



DEPARTMENT OF AGRICULTURAL ECONOMICS & RURAL SOCIOLOGY
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# 1970 OHIO FARM BUSINESS ANALYSIS REPORT.

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DEPARTMENT OF AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY, THE OHIO STATE UNIVERSITY IN ASSOCIATION WITH THE OHIO COOPERATIVE EXTENSION SERVICE

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Introduction

This report contains summaries of 450 Ohio farms that submitted records for analysis in 1970. Summaries are based on average data from 14 different types of farms. Some farm types are also reported by size of farm, by tenure, or by rank of family labor and management income.

These summaries present data for each type of farm under the general categories of income and expense data, size factors, and efficiency factors. Individual farm business analyses give much more information than is reported here. But the factors reported here provide some of the key factors for comparison with individual farm analyses to determine the strong and weak points of individual farm operations.

## Glossary of Terms

Definitions of many of the terms used are given in the glossary at the end of the report.

#### Comparison of Farm Types

An overview of size, income, and analysis factors for some major types of Ohio farms in 1970 is shown in the first table. By far the largest number of farm records are submitted for dairy farms, accounting for over half of the records in this report.

Size of farm can be measured in a variety of ways, and four of the more commonly used measures are shown here. Hogs, Beef Feeding, and General Livestock farms were largest in terms of gross sales and total investment.

General Livestock and Dairy farms had the largest average labor force, while General Crops, Hogs and Beef Feeding farms were largest in terms of cropland.

## Selected Farm Business Analysis Data By Major Farm Types, Ohio, 1970

Item	Type of Farm					
Farms	<u>Unit</u> Number	Dairy 250	Hogs 33	Beef Feeding 20	General <u>Livestock</u> 16	General Crops 42
<u>Size</u>						
Gross Income	Dollars	45,988	54,498	53,974	54,936	36,765
Total Investment	Dollars	113,565	125,068	194,510	130,401	119,470
Number of Men	M.Y.E.	1.87	1.50	1.30	2.00	1.15
Cropland	Acres	194	358	342	301	475
Income						
Net Farm Income	Dollars	15,149	14,000	10,514	17,487	14,732
Family Labor &						•
Management Income	Dollars	10,432	9,530	5,257	11,514	9,301
Return on Investment	Percent	8.9	7.9	5.7	9.2	10.4
Analysis Factors						
Gross Income Per Man	Dollars	24,592	36,3 <b>3</b> 2	41,519	27,468	31,970
Total Labor & Mgt.			-	·	•	•
Income Per Man	Dollars	7,161	7,908	5,118	6,832	8,634
Gross Income Per				•		-
\$1,000 Invested	Dollars	405	436	278	421	308
Return Per \$ Feed Fed	Dollars	1.83	1.52	1.43	1.82	
Value of Crop Production						
Per Acre	Dollars	95	97	109	93	89
Machinery Cost Per						
Crop Acre	Dollars	44	27	27	27	17

These measures illustrate the relative land, labor, and capital requirements of the various farm types. For example, Dairy farms are more labor and capital intensive but require a smaller land base compared to General Crop farms.

It is generally concluded that state farm record cooperators do not represent a random sample of all farms in the state, and this table emphasizes this fact. The average gross income of each of these farm types, except for General Crops, is greater than \$40,000. Farms grossing over \$40,000 are classified by the U.S. Census as Class I farms. In the 1969 Census of Agriculture, Class I farms represented about nine percent of Ohio's commercial farms (those with \$2,500 or more gross sales) and had average gross sales of \$18,053. Thus it is likely that most farms in this summary are from the larger farms, perhaps the top 15-25 percent in terms of gross sales.

Various income measures are used to report farm earnings in this report, and three are shown in this table. There is little difference in average returns for the various farm types, except for Beef Feeding farms. Their 1970 return was lower than the return for the other farm types by each measure. In general, the average returns per farm on all types were rather favorable in 1970.

The final part of the table shows some of the major analysis factors.

These factors cannot be compared between farm types, but they indicate the way these factors vary between farm types, and the need to use standards that correspond to your individual type of farm.

Forty-seven percent of the farm records summarized were from dairy farms. This allowed more detailed breakdowns on dairy farms, and a few highlights from those summaries are presented. For all other farm types only the summary data is presented.

#### Dairy Farms

Financial data for Dairy farms are summarised for three herd sizes. Increasing herd size resulted in increasing average income. Family labor and management income rose from \$7,387 to \$11,186 and \$19,963 for the less than 40 cows, 40-79 cows, and 80 cows or more size farms, respectively. Total Labor and Management Income Per Man also increased with herd size. However, Percent Return On Investment and Gross Income Per \$1,000 Invested was nearly the same regardless of herd size. This reflects the fact that total investment increased more rapidly than labor use or farm income as herd size increased.

Further information is shown for each herd size, as the farms are summarized after being ranked by Family Labor and Management Income. This helps to identify the factors responsible for achieving (or not achieving) a high level of income. For example, each group in the less than 40 cows summary, averaged close to 30 cows. However, Family Labor and Management Income varied from \$14,946 to \$1,464. Several factors contribute to this. For example, comparing the Top 10% and Lower 25% of farms, Gross Income Per Man fell from \$27,791 to \$17,373; Crop Production Value Per Acre went from \$102 to \$76; and total cost of milk production increased from \$4.55 per cwt. to \$6.08 per cwt. No single factor is responsible for the differences in performance, but comparisons of these figures with farm records can help individual farmers to spot weak and strong points of their own operation.

Finally, a comparison of the price received for milk and the costs of milk production indicates that most Ohio farmers are covering all costs of production. These average costs and prices for milk are probably 40 to 50 cents per cwt. below actual levels since hauling charges, marketing charges, and purchase of supplies are excluded from both. However, comparison of the cost of production with the sale price is correct, since they are both net figures.

TYPE OF FARM	DAIRY			
SIZE OF FARM	Less Than	40-79 Cows	80 Or More Cows	_A11
INCOME				
Cash Receipts	25,962	41,865	87,523	39,671
Capital Gains and Losses	1,938	3,097	6,324	2,926
Inventory Changes	2,125	3,788	7,374	3,430
Feeder Livestock Purchase	51	11	109	40
Gross Income*	29,974	48,738	101,112	45,988
EXPENSES				
Cash Expenses	15,929	27,082	58,752	25,506
Depreciation	3,408	5,785	11,835	5,373
Interest Not Charged	3,300	4,697	10,671	4,716
Unpaid Operator & Family Labor	5,217	7,651	13,814	7,226
Total Farm Expense*	27,803	45,204	94,963	42,782
MANAGEMENT INCOME & PROFIT				
Total	2,170	3,535	6,149	3,206
As a Percent of Gross Income	7.2	7.3	6.1	7.0
UNPAID OPERATOR & FAMILY LABOR				
Total	5,217	7,651	13,814	7,226
As a Percent of Gross Income	17.4	15.7	13.7	15.7
OVERHEAD COSTS	•			
Total	10,051	16,696	33,896	15,577
As a Percent of Gross Income	33.5	34.3	33.5	33.9
VARIABLE COSTS	*			
Total	12,537	20,857	47,252	19,980
As a Percent of Gross Income	41.8	42.8	46.7	43.4
NET CASH INCOME	10,033	14,783	28,771	14,166
NET FARM INCOME	10,687	15,884	30,635	15,149
INVESTMENT				
Total	74,987	120,607	244,640	113,565
Return to Investment	6,668	10,771	20,827	10,020
Percent Return on Investment	8.9	8.9	8.5	8.8
Gross Income Per \$1,000 Invested	400	404	413	405
FAMILY LABOR & MANAGEMENT INCOME	7,387	11,186	19,963	10,432
TOTAL LABOR & MANAGEMENT INCOME				
PER MAN	5,840	7,317	9,234	7,161
NUMBER OF MEN(M.Y.E.)	1.49	1.90	3.33	1.87
NUMBER OF COWS	31.3	52.2	106.4	48.7
NUMBER OF FARMS	112	111	27	250

<sup>\*</sup> Feeder livestock purchases are not included in either total.

TYPE OF FARM DAIRY, LESS THAN 40 COWS Rank by Family Labor & Management Income Upper 10% Upper 25% Middle 50% Lower 25% INCOME Cash Receipts 24,388 31,210 30,252 24,604 2,016 Capital Gains and Losses 2,023 2,512 1,611 Inventory Changes 5,118 4,083 1,938 544 Feeder Livestock Purchase 20 130 28 26,928 Gross Income\* 38,352 36,718 28,121 EXPENSES 17,255 Cash Expenses 16,395 16,823 14,819 3,106 4,074 Depreciation 3,492 3,347 Interest Not Charged 3,519 3,596 2,724 4,155 4,237 5,199 Unpaid Operator & Family Labor 6,460 6,234 25,819 29,701 Total Farm Expense\* 29,866 29,870 MANAGEMENT INCOME & PROFIT 2,302 8,486 6,848 -2,773 Total 18.6 8.2 -10.3 As a Percent of Gross Income 22.1 UNPAID OPERATOR & FAMILY LABOR 6,234 5,199 4,237 Total 6,460 17.0 18.5 15.7 As a Percent of Gross Income 16.8 OVERHEAD COSTS 11,835 Total 11,746 10,831 8,770 29.5 43.9 As a Percent of Gross Income 30.6 31.2 VARIABLE COSTS 13,637 Total 11,660 12,805 11,852 As a Percent of Gross Income 34.9 42.1 50.6 30.4 NET CASH INCOME 7,133 9,785 14,815 13,429 NET FARM INCOME 5,619 **18,**465 16,678 10,225 INVESTMENT 90,318 Tota1 79,166 79,604 65,013 Return to Investment 2,646 13,235 11,623 6,202 Percent Return on Investment 2.9 16.7 14.6 9.5 Gross Income Per \$1,000 Invested 461 432 298 484 1,464 FAMILY LABOR & MANAGEMENT INCOME 14,946 13,081 7,501 Hired Labor Expense 796 832 1,262 1,902 TOTAL LABOR & MANAGEMENT INCOME 8.763 3,366 15,742 13,913 NUMBER OF FARMS 11 28 56 28

<sup>\*</sup>Feeder livestock purchases are not included in either total.

TYPE OF FARM DAIRY, Less Than 40 Cows				
		Family Labor Upper 25%		
NUMBER OF FARMS	11	28	56	28
SIZE OF BUSINESS				
Number of Men (M.Y.E.)	1.38	1.44	1.48	1.55
Number of Cows	31.6	33.0	31.1	29.9
Pounds of 3.5 Milk Sold	428,679	454,603	405,469	367,424
Total Crop Acres	177	150	134	153
Corn Acres	49	43	*	*
Soybean Acres	25	12	*	*
Capital Investment	79,166	79,604	65, <b>0</b> 13	90,318
Gross Income	38,352		28,121	26,928
Value of All Crops	18,117		11,961	11,775
Value of Net Livestock Increase	33,728		24,542	21,067
EFFICIENCY FACTORS				
Gross Income Per Man	27,791	25,499	19,000	17,373
Total Labor & Management Income				
Per Man	11,407		5,921	2,172
Crop Production Value Per Acre	102	99	89	76
Returns Per \$ Feed Fed to All				
Livestock Enterprises	2.53		1.84	1.74
Machinery Cost Per Crop Acre	32.31	39.75	40.37	41.54
MILK PRODUCTION COSTS PER CWT.				
Feed	2.18	-	2.90	3.01
Labor	1.03		.93	.93
Vet and Medicine	.12		.08	.07
Other	1.22		1.41	2.07
Total**	4.55	4.76	5.32	6.08
DAIRY PERFORMANCE FACTORS				
Value of Milk Sold, Per Cwt.**	5.33		5.30	5.22
Pounds of 3.5 Milk Sold Per Cow	13,566	13,776	13,038	12,288
Value of Milk Sold Per Cow	·724	744	692	643
Pounds of 3.5 Milk Sold Per Man				
Equivalent	310,600		274,000	237,000
Number of Cows Per Man Equivalent	22.9		21.0	19.3
Value of Dairy Increase	5,966	•	2,872	1,669
Value of Milk Sold	22,881	•	21,526	19,213
Total Value of Dairy Production	28,847	·	24,398	20,882
Value of Production Per Cow	913	896	784	698

<sup>\*</sup> Not Calculated

<sup>\*\*</sup> Net value, after deductions for hauling, marketing charges, and purchase of supplies.

TYPE OF FARM	DAIRY, 40-79 COWS			
			& Management	
INCOME				
Cash Receipts	59,570	50,535	39,689	37,385
Capital Cains and Losses	5 <b>,886</b>	4,384	2,475	3,052
Inventory Changes	7,377	<b>5</b> ,378	3,913	1,881
Feeder Livestock Purchase	14	9	9	17
Gross Income*	72,819	60,288	46,067	42,301
EXPENSES				
Cash Expenses	<b>30,86</b> 5	27,374	25,841	29,352
Depreciation	6,5 <b>8</b> 4	5,960	5,262	6,682
Interest Not Charged	6,410	5,382	4,057	5,316
Unpaid Operator & Family Labor	11,323	9,956	6.762	7,104
Total Farm Expense*	55,168	48,663	41,913	48,437
MANAGEMENT INCOME & PROFIT				
Tetal	17,651	11,625	4,154	-6,136
As a Percent of Gross Income	24.2	19.3	9.0	-14.5
UNPAID OPERATOR & FAMILY LABOR		•		
Total	11,323	9,956	6,762	7,104
As a Percent of Gross Income	15.5	16.5	14.7	16.8
OVERHEAD COSTS	•			
Total	<b>20,</b> 460	17,091	15,168	19,455
As a Percent of Gross Income	28.1	28.3	32.9	46.0
VARIABLE COSTS				
Total	23,385	21,615	19,985	21,878
As a Percent of Gross Income	32.1	35.9	43.4	51.7
NET CASH INCOME	28,705	23,161	13,848	8,033
NET FARM INCOME	35,384	26,963	14,973	6,284
INVESTMENT	1			
Total	144,164	120,664	108,968	144,688
Return to Investment	26,300	18,865	10,691	2,545
Percent Return on Investment	18.2	15.6	9.8	1.8
Gross Income Fer \$1,000 Invested	505	500	423	292
FAMILY LABOR & MANAGEMENT INCOME	28,974	21,581	10,915	968
Hired Labor Expense	2,668	2,845	2,481	3,068
TOTAL LABOR & MANAGEMENT INCOME	31,642	24,426	13,396	4,036
NUMBER OF FARMS	11	28	56	27

<sup>\*</sup>Feeder livestock purchases are not included in either total.

TYPE OF FARM DAIRY, 40-79 Cows Rank by Family Labor & Management Income Upper 10% Upper 25% Middle 50% Lower 25% 28 11 56 27 NUMBER OF FARMS SIZE OF BUSINESS Number of Men (M.Y.E.) 2.22 2.01 1.85 1.88 Number of Cows 61.6 57.3 49.5 52.2 Pounds of 3.5 Milk Sold 900,743 811,595 643,048 634,608 Total Crop Acres 302 241 192 200 Corn Acres + \* \* \* \* \* \* \* Soybean Acres Capital Investment 144,164 120,664 108,968 144,688 Gross Income 79,819 60,288 46,067 42,301 Value of All Crops 27,711 21,533 17,895 16,598 Value of Net Livestock Increase 56,466 50,035 39,321 38,234 EFFICIENCY FACTORS Gross Income Per Man 35,954 29,994 24,901 22,501 Total Labor & Management Income 2,147 14,253 12,152 8,241 Per Man Crop Production Value Per Acre 92 89 93 83 Returns Per \$ Feed Fed to All Livestock Enterprises 2.26 2.19 1.91 1.69 40.40 43.67 49.23 Machinery Cost Per Crop Acre 36.31 MILK PRODUCTION COSTS PER CWT. Feed 2.34 2.42 2.85 3.07 Labor .88 .94 .94 .94 .09 .08 .07 .08 Vet and Medicine 1.30 1.32 1.52 1.97 Other Total\*\* 4.60 4.76 5.37 6.06 DAIRY PERFORMANCE FACTORS Value of Milk Sold, Per Cwt.\*\* 5.34 5.33 5.46 5.17 Pounds of 3.5 Milk Sold Per Cow 14,622 14,164 12,990 12,157 Value of Milk Sold Per Cow 781 756 700 630 Pounds of Milk Sold Per Man 405,700 403,800 347,600 337,600 Equivalent Number of Cows Per Man Equivalent 27.7 28.5 26.8 27.8 6,493 Value of Dairy Increase 7,961 4,517 4,567 Value of Milk Sold 48,137 43,310 34,677 32,872 56,098 49,803 39,194 37,439 Total Value of Dairy Production

Value of Production Per Cow

911

869

792

717

<sup>\*</sup> Not Calculated

<sup>\*\*</sup> Net value, after deductions for hauling, marketing charges, and purchase of supplies.

TYPE OF FARM DAIRY, 80 OR MORE Rank by Family Labor & Management Income Upper 10% Upper 25% Middle 50% Lower 25% INCOME 81,500 104,934 81,399 Cash Receipts 131,434 5,073 13,398 8,540 6,657 Capital Gains and Losses 4,789 Inventory Changes 23,301 15,781 3,597 Feeder Livestock Purchase 210 Gross Income\* 91,051 91,754 168,133 129,255 **EXPENSES** Cash Expenses 79,258 63,393 54,272 63,791 10,947 12,781 12,798 Depreciation 16,083 12,512 Interest Not Charged 9,141 15,226 12,153 23,484 Unpaid Operator & Family Labor 22,116 11,342 9,897 98,981 Total Farm Expense\* 134,052 110,459 85,492 MANAGEMENT INCOME & PROFIT 34,081 5,559 -7,227 Total 18,796 -7.9 As a Percent of Gross Income 20.3 14.5 6.1 UNPAID OPERATOR & FAMILY LABOR 9,897 Total 23,484 22,116 11,342 As a Percent of Gross Income 17.1 12.5 10.8 14.0 OVERHEAD COSTS 39,283 Tota1 46,442 37,014 30,029 42.8 As a Percent of Gross Income 33.0 27.6 28.6 VARIABLE COSTS 49,802 Tota1 64,125 51,328 44,122 As a Percent of Gross Income 38.1 39.7 48.4 54.3 NET CASH INCOME 17,709 52,176 41,541 27,127 NET FARM INCOME 72,791 53,065 26,042 15,181 INVESTMENT Total 326,064 263,976 216,614 287,474 Return to Investment 18,555 10,021 53,643 34,634 3.5 Percent Return on Investment 16.5 13.1 8.6 Gross Income Per \$1,000 Invested 490 420 320 517 FAMILY LABOR & MANAGEMENT INCOME 2,669 40,912 16,901 57,565 10,263 Hired Labor Expense 13,217 15,534 9,746 TOTAL LABOR & MANAGEMENT INCOME 50,658 27,164 15,886 73,099 NUMBER OF FARMS 3 7 14 6

<sup>\*</sup>Feeder livestock purchases are not included in either total.

806

835

#### 1970 OHIO FARM BUSINESS ANALYSIS SUMMARY

TYPE OF FARM DAIRY, 80 or More Cows Rank by Family Labor & Management Income Upper 10% Upper 25% Middle 50% Lower 25% 3 14 6 NUMBER OF FARMS SIZE OF BUSINESS Number of Men (M.Y.E.) 4.59 3.18 3.45 3.20 Number of Cows 156.0 123.9 101.6 96.9 1,369,057 Pounds of 3.5 Milk Sold 2,178,349 1,706,172 1,320,418 Total Crop Acres 420 354 325 412 70 \* Corn Acres 84 \* \* \* Soybean Acres --3 326,064 263,976 216,614 287,474 Capital Investment Gross Income 168,133 129,255 91,051 91,943 Value of All Crops 58,664 50,818 35,150 43,356 Value of Net Livestock Increase 169,484 126,458 85,889 97,027 EFFICIENCY FACTORS Gross Income Per Man 26,391 28,732 36,630 40,646 Total Labor & Management Income 15,926 15,930 7.874 Per Man 4.964 Crop Production Value Per Acre 140 144 108 105 Returns Per \$ Feed Fed to All 2.34 2.15 2.03 2.05 Livestock Enterprises Machinery Cost Per Crop Acre 56.46 53.82 49.20 42.74 MILK PRODUCTION COSTS PER CWT. 2.25 2.42 2.57 2.71 Feed 1.24 1.28 1.08 1.07 Labor .16 .15 .09 .06 Vet and Medicine 1.25 1.22 1.49 1.90 Other Total \*\* 5.07 5.22 5.37 5.28 DAIRY PERFORMANCE FACTORS 5.51 5.27 Value of Milk Sold, Per Cwt.\*\* 5.64 5.49 Pounds of 3.5 Milk Sold Per Cow 13,964 13,770 13,475 13,626 718 Value of Milk Sold Per Cow 788 759 740 Pounds of Milk Sold Per Man 474,500 412,600 536,500 396,800 Equivalent 39.0 29.4 30.1 Number of Cows Per Man Equivalent 34.0 Value of Dairy Increase 23,307 17,567 9,643 8,593 75,171 69,541 122,869 94,075 Value of Milk Sold 84,814 78,134 Total Value of Dairy Production 146,176 111,642

Value of Production Per Cow

937

901

<sup>\*</sup> Not Calculated

<sup>\*\*</sup> Net value, after deductions for hauling, marketing charges, and purchase of supplies.

		BEEF	GENERAL	BEEF &
TYPE OF FARM	HOGS	<b>FEEDING</b>	CROPS	HOGS
INCOME Cash Receipts	58,037	106,143	32,058	7/. 2/.2
Capital Gains and Losses	1,538	454	52,058 59	74,243 717
Inventory Changes	-845	1,028	4,734	7,836
Feeder Livestock Purchase	4,232	53,651	87	25,568
Gross Income*	54,498	53,974	36,765	57,230
	2.,	30,574	30,703	37,230
EXPENSES				
Cash Expenses	39,079	90,969	17,576	60,930
Depreciation	5, <b>6</b> 47	6,142	4,544	5,1 <b>8</b> 0
Interest Not Charged	4,473	5 <b>,257</b>	5,431	6,684
Unpaid Operator & Family Labor	7,145	5,803	4,079	6,884
Total Farm Expense*	52,113	54,519	31,542	54,111
MANAGEMENT INCOME & PROFIT				
Total	2,385	-546	5,222	3,119
As a Percent of Gross Income	4.4	-1.0	14.2	5.4
UNPAID OPERATOR & FAMILY LABOR				
Total	7,145	5, <b>8</b> 03	4,079	6,884
As a Percent of Gross Income	13.1	10.7	11.1	12.0
OURDINAD COOMS				
OVERHEAD COSTS	10 510	22 077	14 621	19,836
Total	18,510 34.0	22,877 42.4	14,631 39.8	34.7
As a Percent of Gross Income	34.0	42.4	37.0	34.7
VARIABLE COSTS	•			
Total	26,458	25,839	12,832	27,389
As a Percent of Gross Income	48.5	47.9	34.9	47.9
NET CASH INCOME	18,957	15,174	14,481	13,313
	44 000			
NET FARM INCOME	14,003	10,514	14,732	16,687
INVESTMENT	· •			
Total	125,068	194,510	119,470	156,189
Return to Investment	9,888	11,124	12,390	12,489
Percent Return on Investment	7.9	5.7	10.4	8.0
Gross Income Per \$1,000 Invested	436	278	308	366
Group income for 41,000 investor	430	2.0	300	300
FAMILY LABOR & MANAGEMENT INCOME	9,530	5,257	9,301	10,003
TOTAL LABOR & MANAGEMENT INCOME				
PER MAN	7,908	5,118	8,634	7,214
A AGAS FESTAL	,,,,,,	5,110	0,054	,,,,,
NUMBER OF MEN (M.Y.E.)	1.47	1.30	1.15	1.82
NUMBER OF FARMS	33	20	42	31

<sup>\*</sup> Feeder livestock purchases are not included in either total.

TYPE OF FARM HOGS TENURE Full Owner Part Owner Tenant INCOME \$ 48,043 Cash Receipts \$ 57,202 \$ 60,641 1,176 2,162 Capital Gains and Losses 1,819 -7,629 Inventory Changes -242 -101 Feeder Livestock Purchase 3,987 5,240 54,791 56,476 42,576 Gross Income\* **EXPENSES** 41,027 32,848 38,188 Cash Expenses 4,988 6,714 3,037 Depreciation Interest Not Charged 5,420 4,188 1,573 7,071 8,394 6,065 Unpaid Operator & Family Labor Total Farm Expense\* 53,004 **5**2,755 44,530 MANAGEMENT INCOME & PROFIT 3,721 -1,954Total 1,787 As a Percent of Gross Income 3.3 6.6 -4.6 UNPAID OPERATOR & FAMILY LABOR 7,071 8,394 6,065 16.6 15.3 10.7 As a Percent of Gross Income OVERHEAD COSTS 18,386 19,108 15,895 Total As a Percent of Gross Income 33.6 33.8 37.3 VARIABLE COSTS 27,581 21,563 Total 26,223 48.9 50.6 As a Percent of Gross Income 47.9 NET CASH INCOME 19,013 19,614 15,194 6,691 NET FARM INCOME 15,601 13,975 INVESTMENT Total 136,901 130,748 39,582 11,565 421 Return to Investment 10,000 Percent Return on Investment 7.3 8.8 1.1 1,076 Gross Income Per \$1,000 Invested 400 432 9,786 5,117 FAMILY LABOR & MANAGEMENT INCOME 10,181 2,373 Hired Labor Expense 1,873 2,291 11,659 7,490 TOTAL LABOR & MANAGEMENT INCOME 12,472 3 NUMBER OF FARMS 14 16

<sup>\*</sup> Feeder livestock purchases are not included in either total.

TYPE OF FARM	HDGS			
TENURE	Full Owner	Part Owner	Tenant	
NUMBER OF FARMS	14	16	3	
SIZE OF BUSINESS				
Number of Men (M.Y.E.)	1.50	1.47	1.35	
Number of Sows and Gilts	69	47	35	
Number of Pigs Weaned	812	626	685	
Number of Feeder Pigs Sold	267	119		
Number of Market Hogs Sold	643	660	619	
Total Crop Acres	284	417	386	
Corn Acres	139	193	<b>18</b> 5	
Soybean Acres	65	135	117	
Capital Investment	136,901	130,748	39,582	
Gross Income	54,791	56,476	42,576	
Value of All Crops	28,637	38,296	38,927	
Value of Net Livestock Increase	33,093	28,955	24,752	
Pounds of Pork Produced	160,166	147,903	125,960	
EFFICIENCY FACTORS				
Gross Income Per Man	36,527	38,419	31,537	
Total Labor & Management Income				
Per Man	8,315	7,931	5,548	
Value of Crop Production Per Acre	101	92	101	
Returns Per \$ Feed Fed to All				
Livestock Enterprises	1.61	1.40	1.85	
Machinery Cost Per Crop Acre	30.82	25.89	16.11	
Pounds of Pork Produced Per Man	106,777	100,614	93,303	

TYPE OF FARM	BEEF FEEDING	
TENURE	Full Owner	Part Owner
INCOME		
Cash Receipts	\$114,330	\$ 90,9 <b>3</b> 6
Capital Gains and Losses	597	189
Inventory Changes	1,001	1,078
Feeder Livestock Purchase	57,131	47,188
Gross Income*	58,797	45,015
EXPENSES		
Cash Expenses	99,385	75,338
Depreciation	6,691	5,121
Interest Not Charged	5,434	4,928
Unpaid Operator & Family Labor	5 <b>,228</b>	6,871
Total Farm Expense*	59,607	45,069
MANAGEMENT INCOME & PROFIT	212	
Total	-810	-54
As a Percent of Gross Income	-1.4	-0.1
UNPAID OPERATOR & FAMILY LABOR		( 071
Total	5,228	6,871
As a Percent of Gross Income	8.9	15.3
OVERHEAD COSTS	05 570	17 070
Total	25,573	17,870
As a Percent of Gross Income	43.5	39.7
VARIABLE COSTS		20. 228
Total	28,806	20,328 45.2
As a Percent of Gross Income	49.0	43.2
NET CASH INCOME	14,944	15,598
NET FARM INCOME	9,852	11,744
INVESTMENT		
Total	214,842	156,750
Return to Investment	12,079	9,349
Percent Return on Investment	5.6	6.0
Gross Income Per \$1,000 Invested	274	287
FAMILY LABOR & MANAGEMENT INCOME	4,418	6,816
Hired Labor Expense	1,954	362
TOTAL LABOR & MANAGEMENT INCOME	6,372	7,178
NUMBER OF FARMS	13	7

<sup>\*</sup> Feeder livestock purchases are not included in either total.

TYPE OF FARM	BEEF FEEDING		
TENURE	Full Owner	Part Owner	
NUMBER OF FARMS	13	7	
SIZE OF BUSINESS			
Number of Men (M.Y.E.)	1.38	1.15	
Number of Fat Cattle Sold	304	253	
Total Crop Acres	329	367	
Corn Acres	130	140	
Soybean Acres	45	92	
Capital Investment	214,842	156,750	
Gross Income	58,797	45,015	
Value of All Crops	36,288	39,087	
Value of Net Livestock Increase	40,941	27,964	
Value of Beef Produced	40,941	27,910	
EFFICIENCY FACTORS			
Gross Income Per Man	42,606	39,143	
Total Labor & Management Income			
Per Man	4,617	6,242	
Crop Production Value Per Acre	110	106	
Return Per \$ Feed Fed to All	1.53	1.23	
Livestock Enterprises	28.95	23.76	
Machinery Cost Per Crop Acre Pounds of Beef Produced Per Man	93,298	95,762	
Pounds of Beer Produced Per Man	93,290	93,702	
BEEF PRODUCTION COSTS PER CWT.			
Feed	20.84	20.53	
Labor	2.22	2.26	
Vet and Medicine	.33	.27	
Other	10.77	7.13	
Total	34.18	30.20	

GENERAL CROP TYPE OF FARM Ful1 Tenant TENURE Owner Part Owner Only INCOME \$ 26,998 \$ 33,839 \$ 32,761 Cash Receipts -45 -94 150 Capital Gains and Losses 4,850 4,044 4,929 Inventory Changes 58 Feeder Livestock Purchase 221 38,454 37,703 30,996 Gross Income\* **EXPENSES** 15,579 18,518 16,618 Cash Expenses 3,587 Depreciation 5,177 4,558 646 9,359 5,199 Interest Not Charged 4,370 4,246 3,231 Unpaid Operator & Family Labor 32,588 34,164 24,059 Total Farm Expense\* MANAGEMENT INCOME & PROFIT 6,937 4,289 5,115 Total 13.6 22.4 11.1 As a Percent of Gross Income UNPAID OPERATOR & FAMILY LABOR 4,246 Total 3,231 4,370 13.7 11.6 As a Percent of Gross Income 8.4 OVERHEAD COSTS 7,338 14,688 Total 19,593 23.7 As a Percent of Gross Income 51.0 39.0 VARIABLE COSTS 12,475 Total 11,340 13,528 40.2 36.0 As a Percent of Gross Income 29.5 11,418 14,243 NET CASH INCOME 17,221 16,880 11,829 NET FARM INCOME 14,685 INVESTMENT 116,326 22,175 Total 195,436 8,267 12,094 Return to Investment 16,015 10.4 37.3 Percent Return on Investment 8.2 1,398 324 Gross Income Per \$1,000 Invested 197 11,183 FAMILY LABOR & MANAGEMENT INCOME 9,486 7,520 768 621 Hired Labor Expense 286 11,804 TOTAL LABOR & MANAGEMENT INCOME 7,806 10,254 7 25 NUMBER OF FARMS 1.0

<sup>\*</sup> Feeder livestock purchases are not included in either total.

TYPE OF FARM	GENERAL CROP			
TENURE	Full Owner	Part Owner	Tenant	
NUMBER OF FARMS	10	25	7	
SIZE OF BUSINESS				
Number of Men (M.Y.E.)	0.90	1.33	. 89	
Total Crop Acres	<b>3</b> 55	529	453	
Corn Acres	123	191	165	
Soybean Acres	164	203	166	
Capital Investment	195,436	116,326	22,175	
Gross Income	38,454	37,703	30,996	
Total Value of All Crops	34,811	44,952	39,907	
Value of Net Livestock Increase	257	704	383	
EFFICIENCY FACTORS				
Gross Income Per Man	42,727	28,348	34,827	
Total Labor & Management Income				
Per Man	8,673	7,710	13,263	
Total Crop Acres Per Man	394	398	5 <b>09</b>	
Crop Production Value Per Acre	98	85	88	
Machinery Cost Per Crop Acre	21.76	16.18	15.13	

TYPE OF FARM	BEEF & HOGS		
TENURE	Full Owner	Part Owner	Tenant
INCOME	6 70 /01	6 01 (12	¢ 52 052
Cash Receipts	\$ 70,421	\$ 81,613	\$ 53,953
Capital Gains and Losses	892	593	578
Inventory Changes	1,839	11,134	17,337
Feeder Livestock Purchase Gross Income*	18,713	33,770 50 571	14,261 57,607
Gross Income -	54,440	59,571	<b>57,60</b> 7
EXPENSES			
Cash Expenses	52 <b>,28</b> 9	72,538	40,326
Depreciation	4,661	6,072	2,974
Interest Not Charged	8,160	6,545	979
Unpaid Operator & Family Labor	5 <b>,375</b>	6,722	14,231
Total Farm Expense*	51,773	58,109	44,250
MANAGEMENT INCOME & PROFIT			
Total	2,667	1,462	13,357
As a Percent of Gross Income	4.9	2.5	23.2
UNPAID OPERATOR & FAMILY LABOR			
Total	5,375	6,722	14,231
As a Percent of Gross Income	9.9	11.3	24.7
OVERHEAD COSTS			
Total	19,800	21,710	10,627
As a Percent of Gross Income	36.4	36.4	18.4
VARIABLE COSTS			
Total	26,597	29,675	19,391
As a Percent of Gross Income	48.8	49.8	33.7
as a referre of Gross income	40.0	43.0	33.7
NET CASH INCOME	18,132	9,074	13,627
NET FARM INCOME	16,202	14,730	28,568
INVESTMENT			
Total	164,968	165,481	71,721
Return to Investment	12,564	11,390	17,660
Percent Return on Investment	7.6	6.9	24.6
Gross Income Per \$1,000 Invested	330	360	<b>80</b> 3
FAMILY LABOR & MANAGEMENT INCOME	8,042	8,184	27,589
Hired Labor Expense	3,135	3,557	936
		J, JJ,	, , ,
TOTAL LABOR & MANAGEMENT INCOME	11,177	11,741	28,525
NUMBER OF FARMS	13	15	3

<sup>\*</sup> Feeder livestock purchases are not included in either total.

TYPE OF FARM	BEEF AND HOGS				
TENURE	Full Owner	Part Owner	Tenant		
NUMBER OF FARMS	13	15	3		
SIZE OF BUSINESS					
Number of Men (M.Y.E.)	1.84	1.84	1.69		
Number of Sows and Gilts	<b>2</b> 5	30	18		
Number of Fat Cattle	104	138	84		
Total Crop Acres	267	407	586		
Corn Acres	<b>12</b> 5	201	319		
Soybean Acres	43	83	97		
Capital Investment	164,968	165,481	71,721		
Gross Income	54,440	59,571	57,607		
Value of All Crops	30,024	41,126	5 <b>5,889</b>		
Value of Net Livestock Increase	38,613	33,167	19,820		
Value of Beef Produced	17,934	17,051	14,967		
Value of Pork Produced	20,035	14,970	4,355		
EFFICIENCY FACTORS					
Gross Income Per Man	29,587	32,376	34,087		
Total Labor & Management Income					
Per Man	6,074	6,381	16,879		
Crop Production Value Per Acre	112	101	95		
Return Per \$ Feed Fed to All					
Livestock Enterprises	1.60	1.25	1.43		
Value of Beef Produced Per Cwt.	28.02	33.24	25.18		
Machinery Cost Per Crop Acre	26.80	23.14	13.20		
Pounds of Beef Produced Per Man	34,773	27,874	35,169		
Pounds of Pork Produced Per Man	54,788	47,935	29,931		

TYPE OF FARM	POULTRY	SHEEP	SPECIAL CROPS
INCOME	00 404	55 510	40.060
Cash Receipts	92,494	55,519	40,260
Capital Gains and Losses	727	-146	21
Inventory Changes	-2,384	2,966	5,890
Feeder Livestock Purchase	13,570	22,769	697
Gross Income*	77,267	35,569	45,475
EXPENSES			
Cash Expenses	72,461	47,673	29,644
Depreciation	4,859	4,814	3,285
Interest Not Charged	4,073	6,358	1,734
Unpaid Operator & Family Labor	998	7,879	2,237
Total Farm Expense*	68,821	43,956	36,203
MANAGEMENT INCOME & PROFIT			
Total	8,446	-8,387	9,272
As a Percent of Gross Income	10.9	-23.6	20.4
a referre of oross income	10.5	23.0	2014
UNPAID OPERATOR & FAMILY LABOR			
Total	998	7,879	2,237
As a Percent of Gross Income	1.3	22.2	4.9
OVERHEAD COSTS			
Total	12,239	16,364	11,305
As a Percent of Gross Income	15.8	46.0	24.8
VARIABLE COSTS			
Total	55,582	19,712	22,661
As a Percent of Gross Income	72.0	55.4	49.8
as a reicent of Gloss income	72.0	JJ.4	49.0
NET CASH INCOME	20,033	7,845	10,616
NET FARM INCOME	13,517	5,851	13,243
INVESTMENT			
Total	91,861	121,581	70,654
Return to Investment	13,957	-1,096	13,510
Percent Return on Investment	15.2	-0.9	19.1
Gross Income Per \$1,000 Invested	841	293	644
oross income let 41,000 invested	041	273	044
FAMILY LABOR & MANAGEMENT INCOME	9,444	<b>-</b> 507	11,509
Hired Labor Expense	3,912	2,551	10,884
TOTAL LABOR & MANAGEMENT INCOME	13,356	2,044	22,393
NUMBER OF FARMS	6	7	6

<sup>\*</sup> Feeder livestock purchases are not included in either total.

TYPE OF FARM	POULTRY	SHEEP	SPECIAL CROPS
NUMBER OF FARMS	6	7	6
SIZE OF BUSINESS			
Number of Men (M.Y.E.)	2.43	1.85	3.48
Number of Hens	8,743		***
Dozens of Eggs Sold	144,948		
Number of Ewes		209	
Total Crop Acres	95	336	137
Corn Acres	12	80	46
Soybean Acres	45	84	25
Capital Investment	91,861	121,581	70,654
Gross Income	77,267	35,5 <b>69</b>	45,475
Value of All Crops	8,951	25,783	29,870
Value of Net Livestock Increase	89,623		
Value of Poultry and Eggs	86,567		
Value of Lamb and Wool Production		12,645	
Value of Special Crops Sold			20,408
EFFICIENCY FACTORS			
Gross Income Per Man	31,797	19,226	13,068
Total Labor & Management Income			
Per Man	5,496	1,105	6 <b>,43</b> 5
Crop Production Value Per Acre	94	77	218
Value of Special Crops Per Acre			416
Return Per \$ Feed Fed to All			
Livestock Enterprises	2.18	1.42	
Machinery Cost Per Crop Acre	65.60	25.58	39.54
Dozens of Eggs Sold Per Man	59,649		
Pounds of Lamb Produced Per Man		15,080	

TYPE OF FARM	B <b>eef</b> & Sheep	BEEF BREEDING	GENERAL LIVESTOCK
INCOME			
Cash Receipts	34,971	43,969	56,489
Capital Gains and Losses	189	1,819	1,941
Inventory Changes	3,654	3,717	3,709
Feeder Livestock Purchase	4,934	7,831	7,204
Gross Income*	33,880	41,673	54,936
EXPENSES			
Cash Expenses	24,848	30,426	39,339
Depreciation	6,191	6,693	5,315
Interest Not Charged	8,672	8,053	5,973
Unpaid Operator & Family Labor	5,326	4,990	7,334
Total Farm Expense*	40,104	42,330	50,757
MANAGEMENT INCOME & PROFIT			
Total	-6,224	-657	4,179
As a Percent of Gross Income	-18.4	-1.6	7.6
UNPAID OPERATOR & FAMILY LABOR			
Total	5,326	4,990	7,334
As a Percent of Gross Income	15.7	12.0	13.4
OVERHEAD COSTS			
Total	19,456	19,959	15,903
As a Percent of Gross Income	57.4	47.9	28.9
VARIABLE COSTS			
Total	15,321	17,382	27,518
As a Percent of Gross Income	45.2	41.7	50.1
NET CASH INCOME	10,122	13,543	17,150
NET FARM INCOME	7 <b>,7</b> 75	12,386	17,487
INVESTMENT			
Total	179,251	171,991	130,401
Return to Investment	4,531	9,662	12,004
Percent Return on Investment	2.5	5.6	9.2
Gross Income Per \$1,000 Invested	189	242	421
FAMILY LABOR & MANAGEMENT INCOME	<b>-8</b> 97	4,333	11,514
Hired Labor Expense	1,852	2,781	2,149
TOTAL LABOR & MANAGEMENT INCOME	955	7,114	13,663
NUMBER OF FARMS	4	3	16

<sup>\*</sup> Feeder livestock purchases are not included in either total.

1970 OHIO FARM BUSINESS ANALYSIS SUMMARY

TYPE OF FARM	BEEF & SHEEP	BEEF BREEDING	GENERAL LIVESTOCK
NUMBER OF FARMS	4	3	16
SIZE OF BUSINESS			
Number of Men (M.Y.E.)	1.55	2.16	2.00
Number of Cows			23.0
Number of Beef Cows Bred to Calve	11.0	101.7	
Number of Fat Cattle Sold	42.0	*	29.0
Number of Ewes	126		
Number of Sows and Gilts			15.0
Total Crop Acres	376	526	301
Corn Acres	107	*	111
Soybean Acres	132	*	5 <b>7</b>
Capital Investment	179,251	171,991	130,401
Gross Income	33,880	41,673	54,936
Value of All Crops	32,556	45,587	27,998
Value of Net Livestock Increase	16,927	16,258	47,515
Value of Milk Sold		~ -	15,940
Value of Beef Produced	8,543	16,258	5,137
Value of Lamb and Wool Production	4,894		
Value of Pork Produced			9,253
EFFICIENCY FACTORS			
Gross Income Per Man	21,858	19,293	27,468
Total Labor & Management Income			
Per Man	616	3,294	6,832
Crop Production Value Per Acre	87	87	93
Return Per \$ Feed Fed to All			
Livestock Enterprises	1.34	1.09	1.81
Value of Milk Sold Per Cwt.**			4.82
Machinery Cost Per Crop Acre	21.43	*	27.20
Pounds of Beef Produced Per Man	21,574		10,174
Pounds of Pork Produced Per Man			19,838
Pounds of 3.5 Milk Sold Per Man			
Equivalent	-1-		165,100

<sup>\*</sup> Not Calculated

<sup>\*\*</sup> Net price after deductions for hauling, marketing charges, and purchase of supplies.

TYPE OF FARM	DAIRY & HOGS	DAIRY & POULTRY	DAIRY & BEEF
INCOME			
Cash Receipts	55,431	53,345	40,762
Capital Gains and Losses	2,026	2,523	1,921
Inventory Changes	4,681	3,098	5,048
Feeder Livestock Purchase	2,266	2,508	
Gross Income*	59,873	56,457	47,730
EXPENSES			
Cash Expenses	37,233	37,751	26,803
Depreciation	5,860	7,298	4,882
Interest Nor Charged	5,992	3,629	3,161
Unpaid Operator & Family Labor	7,003	7,121	9,160
Total Farm Expense*	53,823	53,291	44,006
MANAGEMENT INCOME & PROFIT			
Total	6,049	3,166	3,725
As a Percent of Gross Income	10.1	5.6	7.8
UNPAID OPERATOR & FAMILY LABOR			
Total	7,003	7,121	9,160
As a Percent of Gross Income	11.7	12.6	19.2
OVERHEAD COSTS			
Total	18,264	17,507	13,809
As a Percent of Gross Income	30.5	31.0	28.9
VARIABLE COSTS			
Total	28,557	28,662	21,034
As a Percent of Gross Income	47.7	5 <b>0.</b> 8	44.1
NET CASH INCOME	6,050	15,593	13,958
NET FARM INCOME	19,045	13,917	16,046
INVESTMENT			
Total	130,629	109,019	76,985
Return to Investment	13,886	9,707	8,343
Percent Return on Investment	10.6	8.9	10.8
Gross Income Per \$1,000 Invested	458	518	620
FAMILY LABOR & MANAGEMENT INCOME	13,052	10,287	12,885
Hired Labor Expense	8,817	2,233	1,068
TOTAL LABOR & MANAGEMENT INCOME	21,869	12,520	13,953
NUMBER OF FARMS	18	8	6

<sup>\*</sup> Feeder livestock purchases are not included in either total.

TYPE OF FARM	DAIRY & HOGS	DAIRY & POULTRY	DAIRY & BEEF
NUMBER OF FARMS	18	8	6
SIZE OF BUSINESS			
Number of Men (M.Y.E.)	2.10	1.89	1.72
Number of Cows	52.2	45.9	40.4
Number of Market Hogs Sold	173.2		
Number of Hens		3,283	
Dozens of Eggs Sold		51,140	
Number of Fat Cattle Sold			19.0
Total Crop Acres	263	188	256
Corn Acres	*	64	74
Soybean Acres	*	6	33
Capital Investment	130,629	109,019	76,985
Gross Income	59,873	56,457	47,730
Value of All Crops	28,051	16,962	24,161
Value of Net Livestock Increase	45,448	55,777	42,180
Value of Milk Sold	35,291	28,473	30,525
Value of Beef Produced		- <del>-</del>	3,447
Value of Poultry and Eggs		20,522	
Value of Pork Produced	5,779		
EFFICIENCY FACTORS			
Gross Income Per Man	28,511	29,871	27,750
Total Labor & Management Income Per Man	10,414	6,624	8,112
Crop Production Value Per Acre	107	90	94
Return Per \$ Feed Fed to All			
Livestock Enterprises	1.76	1.88	2.14
Value of Milk Sold Per Cwt.**	5.40	5.53	5.48
Machinery Cost Per Crop Acre	38.03	42.70	3 <b>8.</b> 15
Dozens of Eggs Produced Per Man		27,058	
Pounds of Beef Produced Per Man	Tark Marco		7,130
Pounds of 3.5 Milk Sold Per Man			
Equivalent	310,000	271,900	323,800

<sup>\*</sup> Not Calculated

<sup>\*\*</sup> Net price after deductions for hauling, marketing charges, and purchase of supplies.

#### GLOSSARY OF SELECTED TERMS

GROSS INCOME - is the sum of all types of farm income lass the cost of purchased feeder livestock and poultry.

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.

UNPAID OPERATOR & FAMILY LABOR - is the wage estimates for the operator and unpaid family labor using the hours 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 and poultry. Non-cash expense includes depreciation, interest not charged and unpaid operator and family labor.

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 for his 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.

TOTAL LABOR & MANAGEMENT INCOME - is Family Labor and Management Income plus the actual wages paid for hired labor. This estimates the total returns to all labor plus management and profit for the entire operation. When this is divided by the number of men we have an estimate of the labor returns per man.

RETURN TO INVESTMENT - equals Management Income and Profit plus a six percent return on Total Investment, or Net Farm Income, minus the charge for operator and family labor, plus interest actually paid. This represents the return on all invested capital if no debt was used.

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 very with the level of production.

NUMBER OF MEN (M.Y.E.) - 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 (M.Y.E.) is 3,000 hours or 12-250 hour months.

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

<u>VALUE OF NET LIVESTOCK INCREASE</u> - 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 and overhead on buildings and equipment required by livestock.

MACHINERY COST PER CROP ACRE - is the sum of fuel, oil, grease, repairs, and machine hire expenditures plus charges for depreciation and investment on machinery and equipment, minus custom work receipts divided by acres of cropland. Since both machinery and equipment costs are included, livestock farms have higher per acre costs than crop farms.

#### SAMPLE POPULATION

The 450 farms summarized in this report are part of the 713 farms submitted by Ohio farmers to Ohio State University for analysis in 1970. 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 a ratio comparing two simple averages for that group. For example, Total Crop Acres represents 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 calculated by dividing the average Total Machinery Cost for any particular group by its average Total Crop Acres.

## CONSIDERATIONS IN DETERMINING CROPLAND CASH RENT RATES 1/

#### A. SUPPLY AND DEMAND

When cropland available for renting is abundant in relationship to tenants seeking land, cash rent rates will adjust downward and will adjust upward when the opposite is true. Knowledge of the supply of land to rent and the demand for land is often imperfect. Consequently, adjustments are made only as sufficient pressures are in the market.

## B. TRADITION

Cash rent is influenced to some degree by community custom and tradition. Operational management and expected yields are reflected in the rental rates. Parties to an agreement that have up-to-date information on ownership and production costs and returns are influenced less by tradition in establishing cash rent charges.

#### C. OPERATOR'S EXPECTED RETURN

Illustration 1. Budgeted Costs and Returns Per Acre For Corn At Various Yield Levels With Average Management

	Yield Levels							
		80 Bu.		100 Bu		120 Bu		My Farm
1.	Gross Income/Acre*		\$88.00		\$110.00		\$132.00	\$
	Direct or Variable Costs:							
	Fertilizer & Lime Seed Machine Cash Cost Chemicals	\$16.00 4.50 9.00 4.50		\$22.00 5.59 10.00 6.50		\$30.00 6.50 11.00 8.50		
2.	Total		34.00		44.00		56.00	
3.	Return Over Variable Costs (1-2)		54.00		66.00		76.00	
	Indirect or Fixed Costs:							
	Mach. & Equip. Labor Miscellaneous	15.00 15.00 2.00		16.00 18.00 3.00		17.00 21.00 3.00		
4.	Total		32.00		37.00		40.00	
5.	Return for Rental & Management [1-(2+4)]	}	22.00		29.00		36.00	*****************

<sup>\* \$1.05</sup> per bushel at harvest, labor \$2.50 per hour.

<sup>1/</sup> John E. Moore, Extension Economist, Farm Management, Ohio State University, May, 1972.

## D. LANDLORD'S COST OF OWNING THE LAND

Landlord's ownership costs on crop land are interest and taxes. The illustration below varies the interest rates and the value of land per acre. Taxes remain constant at one percent of the value.

<u>Illustration 2.</u> Ownership Costs of Interest and Taxes On Cropland at Different Land Values and Rates of Interest

Desired Interest			Val	ue of Land	Per Acre	
Rates	Taxes	\$200	<u>\$300</u>	<u>\$400</u>	<u>\$500</u>	\$600
4%	1%	<b>\$ 10</b>	\$ <b>1</b> 5	\$ 20	\$ 25	\$ 30
5%	1%	12	18	24	30	36
6%	1%	14	21	28	35	42
7%	1%	16	24	32	40	48
8%	1%	18	27	36	45	56

## E. BARGAINING

It is important to realize that the land ownership market maybe separate and distinct from the land rental market. With many nonfarm ownership market pressures such as suburban housing, investment for appreciation and the desire for urbanites to live in rural land areas sale prices may not reflect agricultural productivity value. Determining a fair cash rent becomes a problem of establishing an equitable return between the landlord and tenant after considering each party's contribution.

#### CONCLUSION:

Bargaining between landlord and tenant takes place in the area of what costs must be covered and at what rate.

If more land is available for rent than there are tenants available at the present rental rate, landlords may logically decide that capital in land can return more in some other use and sell the land. He may decide to take less interest on his investment in the land for the pride of owning and and/or justify a lower rental charge after considering the rate of appreciation that is taking place.

If land for rent is in short supply in relation to the available renters the tenant may rationalize that he has his machinery on hand and maybe excess labor, thus these costs have to be covered whether he rents more or not. Consequently, he may agree to pay more than he expected for rent and earn less for his labor and machinery overhead costs than he expected. The landlord normally receives less net income from his cash rent than share renting would produce, but he has shifted most of the risk to the tenant.