	-.08%	_____
Return to Unpaid Operator and				
Family Labor, Management and				
Profit				
Total Per Acre	-8.69	-22.99	-48.25	_____
Per Hour	-2.40	-7.80	-62.13	_____
 <u>RATIO ANALYSIS</u>				
Profit Margin	-.012	-.177	-.010	_____
Turnover	.169	.131	.074	_____
Return on Investment	-.002	-.023	-.001	_____

1971 Ohio Farm Business Analysis Report

22 Corn Silage Enterprises

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Farm</u>
<u>NUMBER OF FARMS</u>	5	11	6	
<u>GENERAL INFORMATION</u>				
Number of Acres	63	38	33	_____
Value per ton produced	\$11.60	\$9.36	\$ 8.00	_____
Cost per ton produced	5.93	7.29	11.99	_____
<u>PER ACRE INFORMATION</u>				
(The following information is on a per acre basis)	per acre	per acre	per acre	
Tons produced	18.9	16.4	14.5	_____
Productive Man Work Units	.94	.97	.88	_____
Value of Labor Used	\$18.78	\$18.84	\$20.30	_____
TOTAL VALUE OF PRODUCTION	\$219.59	\$153.95	\$118.33	_____
Cash Expenses				
Hired Labor	\$ 4.02	\$ 2.08	\$ 6.76	_____
Farm Supplies	3.24	4.03	5.88	_____
Machine Repairs	6.32	8.95	7.48	_____
Build, Fence, Etc.	.44	.18	1.30	_____
Fuel, Oil & Grease	7.25	4.03	4.48	_____
Electric	.08	.03	.03	_____
Telephone	.08	.18	.15	_____
Misc. Expense	.71	.29	1.55	_____
Seeds and Plants	6.17	5.61	6.67	_____
Fertilizer and Lime	21.35	23.89	41.70	_____
Machine Hire and Trk.	.16	8.68	5.61	_____
Auto Expense	.32	.50	1.00	_____
Interest on Notes	2.30	2.92	17.30	_____
Taxes	4.38	2.89	8.79	_____
Rent	1.24	.74	.18	_____
Insurance	.35	.55	.36	_____
Total Cash Expenses	\$58.41	\$65.55	\$109.24	_____

1971 Ohio Farm Business Analysis Report

Corn Silage Enterprise Summary (cont.)

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Farm</u>
Non-Cash Expenses				
Depreciation				
Bldg., Fence & Tile	\$ 1.76	\$ 1.71	\$ 3.27	_____
Machinery & Equip.	14.60	11.26	15.42	_____
Total Depreciation	16.37	12.97	18.70	_____
Unpaid Opr. and Fam. Labor	14.76	16.76	13.55	_____
Interest Not Charged	22.52	24.29	21.12	_____
Total Non-Cash Expenses	53.65	54.02	53.37	_____
TOTAL EXPENSES OF PRODUCTION	112.06	119.58	162.61	_____
Management Income and Profit	107.53	34.37	-44.27	_____
Value of Production less				
Cash Expenses	161.17	88.39	9.09	_____
Total Investment	413.81	453.63	640.52	_____
Return on Investment	132.35	61.55	- 5.85	_____
Percent Return on Investment	31.98%	13.57%	-.91%	_____
Return to Unpaid Operator and				
Family Labor, Management and				
Profit				
Total Per Acre	122.29	51.13	-30.73	_____
Per Hour	\$16.95	\$6.06	-\$4.73	_____
<u>RATIO ANALYSIS</u>				
Profit Margin	.603	.400	-.049	_____
Turnover	.531	.339	.185	_____
Return on Investment	.320	.136	-.009	_____

1971 Ohio Farm Business Analysis Report

All Owner-Operator & Tenant-Landlord Farms by Net/Hr to

15 Alfalfa Enterprises

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Farm</u>
<u>NUMBER OF FARMS</u>	4	8	3	
<u>GENERAL INFORMATION</u>				
Number of Acres	42	35	10	_____
Value per ton produced	\$33.00	\$36.12	\$ 22.33	_____
Cost per ton produced	24.16	41.44	43.15	_____
<u>PER ACRE INFORMATION</u>				
(The following information is on a per acre basis)	per acre	per acre	per acre	
Tons produced	3.53	2.84	5.93	_____
Productive Man Work Units	1.02	1.06	1.40	_____
Value of Labor Used	\$21.76	\$23.26	\$36.90	_____
TOTAL VALUE OF PRODUCTION	\$116.50	\$102.60	\$132.60	_____
Cash Expenses				
Hired Labor	\$ 6.29	\$ 3.51	\$ 9.90	_____
Farm Supplies	2.07	9.06	2.80	_____
Machine Repairs	8.86	9.23	18.00	_____
Build, Fence, Etc.		.83	.10	_____
Fuel Oil & Grease	3.93	5.60	23.70	_____
Electric	.14	.23		_____
Telephone	.05	.09		_____
Misc. Expense	.17	.71	.10	_____
Seeds & Plants	4.74	5.71	10.40	_____
Fertilizer Lime	6.45	16.89	14.80	_____
Machine Hired Trk.	.10	.31		_____
Auto Expense	.19	.60		_____
Interest on Notes	3.33	15.14	13.30	_____
Taxes	4.95	3.71	12.60	_____
Rent	2.71		1.40	_____
Insurance	.64	.69	3.70	_____
Total Cash Expenses	\$44.62	\$72.31	\$110.80	_____

1971 Ohio Farm Business Analysis Report

Alfalfa Enterprise Summary (cont.)

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My Farm</u>
Non-Cash Expenses				
Depreciation				
Bldg., Fence, & Tile	\$.60	\$ 1.14	\$ 20.50	_____
Machinery & Equip.	8.64	13.14	34.20	_____
Total Depreciation	9.24	14.28	54.70	_____
Unpaid Opr. and Fam. Labor	15.48	19.74	27.00	_____
Interest Not Charged	19.95	11.34	63.40	_____
Total Non-Cash Expenses	44.67	45.37	145.10	_____
TOTAL EXPENSES OF PRODUCTION	85.29	117.69	255.90	_____
Management Income and Profit	27.21	-15.08	-123.30	_____
Value of Production less				
Cash Expenses	71.88	30.29	21.80	_____
Total Investment	388.12	441.43	1,278.70	_____
Return on Investment	50.48	11.40	-46.60	_____
Percent Return on Investment	13.00%	2.58%	-3.64	_____
Return to Unpaid Operator and Family Labor, Management and Profit				
Total Per Acre	42.69	4.66	-96.20	_____
Per Hour	6.39	.52	-11.92	_____
<u>RATIO ANALYSIS</u>				
Profit Margin	.433	.111	-.351	_____
Turnover	.300	.232	.104	_____
Return on Investment	.130	.026	-.036	_____

1971 Ohio Farm Business Analysis Report

14 Clover-Mixed Hay Enterprises

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My farm</u>
<u>NUMBER OF FARMS</u>	6	7	3	_____
<u>GENERAL INFORMATION</u>				
Number of Acres	31	29	45	_____
Value per ton produced	\$30.50	\$29.42	\$25.00	_____
Cost per ton produced	\$26.30	\$31.32	\$27.45	_____
<u>PER ACRE INFORMATION</u>				
(The following information is on a per acre basis)	per acre	per acre	per acre	
Tons produced	3.46	1.77	1.61	_____
Productive Man Work Units	1.29	1.66	1.71	_____
Value of Labor Used	\$27.03	\$3.62	\$33.07	_____
TOTAL VALUE OF PRODUCTION	\$105.48	\$52.00	\$40.33	
<u>Cash Expenses</u>				
Hired Labor	\$ 6.39	\$ 2.59	\$25.49	_____
Farm Supplies	.81	1.14	3.82	_____
Machine Repairs	8.35	5.48	9.60	_____
Build Fence, Etc.	.39	.83	.11	_____
Fuel, Oil & Grse.	6.16	5.24	3.64	_____
Electric	.16	1.00		_____
Telephone	.42	.45	.02	_____
Misc. Expense	.77	.76	.70	_____
Seeds & Plants	1.68	1.97	1.71	_____
Fertilizer and Lime	3.19	4.58	2.85	_____
Machine Hire and Trk.			.20	_____
Auto Expense	.71	1.31	.02	_____
Interest on Notes	6.48	4.27	1.80	_____
Taxes	2.68	3.21	5.38	_____
Rent		.59	.65	_____
Insurance	.13	1.24	.20	_____
Total Cash Expenses	\$38.32	\$34.66	\$56.27	_____

1971 Ohio Farm Business Analysis Report

Clover-Mixed Hay Enterprise Summary (cont.)

	<u>Top 25%</u>	<u>Middle 50%</u>	<u>Lower 25%</u>	<u>My farm</u>
Non-Cash Expenses				
Depreciation				
Bldg., Fence & Tile	\$ 1.55	\$ 1.31	\$ 1.62	_____
Machinery & Equip.	13.52	12.10	13.60	_____
Total Depreciation	15.07	13.41	15.22	_____
Unpaid Opr. and Fam. Labor	20.66	33.66	7.58	_____
Interest Not Charged	16.95	27.79	29.53	_____
Total Non-Cash Expenses	52.68	74.86	52.33	_____
TOTAL EXPENSES OF PRODUCTION	91.00	109.52	108.60	_____
Management Income and Profit	14.48	-57.52	-68.27	_____
Value of Production less				
Cash Expenses	67.16	17.34	-15.93	_____
Total Investment	390.77	534.59	522.24	_____
Return on Investment	37.90	-25.46	-36.93	_____
Percent Return on Investment	9.70%	-4.76%	-7.07%	_____
Return to Unpaid Operator and				
Family Labor, Management and				
Profit				
Total Per Acre	35.13	-23.86	-60.69	_____
Per Hour	\$3.58	-\$1.55	-\$22.06	_____
<u>RATIO ANALYSIS</u>				
Profit Margin	.359	-.490	-.916	_____
Turnover	.270	.097	.077	_____
Return on Investment	.097	-.043	-.071	_____

MAJOR IMPROVEMENTS

Two major improvements have been added to the farm records analysis: an expanded enterprise analysis, and a ratio analysis. The enterprise analysis examines each crop enterprise as if each were a separate business. The ratio analysis examines three key areas of a business to help determine how it compares with other businesses. These ratio analysis figures are located at the bottom of page 6 and page 12 for the total farm summaries and the second page of each crop enterprise summary.

The enterprise analysis section, which starts on page 16 of this summary, gives an item by item breakdown of cost and income information for each of seven different crop enterprises. Data for each crop enterprise summary is taken from farms which had the cost and production information necessary to receive an analysis of that particular enterprise.

HOW TO USE THE RATIO ANALYSIS SECTION

The ratio analysis permits a comparison of a business with larger or smaller businesses. Comparison of these ratio figures with state summary figures will quickly indicate how a farm or a particular enterprise compares with others in the state concerning "profit margin", "turnover", and "return on investment".

The "return on investment" figure, called $\text{MANAGEMENT INCOME AND PROFIT} + \text{PAID AND UNPAID INTEREST} \div \text{TOTAL INVESTMENT}$ in the printout, gives a good indication of how well the investments in a business are working. If the return on investment figure for a particular business or enterprise is low, that investment is not returning as much as other

similar investments in the state. A closer examination of return on investment can easily be made by looking at the "profit margin" and "turnover" ratios.

The "profit margin" ratio, referred to as $\text{MANAGEMENT INCOME AND PROFIT PLUS PAID AND UNPAID INTEREST} \div \text{GROSS INCOME}$ on the individual printout, is a measure of the profitability of a business. If the figure is low, the farm or enterprise has less profit for each dollar of product sold than other similar farms or enterprises in the state. This may indicate that expenses are high or sale price is low, or both. A look at income figures such as $\text{VALUE PER BUSHEL PRODUCED}$ and at cost figures such as $\text{COST PER BUSHEL PRODUCED}$ or cost figures per acre will provide a better idea of what is causing profit margin to be low.

The "turnover" ratio called $\text{GROSS INCOME} \div \text{TOTAL INVESTMENT}$ in the individual printout, is a measure of how well investments are being utilized. If the "turnover" ratio is low, the farm or enterprise has less sales for each dollar invested than the farms or enterprises in the state summary. Turnover can be examined more closely by looking at receipts and investments. Such items as $\text{TOTAL VALUE OF PRODUCTION PER ACRE}$ and $\text{BUSHELS PRODUCED PER ACRE}$ will indicate how an individual's farm receipts compare with those in the state summary. Investments can be examined more closely by comparing such figures as $\text{TOTAL INVESTMENT PER CROP ACRE}$ with state summary figures.

An example of how these ratios can be used follows.

EXAMPLE:

General crop farmer John Doe owns and operates a farm in west central Ohio. He notes that the number of farms used in the summary is

small and will keep this in mind when making his comparison. John has a Return on Investment ratio of .100 (or a return on investment of 10%) for his farm. He compares this return with those in the state summary, and finds that his farm is slightly below the top 25% average, but well above the middle 50% average. John decides that he wants to improve his return on investment to the farm. To see where improvements should be made, he compares the two other ratios for his farm with those in the state summary. His profit margin ratio is .350 (or profit and interest per dollar of gross farm income is 35¢), above the average of farms in the upper 25%. However, his turnover ratio is .286 (or gross farm income per \$1,000 invested is \$286), less than the middle 50% average in the owner-operator and tenant-landlord summary. John also sees that tenant general crop farms have a much higher turnover ratio than owner-operator farms, but maintain a similar profit margin. John would like to improve both of these ratios, but since the turnover ratio is low, he feels it probably holds the most promise for improvement.

To see how this turnover may be improved, John looks at several factors. He finds that his return per crop acre is \$86, well below the upper 25% average in the summary. His machinery investment per crop acre of \$72 is above the figures in the state summary.

Next, John examines the enterprise summary for each of the crops that he might grow. His corn yield of 108 bushels per acre and value of corn production of \$118 per acre are only slightly less than the top 25% average. He compares his corn expenses item by item with

the state summary and finds that his depreciation per acre of \$15, value of labor used of \$15, machine repair of \$5.70, and fuel, oil, and grease of \$5.60 per acre are relatively high compared to the state summary. John figures that he may be able to spend less time tilling each acre while covering more acres in the same time to bring these costs down. John looks at the other crops which he might grow. He finds that oats is not very profitable and shows little chance of improvement, while corn and soybeans are profitable and hold much potential improvement for his situation.

Next, John looks at his livestock enterprise. He finds that his return per dollar of feed fed of \$1.70 is near the middle 50% average in the summary. Since John has only hogs in his livestock operation, he looks at the state 1971 Swine Summary to see how his return compares with other hog operations. He first notes that, as in the crop summary, there is a small number of farms in the state summary. He finds that his return per \$ of feed fed is above the upper 25% average for swine farms. John looks at several other figures in the swine summary and finds that his hog operation compares very well with the performance of other hog operations as shown in the state Swine Summary.

John looks at several other factors and decides he can improve his farm business in several ways, including an increase in corn and soybean acreage, more rented land, elimination of oats, and an increase in the size of his hog operation, while keeping cost increases relatively low. This should improve his turnover as well as his profit margin, and thereby increase his return on investment.

Use of these ratios will permit fast identification of trouble spots and help to locate what is causing them. For questions concerning this analysis, contact your county agent, or the farm management area agent in your area.

GLOSSARY OF SELECTED TERMS*

GROSS FARM INCOME - is the sum of all cash receipts plus increases in inventory and capital gains less decreases in inventory, capital losses, and feeder livestock purchases. Feeder livestock purchases are deducted to reflect on farm production.

INTEREST NOT CHARGED - represents an estimated charge for equity capital. It is determined by taking six percent of total investment and subtracting the amount of interest paid during the year. This calculation makes a similar charge for the total investment of each farm business.

UNPAID OPERATOR & FAMILY LABOR - is the wage charge for the operator and unpaid family labor using the time worked and rates per hour estimated by the farm operator.

TOTAL FARM EXPENSE - is the sum of all cash and non-cash expense for the farm less the cost of purchased feeder livestock. Non-cash expense includes depreciation, interest not charged and unpaid operator and family labor charge.

MANAGEMENT INCOME & PROFIT - equals Gross Income minus Total Farm Expense. This represents the return to management income and profit after all cash and non-cash expenses are deducted.

FAMILY LABOR & MANAGEMENT INCOME - equals Management Income and Profit plus Unpaid Operator and Family Labor. This represents the return to the operator and his family for their unpaid labor, management and profit.

NET FARM INCOME - equals Family Labor and Management Income plus Interest Not Charged. This represents the return to the operator for equity capital, unpaid labor, management and profit.

RETURN TO INVESTMENT - equals Management Income and Profit plus paid and unpaid interest. Paid and unpaid interest equals six percent of Total Investment. This represents the return to all capital, owned and borrowed, plus management and profit. This return times 100 divided by Total Investment gives Percent Return On Investment.

OVERHEAD COSTS - is the sum of depreciation, building repairs, interest paid, property taxes, cash rent, insurance and interest not charged. These represent costs that are essentially fixed and must be recovered regardless of the level of production.

VARIABLE COSTS - is the sum of all cash expenses other than those included in Overhead Costs. These costs vary with the level of production.

NUMBER OF MAN-YEAR EQUIVALENTS - represents the number of full-time man equivalents available on the farm for the entire year. Family labor is adjusted to a man-equivalent basis. One man-year equivalent is 3,000 hours.

* A complete listing of calculations is contained in occasional paper #49, "A Guide To Interpretation of the Computer Printout".

VALUE OF ALL CROPS - represents all crop production valued at market price (not necessarily sold) plus government crop payments.

VALUE OF NET LIVESTOCK INCREASE - is the net value of livestock and livestock products produced during the year. This includes livestock sold less value of feeder livestock plus change in inventory.

RETURN PER \$ FEED FED TO ALL LIVESTOCK ENTERPRISES - equals the Value of Net Livestock Increase divided by the Total Value of Feed Fed to All Livestock. The returns per dollar of feed fed should pay for the feed, labor, overhead on buildings and equipment required by livestock, other production costs, and provide a profit.

MACHINERY COST PER CROP ACRE - is the sum of fuel, oil, grease, repairs, and machine hire expenditures plus charges for depreciation and investment, less custom work receipts divided by acres of cropland.

PROFIT MARGIN RATIO - equals Management Income and Profit plus paid and unpaid interest divided by Gross Income. This ratio shows the dollars of profit and interest received from each dollar of gross income.

TURNOVER RATIO - equals Gross Income divided by Total Investment. This ratio is the same as the Gross Income Per \$1,000 Invested figure, but is given as a decimal figure rather than a return per \$1,000. It gives the dollars of gross income received during the year for each dollar of investment.

RETURN ON INVESTMENT RATIO - equals Management Income and Profit plus paid and unpaid interest divided by Total Investment. This ratio is the same as Percent Return On Investment, but is stated as a decimal rather than a percentage. It gives the dollars of profit and interest received during the year for each dollar of investment.

SAMPLE POPULATION

The 12 owner-operator and tenant-landlord general crop farm and 19 tenant general crop farm records summarized in this report are part of the 462 farm records of all types submitted by Ohio farmers to Ohio State University for analysis in 1971. Not all farm records were complete and accurate enough to be used in the summaries. Care must be used in interpreting the summaries, especially where only a small number of farms are included.

SUMMARY DATA

All data included in the tables are either simple averages for all farms in the group or weighted averages comparing two simple averages for that group. For example, Total Crop Acres is a simple average representing the total number of crop acres for any particular group of farms divided by the number of farms in the group. However, Machinery Cost Per Crop Acre is a weighted average calculated by dividing the average Total Machinery Cost for any particular group by the average Total Crop Acres for that group.