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Farm Business Analysis Report

Department of Agricultural Economics and Rural Sociology
COOPERATIVE EXTENSION SERVICE
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FARM BUSINESS
ANALYSIS REPORT

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SECTION I
345 OHIO DAIRY FARMS

The highlights out of the total dairy summary are listed below in Table 1. The basis for sorting these 345 farms is income earned by full-time operator. Thus in Table 1 through 8, the groups are: the 25 per cent of the farms with the highest income, the 25 per cent with lowest income, and medium which is the 50 per cent of the 345 farms lying between the high and low quarters.

TABLE 1. HIGHLIGHTS

	High 25%	My Farm	Low 25%	Medium 50%
Pounds of Milk Sold	726,049	_____	402,620	479,886
Milk Sold Per Cow	$ 680	_____	$ 548	$ 625
Return Per $1 Feed Fed	$ 2.33	_____	$ 1.74	$ 2.07
Crop Acres	200	_____	173	154
Value of Crops Per Acre	$ 86	_____	$ 66	$ 77
Number of Cows	54	_____	36	38
Number of Men	2.0	_____	1.8	1.7
Cows Per Man	27	_____	20	22
P.M.W.U. Per Man	290	_____	232	242
Cost Per Cwt. Milk Prod.	$ 4.08	_____	$ 5.91	$ 4.75
Capital Invested	$ 114,320	_____	$ 88,393	$ 81,087
Gross Income	48,308	_____	25,202	31,103
Gross Per $1 Invested	.42	_____	.29	.38
Total Overhead	$ 13,390	_____	$ 10,427	$ 9,677
Overhead Divided by Gross	.28	_____	.41	.31
Mgt. and Labor Income Per Full Time Operator	$ 14,729	_____	$ 753	$ 7,024

TABLE 2. CASH RECEIPTS

	High 25%	My Farm	Low 25%	Medium 50%
Milk and Cream	$ 36,377	_____	$ 19,478	$ 24,004
General Crops	1,987	_____	1,696	1,571
Cash Rent and Royalties	136	_____	221	152

Labor Off Farm	167	_____	126	182
Custom Work	353	_____	139	185
Tax Refund	153	_____	114	112
Patronage Dividend	184	_____	94	126
Miscellaneous Receipts	540	_____	755	420
Government Payments	590	_____	701	578
Market Livestock				
Cattle	2,726	_____	1,809	1,898
Veal Calves	541	_____	304	362
Other	559	_____	732	400
Total Cash Receipts	44,313	_____	26,169	29,990

Note in Table 2 that the high group had much higher milk receipts and total receipts than either of the other groups. This is an indication of a greater volume of business which is an essential step in achieving a satisfactory labor and management income.

TABLE 3. CASH EXPENSES

	High 25%	My Farm	Low 25%	Medium 50%
Hired Labor	$ 2,556	_____	$ 1,805	$ 1,213
Feed Purchased	6,644	_____	4,312	4,724
Farm Supplies	903	_____	724	717
Machinery Repairs	1,578	_____	1,193	1,067
Building, Fence, Tile Repairs	536	_____	472	454
Fuel, Oil and Grease	1,215	_____	946	935
Telephone (farm share)	92	_____	99	91
Electricity (farm share)	480	_____	404	361
Miscellaneous Expenses	622	_____	473	358
Seeds and Plants	677	_____	466	505
Fertilizer and Lime	3,098	_____	1,868	2,046
Machine Hire and Trucking	665	_____	602	611
Auto Expense (farm share)	304	_____	294	282
Interest on Notes and Mortgages	1,583	_____	1,469	1,282
Veterinary and Medicine	578	_____	392	413
Breeding Fees and Registration	479	_____	376	438
Feeder Livestock Purchase	762	_____	901	471
Taxes	1,235	_____	1,022	939
Cash Rent	597	_____	322	495
Insurance	416	_____	365	322
Total Cash Expenses	25,020	_____	18,505	17,724

Note that the high group had higher expenses, particularly for hired labor, feed purchased and fertilizer and lime. These are variable expenses that tend to increase as volume or size of business is increased.

TABLE 4. INCOME AND INVESTMENT

	High 25%	My Farm	Low 25%	Medium 50%
Capital Gain or Loss				
Raised Breeding Stock	$ 1,742	_____	$ 646	$ 958
Purchased Breeding Stock	72	_____	56	-56
Machinery and Equipment	521	_____	27	-4
Total Capital Gain or Loss	2,335	_____	729	898
Net Inventory Change				
Raised Breeding Stock	1,617	_____	178	922
Market Livestock	130	_____	-123	20
Grain, Hay and Supplement	687	_____	-697	-384
Supplies and Fertilizer	-12	_____	-11	-15
Total Inventory Change	2,422	_____	-653	543
Depreciation				
Buildings, Fence, Tile	1,423	_____	1,140	958
Machinery and Equipment	3,303	_____	2,531	2,344
Purchased Breeding Stock	164	_____	155	110
Total Depreciation	4,890	_____	3,826	3,412
Capital Investment				
Purchased Breeding Stock	1,821	_____	1,119	1,280
Raised Breeding Stock	18,529	_____	11,502	12,489
Market Livestock	502	_____	913	477
Grain and Hay	8,871	_____	5,701	5,766
Supplies and Fertilizer	156	_____	220	119
Machinery and Equipment	18,362	_____	13,043	12,237
Buildings, Fences, Tile	21,746	_____	16,773	15,101
Land (current Agr. value)	44,333	_____	39,121	33,617
Total Capital Investment	114,320	_____	88,392	81,086
Income				
Gross Income	48,308	_____	25,202	31,103
Net Cash Income	19,291	_____	7,664	12,264
Net Farm Income	19,158	_____	3,770	10,436
Family Labor and Management Income				
Total	15,025	_____	819	7,664
Per Full Time Operator	14,729	_____	753	7,024
Net Margin Per Cent	31	_____	3	25

Table 4 presents information used in calculating the various income figures. Capital gains or losses are reported for income tax purposes. Actually, raised breeding stock that is sold should be listed under capital gains, although many farmers still recorded these sales under cash receipts, (Market Livestock, Cattle) as listed in Table 2.

Net Inventory Change measures the difference between beginning and closing inventories of livestock, feed and supplies. Depreciation is included as an annual expense.

Capital investment is an average of beginning and closing inventories for all items. The high income group had a much higher capital investment than the other two groups.

Gross income is total cash receipts (Table 2) minus feeder livestock purchases (Table 3) + total inventory change (Table 4). Net cash income is total cash receipts minus total cash expenses. Net farm income is net cash income plus total inventory change, minus total depreciation. Family labor and management income is net farm income minus unpaid interest on the owner's equity. Net margin is family labor and management income as a per cent of gross income. Family labor and management income per full time operator is calculated by converting "months operator labor" Table 8 to years of operator labor and dividing family labor and management income by this figure.

TABLE 5. CAPITAL EFFICIENCY

	High 25%	My Farm	Low 25%	Medium 50%
Overhead Expenses				
Depreciation	$ 4,890	_____	$ 3,827	$ 3,412
Interest	5,716	_____	4,420	4,054
Repairs (Bldgs. & Fence)	536	_____	472	454
Taxes	1,235	_____	1,022	939
Insurance	416	_____	365	322
Rent	597	_____	322	495
Total	13,390	_____	10,427	9,677
Overhead as % of Gross	28	_____	41	31
Gross Income per $1,000 Invested	423	_____	285	384

In Table 5 all the overhead expenses are listed. The total interest is computed by multiplying the total investment (Table 4) by 5 per cent. The total overhead is divided by the gross income to determine the per cent of the gross that is absorbed by overhead or fixed expenses. It should be noted that the high income farms are the lowest which indicates greater capital efficiency. This efficiency is expressed another way by the gross income generated by each $1,000 invested.

TABLE 6. CROP SUMMARY

	High 25%		My	Low 25%		Medium 50%	
	Acres	Yield	Farm	Acres	Yield	Acres	Yield
Crop Production							
Corn	52	94	_____	39	78	34	89
Soybeans	7	24	_____	12	19	11	21

Oats	8	58	____	9	45	8	50
Wheat	22	38	____	18	33	16	37
Alfalfa Hay	42	3.5	____	36	2.5	34	3.1
Clover, Mixed Hay	20	2.6	____	28	2.3	21	2.5
Green Chop	3	8.1	____	2	10.3	2	14.0
Corn Silage	32	15.8	____	20	12.8	20	13.6
Grass Silage	10	10.1	____	6	5.9	5	11.1
Other	4		____	3		3	
Total Harvested Crop Acres	200		____	173		154	
Value of Crops							
Total Value of Crops	$17,125		____	$11,401		$11,766	
Value of Crops per Harvested Acre	86		____	66		77	
Machinery							
Investment per Harvested Crop Acre	83		____	74		75	
Machinery Costs per Harvested Crop Acre	34		____	35		35	

In Table 6, observe the differences in crop yields between groups. Some of this may be due to differences in land quality, but part of it is fertilizer use and cropping practices. Value of crops per harvested acre is a single measure that combines yield and crop prices for an easy comparison of crop production efficiency. There was quite a bit of difference between groups in this factor.

TABLE 7. DAIRY SUMMARY

	High 25%	My Farm	Low 25%	Medium 50%
Value of Feed Fed				
Crops Fed	$ 11,598	____	$ 8,193	$ 8,602
Purchased Feed	6,644	____	4,312	4,328
Pasture	406	____	508	367
Inventory Change	-95	____	-17	-26
Total Value of Feed Fed	18,553	____	12,996	13,667
Value of Net Livestock Increase				
Returns per $1.00 Feed Fed	2.33	____	1.74	2.07
Number of Cows	54	____	36	38
Pounds of 3.5% Milk Sold				
Total	726,049	____	402,620	479,886
Per Cow	13,563	____	11,328	12,501
Per Man Equivalent	366,783	____	222,598	275,923
Dairy Products Sold				
Total	36,377	____	19,478	24,004
Per Cow	680	____	548	625
As Per Cent of Gross Income	75	____	77	77
Cost of Producing Milk	29,636	____	23,789	22,790
Cost Per Cwt. Milk Sold	4.08	____	5.91	4.75

In Table 7 there are comparisons of total value of feed fed, net livestock increase (sales, capital gains, inventory change, minus feeder livestock purchases) and a calculation of livestock returns per dollar of feed fed. This measures feeding efficiency, and there were important differences between groups in this factor. Observe that the high income group included large herds with higher production per cow and per man. Their cost of producing milk was lower because of higher productivity and efficiency in feeding and use of capital. This cost of producing milk includes interest on investment, $400 per month for operator labor and $200 per man month equivalent for other unpaid labor. The differences between cost of producing milk and price received for milk would be management income and net profit.

TABLE 8. LABOR EFFICIENCY

	High 25%	My Farm	Low 25%	Medium 50%
Production Man Work Units				
Crops	140	____	122	108
Dairy	428	____	284	307
Other Livestock	6	____	13	6
Total P.M.W.U.	574	____	419	421
Months Operator Labor	12.2	____	13.1	13.1
Man-Year Equivalents of Labor	2.0	____	1.8	1.7
P.M.W.U. Per Man Equivalent	290	____	232	242
Gross Income Per Man Equivalent	$24,404	____	$13,934	17,883

In Table 8, a productive man work unit is a standard labor requirement, representing 10 hours of labor at standard efficiency levels. To get an indication of labor requirements in hours, multiply the P.M.W.U. figures by 10. The high income group had good levels of labor efficiency as measured by P.M.W.U. and gross income per man equivalent.

From the foregoing tables, it can be concluded that no single factor is a specific indicator of success as measured by family labor and management income. Success seems to be the summation of many things which contribute to a large volume of business combined with a high degree of efficiency.

SECTION II
OHIO HOG FARMS

This summary has been grouped by three tenure groups for analysis; namely, owner-operators, tenant-operators, and part tenant-part owner. The number of farms in both samples are small, but the results point up some current problems and accomplishments that deserve consideration.

The records were first analyzed individually and an individual computer print-out analysis was sent back to the farmer. Then the individual records were sorted, on the basis of labor and management income per operator into three groups: High, 25% income group; low, 25%; and medium, 50% income group case of owner-operators.

OWNER OPERATOR HOG FARMS

This summary includes data from 29 owner-operators. Typically, hog sales made up 66 to 84% of all salable receipts.

TABLE 1. GENERAL SUMMARY

	High 25%	My Farm	Low 25%	Medium 50%
*Labor and Management Income	$ 9,295	_____	$ -7,079	$ 3,708
Gross Income per Farm	44,032	_____	19,346	31,226
Gross Income (Per Man Equiv.)	29,215	_____	15,962	21,310
Cash Expenses	30,866	_____	22,214	22,377
Overhead Expenses	13,028	_____	8,866	8,679
Overhead as % of Gross Income	29.6%	_____	45.8%	27.8%
Man Equivalents of Labor	1.51	_____	1.21	1.47
P.M.W.U. Per Man	207	_____	192	175
Number Crop Acres	180	_____	155	140
Value of Crops per Crop Acre	92	_____	63	69
Number Sows	49	_____	29	36
Return per $1.00 Feed Fed	1.83	_____	1.09	1.57
Pounds of Market Hogs Sold Per Man	109,017	_____	72,790	65,302
Gross Income Per $1,000 Invested	346	_____	195	345
Total Capital Investment	127,128	_____	99,030	90,367

*Income per farm after all cash expenses, depreciation and interest on own investment is deducted from cash receipts plus or minus changes in inventory.

WHY THE WIDE DIFFERENCE IN INCOME?

As you will note the high 25% had a Labor and Management Income of $9,295 while the low 25% had a $-7,079 income. This means the low group were living on their depreciation and interest on their own equity in the business.

Volume of output per man plus crop and livestock performance are important in the success formula. It is hard to single out any one basic difference between the high and low income farms. However, the high group excelled in crop and livestock performance as measured by yield per acre and return per $1.00 feed fed plus output per man.

Following are a few key points to note when analyzing your own record and in looking over this summary:

1. Gross income per man equivalent is a very important consideration since this is a good indication of the work done or amount of product produced per man. Another evaluation is to compare total gross income to P.M.W.U. or productive man work units (number of 10 hour days). The P.M.W.U. figure is an indication of the number of days that productive employment was available per farm. High P.M.W.U. usually means high net income.

2. Another measure is gross value of crops per crop acre which is an indication of how well you are doing with the crop enterprise. On 100 bu. corn ground this should average over $100 per crop acre.

3. The pounds of pork sold per man is an indication of volume of work per man and the return per $1.00 feed fed is an indication of efficiency. Note difference between high and low group.

4. Overhead costs as a per cent of the gross income is an important factor. This indicates the kind of job you are doing in putting your fixed assets to work. You can calculate this by adding up your depreciation, interest (both interest paid and interest on your equity), repairs on buildings, fences, etc., taxes and insurance. Then divide this total by your gross income (total cash income plus or minus change in inventory of grain, feed and livestock). Owner-operators should range from 25 to 40%. Tenants 14 to 20%. This being an above average price year for hogs makes this percentage factor lower than usual on most farms.

5. Machinery investment per crop acre and machinery costs (depreciation, fuel, repairs, custom work, etc.) are very important factors to keep a watch on. Above $60 investment per crop acre should be a special concern and above $30 cost is the area of asking why.

6. The important factor is the Labor and Management Income, which is what is left after cash expenses, depreciation and interest on your own investment is deducted from gross income.

TABLE 2. CASH RECEIPTS

	High 25%	My Farm	Low 25%	Medium 50%
General Crops	$ 5,427	_____	$ 3,088	$ 3,687
Cash Rent and Royalties	0	_____	71	45
Labor Off Farm	0	_____	145	193
Custom Work	343	_____	75	390
Tax Refund	140	_____	163	102
Patronage Dividend	38	_____	57	17
Miscellaneous Receipts	701	_____	393	1,499
Government Payments	1,555	_____	425	665
Market Livestock				
Swine	36,390	_____	17,417	21,851
Cattle	548	_____	2,161	873
Other	359	_____	217	520
Total Cash Receipts	45,502	_____	24,212	29,797

Observe that the high income group had over 50% higher total receipts than did the low group. A high proportion of those receipts were from market hogs.

TABLE 3. CASH EXPENSES

	High 25%	My Farm	Low 25%	Medium 50%
Hired Labor	$ 1,458	_____	$ 963	$ 1,171
Feed Purchased	10,443	_____	9,220	10,308
Farm Supplies	962	_____	400	532
Machinery Repairs	905	_____	1,102	898
Building, Fence, Tile Repairs	513	_____	147	342
Fuel, Oil and Grease	1,019	_____	866	736
Electricity (farm share)	404	_____	239	235
Telephone (farm share)	120	_____	64	75
Miscellaneous Expenses	322	_____	194	483
Seeds and Plants	698	_____	435	728
Fertilizer and Lime	3,424	_____	2,615	2,224
Machine Hire and Trucking	872	_____	835	448
Auto Expense (farm share)	459	_____	296	305
Interest on Notes and Mortgages	912	_____	1,273	1,721
Veterinary and Medicine	622	_____	331	696
Feeder Livestock Purchase	5,144	_____	1,957	210
Taxes	1,214	_____	876	873
Cash Rent	933	_____	98	140
Insurance	441	_____	302	251
Total Cash Expenses	30,866	_____	22,214	22,377

TABLE 4. INCOME AND INVESTMENT

	High 25%	My Farm	Low 25%	Medium 50%
Capital Gain or Loss				
Raised Breeding Stock	$ 1,385	____	$ 1,079	$ 864
Purchased Breeding Stock	-30	____	-30	6
Machinery and Equipment	0	____	-125	128
Total Capital Gain or Loss	1,355	____	984	998
Net Inventory Change				
Raised Breeding Stock	-79	____	24	-89
Market Livestock	447	____	-829	1,075
Grain, Hay and Supplement	1,998	____	-3,090	-314
Supplies and Fertilizer	-47	____	0	-31
Total Inventory Change	2,319	____	-3,894	641
Depreciation				
Buildings, Fence, Tile	1,208	____	633	888
Machinery and Equipment	2,362	____	1,723	1,544
Purchased Breeding Stock	1	____	135	122
Total Depreciation	3,571	____	2,491	2,554
Capital Investment				
Purchased Breeding Stock	837	____	511	1,275
Raised Breeding Stock	3,589	____	2,592	3,856
Market Livestock	8,054	____	7,261	6,238
Grain, Hay and Supplement	10,913	____	7,477	6,914
Supplies and Fertilizer	236	____	0	289
Machinery and Equipment	12,189	____	7,798	11,003
Buildings, Fences, Tile	19,831	____	12,722	13,861
Land	71,479	____	60,667	46,931
Total Capital Investment	127,128	____	99,030	90,367
Capital Efficiency				
Interest Not Yet Chared (5%)	5,344	____	3,678	2,797
Gross Income per $1,000 Invested	346	____	195	345
Overhead Expenses				
Total	13,028	____	8,866	8,679
As Per Cent of Gross Income	29.6%	____	45.8%	27.8%

This table presents information used in calculating the various income measures. Capital gain or loss is the gain or loss from sale of breeding stock and machinery or equipment. Net inventory change is the change in inventory of production items, such as livestock, feed, and supplies. Capital investment is an average of beginning and closing inventories, to measure investment in the farm business for the year. Under capital efficiency, interest not yet charged is calculated by taking 5% of total capital investment and subtracting interest on notes and mortgages.

Overhead expenses include building, fence and tile repairs, interest on notes and mortgages, taxes, insurance, depreciation, and interest not yet charged. Overhead expense as a per cent of gross income is another measure of capital efficiency. On efficiently operated farms, this figure should run around 25%.

Gross income is total cash receipts minus feeder livestock purchases plus total inventory change. Net cash income is total cash receipts minus total cash expenses. Net farm profit is net cash income plus total inventory change minus total depreciation.

TABLE 5. CROP SUMMARY

	High 25%		My	Low 25%		Medium 50%	
	Acres	Yield	Farm	Acres	Yield	Acres	Yield
Crop Production							
Corn	126	105	____	101	74	75	86
Soybeans	14	28	____	19	15	19	17
Oats	1	72	____	5	55	24	40
Wheat	21	42	____	20	29	19	37
Alfalfa Hay	2	1.6	____	3	1.7	4	2.6
Clover, Mixed Hay	5	1.3	____	7	2.1	18	1.9
Green Chop	0	---	____	0	---	0	---
Corn Silage	0	---	____	1	18	1	18
Grass Silage	0	---	____	0	0	0	---
Other	11	---	____	1	1	1	---
Total Harvested Crop Acres	180		____	159		139	
Machinery Investment Per Harvested Crop Acre	$ 57		____	$ 48		$ 76	
Machinery Cost Per Harvested Crop Acre	$ 28		____	$ 32		$ 28	
Average Value Crops Per Acre	$ 92		____	$ 63		$ 69	

In Table 5, the high income group had higher yields in most cases, and a higher total acreage in crops. The value of crops per harvested acre provides a measure of cropping intensity.

TABLE 6. LIVESTOCK SUMMARY

	High 25%	My Farm	Low 25%	Medium 50%
Value of Feed Fed				
Crop Fed	$ 8,084	____	$ 7,156	$ 6,125
Purchased Feed	10,512	____	9,202	10,249
Pasture	191	____	135	283
Total Value Feed Fed	18,787	____	16,493	16,657
Value of Net Livestock Increase	34,309	____	18,049	26,119
Returns per $1.00 Feed Fed	1.83	____	1.09	1.57

Observe the high proportion of purchased feed fed, but note also the returns per $1.00 feed fed. The high income group received $1.83 return per $1.00 worth of feed fed with low income group only making $1.09 return per $1.00 worth of feed fed.

TABLE 7. SWINE SUMMARY

	High 25%	My Farm	Low 25%	Medium 50%
Number Sows and Gilts	49	____	29	36
Number Litters Farrowed	88	____	58	68
Total Pigs Weaned	663	____	412	572
Pigs Weaned Per Litter	7.3	____	7.1	8.4
Sales				
Market Hogs Sold	735	____	415	453
Pounds of Market Hogs Sold	164,617	____	88,077	95,994
Number Feeder Pigs Sold	163	____	71	106

Table 7 represents swine production information. The high income group had larger sow herds and hog marketings. All had good performance in terms of pigs weaned per litter.

The difference in volume of work per man in terms of pounds of market hogs sold is very evident here. This possibility of increased output per man could be limited by lack of building resources. However, it may be in many cases the use of available buildings could be intensified.

PART OWNER - PART TENANT PORK PRODUCERS

Analyzed according to the operator's return to his labor and capital.

21 FARMS

TABLE 1. GENERAL SUMMARY

	High 25%	My Farm	Low 25%	Medium 50%
Labor and Management Income	$ 13,745	_____	$ -3,986	$ 3,912
Gross Income Per Farm	37,255	_____	22,348	30,630
Gross Income (Per Man Equiv.)	25,974	_____	15,033	23,405
Cash Expenses	23,461	_____	19,484	22,030
Overhead Expenses	10,012	_____	11,530	9,924
Overhead as % of Gross Income	27%	_____	52%	32%
Number of Man Equivalents	1.43	_____	1.49	1.31
P.M.W.U. Per Man	302	_____	279	321
Pounds of Market Hogs Sold	121,426	_____	40,980	101,042
Number Sows	26	_____	31	38
Return Per $1.00 Feed Fed	2.03	_____	1.42	1.66
Number Crop Acres	218	_____	284	266
Value of Crops Per Crop Acre	71	_____	55	69
Gross Income Per $1,000 Invested	518	_____	212	301
Total Capital Invested	71,922	_____	105,365	101,876
Interest Not Yet Charged (Or Interest On Own Equity at 5%)	2,142	_____	4,091	4,453

TABLE 2. CASH RECEIPTS (PART OWNER-PART TENANT)

	High 25%	My Farm	Low 25%	Medium 50%
General Crops	$ 3,957	_____	$ 6,784	$ 6,620
Special Crops	340	_____	506	258
Cash Rent and Royalties	0	_____	178	22
Labor Off Farm	4	_____	55	304
Custom Work	382	_____	505	554
Tax Refund	119	_____	189	150
Miscellaneous Receipts	439	_____	317	1,062
Government Payments	1,267	_____	1,765	1,043
Market Livestock				
Swine	19,728	_____	13,197	18,738
Cattle	8,476	_____	1,707	4,990
Total Cash Receipts	34,712	_____	25,203	33,741

TABLE 3. CASH EXPENSES

	High 25%	My Farm	Low 25%	Medium 50%
Hired Labor	$ 335	_____	$ 897	$ 943
Feed Purchased	6,128	_____	5,490	7,269
Farm Supplies	628	_____	828	542
Machinery Repairs	914	_____	1,270	1,061
Buildings, Fence, Repairs	360	_____	457	316
Fuel, Oil and Grease	784	_____	1,153	1,100
Electricity (farm share)	238	_____	279	203
Telephone (farm share)	56	_____	42	56
Miscellaneous Expenses	175	_____	270	157
Seeds and Plants	616	_____	837	591
Fertilizer and Lime	2,535	_____	2,711	3,457
Machine Hire and Trucking	298	_____	432	440
Auto Expense (farm share)	247	_____	171	403
Interest on Notes and Mortgages	1,454	_____	1,177	641
Veterinary and Medicine	542	_____	422	573
Feeder Livestock Purchase	5,604	_____	1,085	3,000
Taxes	612	_____	756	918
Cash Rent	1,675	_____	963	108
Insurance	260	_____	244	252
Total Cash Expenses	23,461	_____	19,484	22,030

TABLE 4. INCOME AND INVESTMENT

	High 25%	My Farm	Low 25%	Medium 50%
Total Capital Gain or Loss	$ 1,100	_____	$ 39	$ 1,218
Inventory Change (Livestock, Grain, Feed, Machinery, etc.)	5,496	_____	-1,808	-1,329
Depreciation				
Buildings, Fence, Tile	805	_____	796	592
Machinery and Equipment	2,698	_____	2,991	2,624
Purchased Breeding Stock	8	_____	57	19
Total Depreciation	3,511	_____	3,844	3,236
Total Capital Investment	71,922	_____	105,365	101,876
Change in Total Inventory	+2,143	_____	4,091	+4,453

TABLE 5. MACHINERY COSTS

	High 25%	My Farm	Low 25%	Medium 50%
Machinery Investment Per Harvested Crop Acre	$ 61	_____	$ 61	$ 47
Machinery and Power Cost Per Harvested Crop Acre	24	_____	22	21

TABLE 6. LIVESTOCK SUMMARY

	High 25%	My Farm	Low 25%	Medium 50%
Total Value Feed Fed	$ 13,636	_____	$ 9,835	$ 14,054
Value of Net Livestock Increase	27,745	_____	13,920	23,366
Returns Per $1.00 Feed Fed	2.03	_____	1.42	1.66
Number Sows and Gilts	26	_____	31	38
Number Litters Farrowed	44	_____	61	69
Pigs Weaned Per Litter	424	_____	411	545
Market Hogs Sold	520	_____	199	468
Pounds of Market Hogs Sold	121,426	_____	40,980	101,042

TENANT PORK PRODUCERS

This summary includes data on the averages of 9 farms. Since the sample was so small, the data was not divided into high, medium and low groups.

The tenant labor and management income could be compared to the average of the medium 50% owner-operators. You want to realize the owner-operator has more depreciation, interest on his own equity, and other overhead cost to cover before labor and management income is determined.

Note the higher gross income per $1,000 of investment on tenant farms than on owner-operator and higher labor and management income because tenant is getting return only to non-land investments and labor. His main contribution is labor and management.

This summary includes only the tenant's share of gross income, expenses, and investments.

14 TENANT HOG FARMS

TABLE 1. GENERAL SUMMARY

	My Farm	Average 9 Farms
Labor and Management Income	_____	$ 4,214
Gross Income Per Farm	_____	15,535
Gross Income (Per Man Equivalent)	_____	14,451
Cash Expenses	_____	9,699
Overhead Expenses	_____	3,252
Overhead As % of Gross Income	_____	21%
Man Equivalents of Labor	_____	1.07
P.M.W.U. Per Man	_____	232
Pounds of Market Hogs Sold	_____	64,635#
Number Sows	_____	27
Return Per $1.00 Feed Fed	_____	1.54
Number Crop Acres	_____	146
Value of Crops Per Crop Acre	_____	87
Gross Income Per $1,000 Invested	_____	855
Total Capital Invested	_____	18,180
Interest Not Yet Charged (Or Interest On Own Equity)	_____	581

TABLE 2. CASH RECEIPTS (TENANT HOG FARMS)

	My Farm	Average 9 Farms
General Crops	_____	$ 3,274
Special Crops	_____	121
Cash Rent and Royalties	_____	14
Labor Off Farm	_____	19
Custom Work	_____	529
Tax Refund	_____	76
Miscellaneous Receipts	_____	186
Government Payments	_____	544
Market Livestock		
Swine	_____	8,138
Cattle	_____	1,271
Total Cash Receipts	_____	14,769

TABLE 3. CASH EXPENSES

	My Farm	Average 9 Farms
Hired Labor	_____	85
Feed Purchased	_____	3,307
Farm Supplies	_____	676
Machinery Repairs	_____	574
Fuel, Oil and Grease	_____	735
Electricity (farm share)	_____	178
Telephone (farm share)	_____	76
Miscellaneous Expenses	_____	161
Seeds and Plants	_____	436
Fertilizer and Lime	_____	1,384
Machine Hire and Trucking	_____	31
Auto Expense (farm share)	_____	186
Interest on Notes and Mortgages	_____	328
Veterinary and Medicine	_____	242
Feeder Livestock Purchase	_____	928
Taxes	_____	217
Cash Rent	_____	0
Insurance	_____	155
Total Cash Expense	_____	9,699

TABLE 4. INCOME AND INVESTMENT

	My Farm	Average 9 Farms
Total Capital Gain or Loss		$ 602
Total Inventory Change		1,093
Depreciation		
Buildings, Fence, Tile		0
Machinery and Equipment		1,946
Purchased Breeding Stock		23
Total Depreciation		1,969
Total Capital Investment		18,180
Capital Efficiency		
Interest Not Yet Charged		581
Gross Income per $1,000 Invested		855
Overhead Expenses		
Total		3,252
As Per Cent of Gross Income		21%

TABLE 5. MACHINERY COSTS

	My Farm	Average 9 Farms
Machinery Investment Per Harvested Crop Acre		51
Machinery and Power Cost Per Harvested Crop Acre		19

TABLE 6. LIVESTOCK SUMMARY

	My Farm	Average 9 Farms
Total Value Feed Fed		$ 6,413
Value of Net Livestock Increase		9,872
Returns Per $1.00 Feed Fed		1.54
Number Sows and Gilts		27
Number Litters Farrowed		52
Pigs Weaned Per Litter		7
Sales		
Market Hogs Sold		302
Pounds of Market Hogs Sold		64,635#

SECTION III

101 OHIO CROP FARMS

This summary of 101 Ohio Crop Farms has been divided into 3 subsections according to tenure groups; A - Owner Operators, B - Part Owner, Part Tenant Operators, C - Tenant Operators. The records were then sorted into 3 groups based on net return to labor and management per full time operator. The groups were: high, 25% of the farms, low, 25% of the farms, and the medium, 50% of the farms.

SUBSECTION III A

26 Owner Operator Ohio Crop Farmers.

The summary highlights of the owner operator farms are listed in Table I.

TABLE 1. SUMMARY HIGHLIGHTS

	High 25%	My Farm	Low 25%	Medium 50%
Labor and Management Income	$ 14,341	_____	$ -4,751	$ 431
Gross Income	62,469	_____	17,952	20,278
Capital Invested	274,083	_____	145,982	103,809
Gross Income per $1000 Invested	228	_____	123	195
Labor & Management Income Per Man Equivalent	14,089	_____	-7,002	480
Cash Expenses	33,572	_____	17,003	14,671
Total Overhead Expenses	23,229	_____	11,918	9,799
Overhead as a % of Gross Income	37%	_____	66%	48%
Number of Crop Acres	442	_____	230	209
Total Value of General Crops	41,180	_____	17,057	16,274
Value of Crops Per Acre	94	_____	75	78
% of Cropland in Corn & Soybeans	79%	_____	87%	75%
Total P.M.W.U.	362	_____	183	182
Number of Man Equivalents	1.7	_____	.8	1.1
Total Power & Machinery Costs	10,448	_____	4,690	5,140
Power & Machinery Costs per Acre	20	_____	18	23
Machinery Investment per Acre	48	_____	41	50
Net Margin	23	_____	-26	2

Farmers in the high income group farmed more acres, had more capital invested, and required more labor than the farmers in the low and medium income groups. In return for the resources employed, they had a higher gross income and a higher value of crops produced per acre.

TABLE 2. CASH RECEIPTS

	High 25%	My Farm	Low 25%	Medium 50%
General Crops	$ 39,946	_____	$ 13,000	$ 13,497
Special Crops	624	_____	139	198
Swine Sales	6,460	_____	1,823	1,139
Cattle Sales	3,004	_____	557	1,822
Other Livestock Sales	90	_____	16	767
Livestock Products, Poultry	114	_____	282	233
Cash Rent and Royalities	258	_____	287	326
Labor Off the Farm	144	_____	132	33
Custom Work	371	_____	203	274
Tax Refund	137	_____	112	108
Patronage Dividends	111	_____	110	102
Government Payments	8,259	_____	722	920
Miscellaneous Receipts	1,928	_____	88	345
Total Cash Receipts	61,446	_____	17,471	19,765

TABLE 3. CASH EXPENSES

	High 25%	My Farm	Low 25%	Medium 50%
Hired Labor	$ 1,796	_____	$ 650	$ 292
Feed Purchased	4,566	_____	1,870	1,108
Farm Supplies	770	_____	358	826
Machinery Repairs	2,498	_____	944	983
Building, Fence Repairs	474	_____	340	220
Fuel, Oil, Grease	2,399	_____	874	820
Electricity (farm share)	275	_____	140	115
Telephone (farm share)	79	_____	35	68
Miscellaneous Expenses	410	_____	133	207
Seeds and Plants	2,144	_____	706	834
Fertilizer and Lime	8,844	_____	4,000	3,866
Machine Hire and Trucking	683	_____	838	613
Auto Expense (farm share)	221	_____	143	226
Interest on Notes and Mortgages	4,325	_____	2,765	1,370
Veterinary	176	_____	80	84
Breeding Fees and Registration	37	_____	15	7
Feeder Livestock Purchased	736	_____	1,513	1,583
Taxes	1,925	_____	872	826
Cash Rent	532	_____	321	375
Insurance	681	_____	407	250
Total Cash Expenses	33,572	_____	17,003	14,671

The high income group had more cash receipts and cash expenses than either the low income group or the medium group. Their cash expenses accounted for about 55% of the cash receipts while the low income group had cash expenses nearly equal to cash receipts.

TABLE 4. INCOME AND INVESTMENT

	High 25%	My Farm	Low 25%	Medium 50%
Capital Gains				
Raised Breeding Stock	$ 200	_____	$ 979	$ 609
Purchased Breeding Stock	-48	_____	38	23
Machinery and Equipment	771	_____	-21	-83
Total Capital Gains	923	_____	996	549
Net Inventory Change				
Raised Breeding Stock	306	_____	-626	-495
Market Livestock	-1,664	_____	1,389	745
Grain, Hay & Supplement	1,676	_____	227	1,200
Supplies & Fertilizer	517	_____	7	98
Net Inventory Change	835	_____	997	1,548
Depreciation				
Buildings, Fence Tile	2,117	_____	1,056	687
Machinery and Equipment	3,780	_____	1,570	2,208
Purchased Breeding Stock	15	_____	53	43
Total Depreciation	5,912	_____	2,679	2,938
Capital Investment				
Purchased Breeding Stock	372	_____	160	510
Raised Breeding Stock	639	_____	1,320	564
Market Livestock	3,843	_____	1,686	2,030
Grain, Hay & Supplement	21,717	_____	4,189	8,436
Supplies & Fertilizer	1,557	_____	4	624
Machinery & Equipment	24,739	_____	10,478	11,287
Buildings, Fences, Tile	33,601	_____	15,836	7,975
Land	187,615	_____	112,309	72,383
Total Capital Investment	274,083	_____	145,982	103,809
Income				
Gross Income	62,468	_____	17,952	20,278
Net Cash Income	27,874	_____	468	5,094
Net Farm Income	23,720	_____	-217	4,252
Labor & Management Income				
Total	14,341	_____	-4,751	431
Per Full Time Operator	14,089	_____	-7,002	480
Net Margin Per Cent	23	_____	-26	2

Table 4 presents information for determining the various income figures. Capital Gains indicate the adjustment in gross income from the sale of livestock and machinery. Net Inventory Change measures the difference between beginning and closing inventories of livestock, feed and supplies. Capital Investment was an average of beginning and closing inventories for all items on inventory.

Gross Income was total cash receipts minus feeder livestock purchases plus or minus net inventory change. Net Cash Income was cash receipts minus cash expenses. Net Farm Income was net cash income plus or minus net inventory change, minus total depreciation. Family Labor and Management Income was net farm income minus unpaid interest on the capital investment. This unpaid interest was calculated by taking 5% of capital investment minus paid interest. Net Margin was family labor and management income as a per cent of gross income. Family Labor and Management Income per Full Time Operator was calculated by converting months operator labor to years of operator labor and dividing this figure into labor and management income.

TABLE 5. CAPITAL EFFICIENCY

	High 25%	My Farm	Low 25%	Medium 50%
Overhead Expenses				
Depreciation	$ 5,912	_____	$ 2,679	$ 2,938
Interest Paid	4,325	_____	2,765	1,370
Interest on Owned Equity	9,379	_____	4,534	3,821
Repairs (Bldgs. & Fence)	474	_____	340	220
Taxes	1,925	_____	872	826
Insurance	681	_____	407	250
Rent	532	_____	321	375
Total Overhead	23,229	_____	11,918	9,799
Overhead As % of Gross Income	37	_____	66	48
Gross Income per $1000 Invested	228	_____	123	195

All overhead expenses are listed in Table 5. Interest paid was a cash expense while interest on owned equity was figured by multiplying total investment by 5% and subtracting the paid interest. The total overhead was divided by the gross income to determine the overhead as per cent of gross income. This figure serves as a measure for capital efficiency. The high income group had a lower per cent of gross income to pay overhead expenses than did the low or medium income groups. Gross income per $1,000 invested was another method of expressing capital efficiency. The high income group had more gross income per $1,000 invested than did the low or medium income groups. This indicates the high income group had higher capital efficiency.

TABLE 6. CROP SUMMARY

	High 25%		My	Low 25%		Medium 50%	
	Acres	Yield	Farm	Acres	Yield	Acres	Yield
Crop Production							
Corn	235	109	_____	113	81	86	100
Soybeans	115	33	_____	79	28	70	27

Oats	2	67	____	4	70	4	72
Wheat	69	52	____	19	43	28	36
Alfalfa Hay	2	2.5	____	3	3.0	6	3.0
Clover, Mixed Hay	5	1.6	____	3	2.6	9	2.1
All Other Crops	14	---	____	9	---	6	---
Total Crop Acres	442		____	230		209	
Total Value of General Crops	41,180		____	17,057		16,274	
Value of Crops Per Acre	94		____	75		78	
Machinery Investment Per Crop Acre	48		____	41		50	
Total Power and Machinery Costs	10,448		____	4,690		5,140	
Power and Machinery Costs per Crop Acre	20		____	18		23	
% of Cropland in Corn & Soybeans	79		____	87		75	

Crop yields, particularly corn and soybeans vary between income groups with the high income group having the highest yields. Value of crops per harvested acre provides a measure of the intensity of crop production. The high income group had the highest value of crops per harvested acre.

Power and machinery costs are the sum of expense items, machinery repair, fuel, oil, and grease, machine hire and trucking, auto, machinery depreciation, plus 5% of the average investment in machinery minus custom work receipts.

TABLE 7. LABOR EFFICIENCY

	High 25%	My Farm	Low 25%	Medium 50%
Productive Man Work Units				
Crops	310	____	161	146
Livestock & Poultry	52	____	22	36
Total P.M.W.U.	362	____	183	182
Months Operator Labor	12.2	____	8.1	10.8
Man-Year Equivalents of Labor	1.7	____	.9	1.1
P.M.W.U. Per Man Equivalent	208	____	216	165
Gross Income Per Man Equivalent	35,867	____	21,120	18,383

Productive man work units are a standard labor requirement representing 10 hours of labor. A high productive man work units per man is a measure of labor efficiency. High gross income per man equivalent indicates efficient use of labor. The high income group had the highest gross income per man equivalent.

SUBSECTION III B

49 Part Owner-Part Tenant Operator Ohio Crop Farmers.

The summary highlights of the part owner-part tenant operator farms are listed in Table 1.

TABLE 1. SUMMARY HIGHLIGHTS

	High 25%	My Farm	Low 25%	Medium 50%
Labor and Management Income	$ 11,071	_____	$ -6,725	$ 2,038
Gross Income	34,021	_____	17,083	26,872
Capital Invested	92,645	_____	114,772	110,076
Gross Income per $1000 Invested	367	_____	149	244
Labor & Management Income Per Man Equivalent	12,170	_____	-6,917	1,998
Cash Expenses	15,641	_____	20,529	19,467
Total Overhead Expenses	11,311	_____	11,469	11,877
Overhead as a % of Gross Income	33%	_____	67%	44%
Number of Crop Acres	435	_____	298	364
Total Value of General Crops	33,578	_____	21,209	23,986
Value of Crops per Acre	80	_____	71	66
% of Cropland in Corn & Soybeans	69%	_____	76%	75%
Total P.M.W.U.	336	_____	264	297
Number of Man Equivalents	1.2	_____	1.3	1.5
Total Power & Machinery Costs	6,863	_____	6,063	6,959
Power & Machinery Costs per Acre	39	_____	46	39
Machinery Investment per Acre	14	_____	19	18

The high income group were larger farmers than the other two groups of farmers. They farmed more acres with less man power. They had more gross income and a higher value of crops produced per acre.

TABLE 2. CASH RECEIPTS

	High 25%	My Farm	Low 25%	Medium 50%
General Crops	$ 23,799	_____	$ 14,883	$ 18,777
Special Crops	907	_____	111	690
Swine Sales	605	_____	1,134	4,458
Cattle Sales	3,774	_____	8,193	1,683
Other Livestock Sales	335	_____	0	117
Livestock Products, Poultry	71	_____	229	362

Cash Rent and Royalties	68	____	76	80
Labor Off the Farm	1,130	____	251	332
Custom Work	1,673	____	514	556
Tax Refund	240	____	182	187
Patronage Dividends	65	____	87	312
Government Payments	2,015	____	1,370	1,483
Miscellaneous Receipts	1,162	____	98	311
Total Cash Receipts	35,843	____	27,131	29,349

TABLE 3. CASH EXPENSES

	High 25%	My Farm	Low 25%	Medium 50%
Hired Labor	$ 607	____	$ 509	$ 921
Feed Purchased	176	____	3,578	1,858
Farm Supplies	878	____	479	622
Machinery Repairs	1,605	____	1,052	1,452
Building, Fence Repairs	69	____	530	275
Fuel, Oil, Grease	1,529	____	1,259	1,589
Electricity (farm share)	145	____	175	197
Telephone (farm share)	66	____	68	62
Miscellaneous Expenses	187	____	253	229
Seeds and Plants	1,143	____	812	961
Fertilizer and Lime	4,639	____	3,180	3,925
Machine Hire and Trucking	378	____	632	583
Auto Expense (farm share)	256	____	238	348
Interest on Notes and Mortgages	1,033	____	1,753	1,773
Veterinary	30	____	100	159
Breeding Fees and Registration	0	____	2	50
Feeder Livestock Purchased	550	____	4,318	2,017
Taxes	707	____	853	957
Cash Rent	1,331	____	493	1,122
Insurance	312	____	243	367
Total Cash Expenses	15,641	____	20,529	19,467

The high income group had more cash receipts and less cash expenses than did the low income group or the medium group. Cash expenses accounted for less than 50% of the cash receipts for the high income group while the low income group had cash expenses nearly 75% of their cash receipts.

TABLE 4. INCOME AND INVESTMENT

	High 25%	My Farm	Low 25%	Medium 50%
Capital Gains				
Raised Breeding Stock	$ 10	____	$ 99	$ 557
Purchased Breeding Stock	-37	____	0	42
Machinery and Equipment	-28	____	13	221
Total Capital Gains	-55	____	112	820

Net Inventory Change				
Raised Breeding Stock	-8		-118	-466
Market Livestock	-855		53	541
Grain, Hay & Supplement	-480		-5,672	-1,255
Supplies & Fertilizer	126		-105	-100
Net Inventory Change	-1,217		-5,842	-1,280
Depreciation				
Buildings, Fence, Tile	431		934	856
Machinery and Equipment	3,824		2,662	2,774
Purchased Breeding Stock	5		16	23
Total Depreciation	4,260		3,612	3,653
Capital Investment				
Purchased Breeding Stock	391		92	465
Raised Breeding Stock	394		370	769
Market Livestock	2,157		4,993	2,232
Grain, Hay & Supplement	12,615		10,645	14,220
Supplies & Fertilizer	111		143	235
Machinery & Equipment	18,880		14,694	15,361
Buildings, Fences, Tile	7,219		11,089	12,268
Land	50,879		72,747	64,526
Total Capital Investment	92,645		114,772	110,076
Income				
Gross Income	34,021		17,083	26,872
Net Cash Income	20,202		6,602	9,882
Net Farm Income	14,671		-2,740	-5,769
Labor & Management Income				
Total	11,071		6,725	2,038
Per Full Time Operator	12,170		-6,917	1,998
Net Margin Per Cent	33		-39	8

Table 4 present information for determining the various income figures. Capital Gains indicate the adjustment in gross income from the sale of livestock and machinery. Net Inventory Change measures the difference between beginning and closing inventories of livestock, feed and supplies. Capital Investment was an average of beginning and closing inventories for all items on inventory.

Gross Income was total cash receipts minus feeder livestock purchases plus or minus net inventory change. Net Cash Income was cash receipts minus cash expenses. Net Farm Income was net cash income plus or minus net inventory change, minus total depreciation. Family Labor and Management Income was net farm income minus unpaid interest on the capital investment. This unpaid interest was calculated by taking 5% of capital investment minus paid interest. Net Margin was family labor and management income as a per cent of gross income. Family Labor and Management Income per Full Time Operator was calculated by converting months operator labor to years of operator labor and dividing this figure into labor and management income.

TABLE 5. CAPITAL EFFICIENCY

	High 25%	My Farm	Low 25%	Medium 50%
Overhead Expenses				
Depreciation	$ 4,259	_____	$ 3,612	$ 3,653
Interest Paid	1,033	_____	1,753	1,773
Interest on Owned Equity	3,600	_____	3,985	3,730
Repairs (Bldgs. & Fence)	69	_____	530	275
Taxes	707	_____	853	957
Insurance	312	_____	243	367
Rent	1,331	_____	493	1,122
Total Overhead	11,311	_____	11,469	11,877
Overhead as % of Gross Income	33	_____	67	44
Gross Income per $1000 Invested	367	_____	149	244

All overhead expenses are listed in Table 5. Interest paid was a cash expense while interest on owned equity was figured by multiplying total investment by 5% and subtracting the paid interest. The total overhead was divided by the gross income to determine the overhead as per cent of gross income. This figure serves as a measure for capital efficiency. The high income group had a lower per cent of gross income to pay overhead expenses than did the lower or medium income groups. Gross income per $1000 invested was another method of expressing capital efficiency. The high income group had more gross income per $1,000 invested than did the low or medium income groups. This indicates the high income group had higher capital efficiency.

TABLE 6. CROP SUMMARY

	High 25%		My	Low 25%		Medium 50%	
	Acres	Yield	Farm	Acres	Yield	Acres	Yield
Crop Production							
Corn	151	103	_____	116	86	154	77
Soybeans	143	29	_____	104	24	120	25
Oats	19	83	_____	10	57	16	67
Wheat	76	44	_____	49	48	59	38
Alfalfa Hay	4	3.6	_____	5	4.1	4	3.1
Clover, Mixed Hay	6	2.2	_____	2	1.0	7	2.2
All Other Crops	36	---	_____	12	---	4	---
Total Crop Acres	435		_____	298		364	
Total Value of General Crops	33,578		_____	21,209		23,986	
Value of Crops Per Acre	80		_____	71		66	

Machinery Investment Per Crop Acre	39	____	46	39
Total Power and Machinery Costs	6,863	____	6,063	6,959
Power and Machinery Costs per Crop Acre	14	____	19	18
% of Cropland in Corn & Soybeans	69	____	76	75

Crop yields, particularly corn and soybeans vary between income groups with the high income group having the highest yields. Value of crops per harvested acre provides a measure of the intensity of crop production. The high income group had the highest value of crops per harvested acre.

Power and machinery costs are the sum of expense items, machinery repair, fuel, oil, and grease, machine hire and trucking, auto, machinery depreciation, plus 5% of the average investment in machinery minus custom work receipts.

TABLE 7. LABOR EFFICIENCY

	High 25%	My Farm	Low 25%	Medium 50%
Productive Man Work Units				
Crops	305	____	209	254
Livestock & Poultry	31	____	53	43
Total P.M.W.U.	336	____	264	297
Months Operator Labor	10.9	____	11.7	12.2
Man-Year Equivalents of Labor	1.2	____	1.3	1.5
P.M.W.U. Per Man Equivalent	289	____	205	203
Gross Income Per Man Equivalent	29,219	____	13,311	18,387

Productive man work units are a standard labor requirement representing 10 hours of labor. A high productive man work units per man is a measure of labor efficiency. High gross income per man equivalent indicates efficient use of labor. The high income group had the highest gross income per man equivalent.

SUBSECTION III C

26 Tenant Operator Farms.

The summary highlights of the tenant operator farms are listed in Table 1.

TABLE 1. SUMMARY HIGHLIGHTS

	High 25%	My Farm	Low 25%	Medium 50%
Labor and Management Income	$12,657	_____	$ -360	$ 4,642
Gross Income	30,827	_____	25,473	19,764
Capital Invested	32,433	_____	29,112	25,043
Gross Income per $1000 Invested	950	_____	875	789
Labor & Management Income Per Man Equivalent	14,767	_____	-336	5,369
Cash Expenses	20,893	_____	12,323	12,928
Total Overhead Expenses	6,877	_____	9,952	5,166
Overhead as a % of Gross Income	22%	_____	39%	26%
Number of Crop Acres	403	_____	584	357
Total Value of General Crops	31,804	_____	38,020	26,608
Value of Crops per Acre	84	_____	65	75
% of Cropland in Corn & Soybeans	75%	_____	88%	80%
Total P.M.W.U.	302	_____	434	275
Number of Man Equivalents	1.4	_____	1.4	1.2
Total Power & Machinery Costs	5,742	_____	8,195	5,262
Power & Machinery Costs per Acre	12	_____	14	15
Machinery Investment per Acre	44	_____	39	43
Net Margin	41	_____	-1	23

The high income group were not the largest farmers but farmers who had the highest value of crops produced per acre on a sufficient number of acres.

TABLE 2. CASH RECEIPTS

	High 25%	My Farm	Low 25%	Medium 50%
General Crops	$ 17,443	_____	$ 24,358	$ 14,174
Special Crops	5,156	_____	114	1,227
Swine Sales	669	_____	933	864
Cattle Sales	233	_____	570	1,254
Other Livestock Sales	20	_____	72	248
Livestock Products, Poultry	0	_____	16	77

Cash Rent and Royalties	71	_____	66	38
Labor Off Farm	228	_____	236	524
Custom Work	3,277	_____	1,436	917
Tax Refund	232	_____	72	210
Patronage Dividends	16	_____	49	69
Government Payments	2,177	_____	445	745
Miscellaneous Receipts	154	_____	62	132
Total Cash Receipts	29,707	_____	28,429	20,479

TABLE 3. CASH EXPENSES

	High 25%	My Farm	Low 25%	Medium 50%
Hired Labor	$ 2,045	_____	$ 976	$ 787
Feed Purchases	224	_____	1,713	828
Farm Supplies	577	_____	429	582
Machinery Repairs	1,098	_____	2,230	1,462
Building, Fence Repairs	24	_____	74	74
Fuel, Oil, Grease	1,753	_____	1,164	1,059
Electricity (farm share)	107	_____	217	163
Telephone (farm share)	48	_____	23	31
Miscellaneous Expenses	143	_____	408	175
Seeds and Plants	840	_____	1,243	734
Fertilizer and Lime	3,312	_____	6,606	3,572
Machine Hire and Trucking	930	_____	348	300
Auto Expense (farm share)	212	_____	108	225
Interest on Notes and Mortgages	324	_____	1,053	379
Veterinary	2	_____	415	36
Breeding Fees and Registration	0	_____	1	2
Feeder Livestock Purchased	73	_____	95	709
Taxes	475	_____	553	338
Cash Rent	550	_____	2,836	658
Insurance	189	_____	401	210
Total Cash Expenses	12,928	_____	20,893	12,323

The high income group had cash receipts only slightly higher than the low income group but their cash expenses accounted for less than 45% of the cash receipts whereas the low income group had cash expenses accounting for over 70% of the cash receipts.

TABLE 4. INCOME AND INVESTMENT

	High 25%	My Farm	Low 25%	Medium 50%
Capital Gains				
Raised Breeding Stock	$ 157	_____	$ 97	$ 155
Purchased Breeding Stock	21	_____	-4	-10
Machinery and Equipment	190	_____	-848	207
Total Capital Gains	368	_____	-755	352

Net Inventory Change				
Raised Breeding Stock	161		-119	-233
Market Livestock	583		395	669
Grain, Hay & Supplement	262		-2,399	-933
Supplies & Fertilizer	200		16	139
Net Inventory Change	-1,206		-2,106	-358
Depreciation				
Buildings, Fence, Tile	8		0	0
Machinery and Equipment	4,010		4,621	2,402
Purchased Breeding Stock	0		11	232
Total Depreciation	4,018		4,632	2,634
Capital Investment				
Purchased Breeding Stock	24		29	118
Raised Breeding Stock	540		340	672
Market Livestock	856		782	1,196
Grain, Hay & Supplement	10,369		4,046	7,305
Supplies & Fertilizer	118		14	347
Machinery & Equipment	20,314		23,227	14,619
Buildings, Fences, Tile	212		0	0
Land	0		674	787
Total Capital Investment	32,433		29,112	25,044
Income				
Gross Income	30,827		25,473	19,764
Net Cash Income	16,779		7,536	8,155
Net Farm Income	13,955		43	5,516
Labor & Management Income				
Total	12,657		-360	4,642
Per Full Time Operator	14,767		-336	5,369
Net Margin Per Cent	41		-1	23

Table 4 presents information for determining the various income figures. Capital Gains indicate the adjustment in gross income from the sale of livestock and machinery. Net Inventory Change measures the difference between beginning and closing inventories of livestock, feed and supplies. Capital Investment was an average of beginning and closing inventories for all items on inventory.

Gross Income was total cash receipts minus feeder livestock purchases plus or minus net inventory change. Net Cash Income was cash receipts minus cash expenses. Net Farm Income was net cash income plus or minus net inventory change, minus total depreciation. Family Labor and Management Income was net farm income minus unpaid interest on the capital investment. This unpaid interest was calculated by taking 5% of capital investment minus paid interest. Net Margin was family labor and management income as a per cent of gross income. Family Labor and Management Income per Full Time Operator was calculated by converting months operator labor to years of operator labor and dividing this figure into labor and management income.

TABLE 5. CAPITAL EFFICIENCY

	High 25%	My Farm	Low 25%	Medium 50%
Overhead Expenses				
Depreciation	$ 4,018	_____	$ 4,632	$ 2,634
Interest Paid	323	_____	1,053	379
Interest on Owned Equity	1,298	_____	403	873
Repairs (Bldgs. & Fence)	24	_____	74	74
Taxes	476	_____	553	338
Insurance	189	_____	401	210
Rent	550	_____	2,836	658
Total Overhead	6,877	_____	9,952	5,164
Overhead as % of Gross Income	22	_____	39	26
Gross Income per $1000 Invested	950	_____	875	798

All overhead expenses are listed in Table 5. Interest paid was a cash expense while interest on owned equity was figured by multiplying total investment by 5% and subtracting the paid interest. The total overhead was divided by the gross income to determine the overhead as per cent of gross income. This figure serves as a measure for capital efficiency. The high income group had a lower per cent of gross income to pay overhead expenses than did the lower or medium income groups. Gross income per $1,000 invested was another method of expressing capital efficiency. The high income group had more gross income per $1,000 invested than did the low or medium income groups. This indicates the high income group had higher capital efficiency.

TABLE 6. CROP SUMMARY

	High 25%		My	Low 25%		Medium 50%	
	Acres	Yield	Farm	Acres	Yield	Acres	Yield
Crop Production							
Corn	145	107	_____	332	78	169	96
Soybeans	143	31	_____	179	18	110	24
Oats	10	70	_____	5	66	8	50
Wheat	77	43	_____	60	41	48	43
Alfalfa Hay	3	3.2	_____	1	3.0	5	2.4
Clover, Mixed Hay	2	2.7	_____	5	1.9	9	1.5
All Other Crops	23	---	_____	2	---	8	---
Total Crop Acres	403		_____	584		357	
Total Value of General Crops	31,804		_____	38,020		26,608	
Value of Crops Per Acre	84		_____	65		75	

Machinery Investment Per Crop Acre	44	____	39	43
Total Power and Machinery Costs	5,742	____	8,195	5,262
Power and Machinery Costs per Crop Acre	12	____	14	15
% of Cropland in Corn & Soybeans	75	____	88	78

Crop yields, particularly corn and soybeans vary between income groups with the high income group having the highest yields. Value of crops per harvested acre provides a measure of the intensity of crop production. The high income group had the highest value of crops per harvested acre.

Power and machinery costs are the sum of expense items, machinery repair, fuel, oil, and grease, machine hire, and trucking, auto, machinery depreciation, plus 5% of the average investment in machinery minus custom work receipts.

TABLE 7. LABOR EFFICIENCY

	High 25%	My Farm	Low 25%	Medium 50%
Productive Man Work Units				
Crops	282	____	409	250
Livestock & Poultry	20	____	25	25
Total P.M.W.U.	302	____	434	275
Months Operator Labor	10.3	____	12.9	10.4
Man-Year Equivalents of Labor	1.4	____	1.4	1.2
P.M.W.U. Per Man Equivalent	215	____	303	232
Gross Income per Man Equivalent	22,020	____	17,816	16,634

Productive man work units are a standard labor requirement representing 10 hours of labor. A high productive man work units per man is a measure of labor efficiency. High gross income per man equivalent indicates efficient use of labor. The high income group had the highest gross income per man equivalent.

SECTION IV

29 OHIO BEEF FARMS

This group summarizes the 1967 farm account records of farms with 50% or more of the income from cattle sales. Cattle sales made up the major proportion of the farm income, supplemented by crop sales, swine, and government payments.

The tables present the averages for each group, item by item, as they were analyzed, and some explanation of the data and significant comparisons are pointed out in the paragraphs that follow each table.

TABLE 1. SUMMARY HIGHLIGHTS

	High 25%	My Farm	Low 25%	Medium 50%
Labor & Management Income	$ 9,300	_____	$-11,958	$ 682
Gross Income Per Farm	50,218	_____	35,877	35,370
Gross Income (Per Man Equiv.)	38,861	_____	21,104	22,680
Cash Expenses	75,425	_____	49,062	52,446
Overhead Expenses	19,322	_____	19,591	15,708
Overhead Expenses As % Of Gross Income	38%	_____	55%	44%
Man Equivalents of Labor	1.29	_____	1.7	1.58
P.M.W.U. Per Man	324	_____	196	224
Number Crop Acres	283	_____	320	294
Value of Crops Per Acre	97	_____	68	87
Beef Cattle Fattened	294	_____	152	204
Return Per $1.00 Feed Fed	1.60	_____	1.10	1.21
Total Investment	198,086	_____	225,879	172,444
Gross Income Per $1,000 Invested	254	_____	129	205

TABLE 2. CASH RECEIPTS

	High 25%	My Farm	Low 25%	Medium 50%
Poultry and Eggs	$ 530	_____	$ 207	$ 260
General Crops	3,259	_____	8,836	5,835
Special Crops	3,391	_____	8	1,354
Cash Rent and Royalties	186	_____	280	89
Labor Off Farm	192	_____	23	384
Custom Work	626	_____	257	1,368

Tax Refund	159	_____	168	142
Patronage Dividend	400	_____	8	82
Miscellaneous Receipts	384	_____	453	257
Government Payments	1,153	_____	537	1,351
Market Livestock				
Swine	3,371	_____	3,763	3,720
Cattle	73,340	_____	43,084	50,615
Other Livestock	0	_____	0	411
Total Cash Receipts	86,989	_____	57,624	65,870

TABLE 3. CASH EXPENSES

	High 25%	My Farm	Low 25%	Medium 50%
Hired Labor	$ 1,485	_____	$ 2,436	$ 1,209
Feed Purchased	8,569	_____	9,258	6,117
Farm Supplies	1,223	_____	1,084	711
Machinery Repairs	1,016	_____	1,240	1,504
Building, Fence, Tile Repairs	283	_____	387	410
Fuel, Oil and Grease	1,109	_____	1,370	1,291
Electricity (farm share)	317	_____	269	199
Telephone (farm share)	88	_____	699	77
Miscellaneous Expenses	411	_____	356	216
Seeds and Plants	911	_____	607	1,057
Fertilizer and Lime	4,418	_____	4,509	5,066
Machine Hire and Trucking	1,128	_____	305	936
Auto Expense (farm share)	414	_____	360	244
Interest on Notes and Mortgages	3,860	_____	2,314	2,454
Veterinary and Medicine	482	_____	345	268
Breeding Fees and Registration	27	_____	0	86
Feeder Livestock Purchase	46,661	_____	20,828	28,030
Taxes	1,743	_____	1,670	1,401
Cash Rent	853	_____	650	740
Insurance	428	_____	375	431
Total Cash Expense	75,425	_____	49,062	52,446

Table 3 presents cash expenses. Note that feeder livestock purchases was a very large item for each group.

TABLE 4. INCOME AND INVESTMENT

	High 25%	My Farm	Low 25%	Medium 50%
Total Capital Gain or Loss	$ 180	_____	$ 0	$ 82.04
Net Inventory Change				
Raised Breeding Stock	64.29	_____	-645	-9.33

Market Livestock	3,957.00	____	+2,510.00	-1,488.44
Grain, Hay and Supplement	5,431.71	____	-2,817.00	-620.33
Supplies and Fertilizer	256.86	____	+33.00	-434.00
Total Inventory Change	9,709.86	____	-919.00	-2,552.11
Depreciation				
Buildings, Fence, Tile	2,248.64	____	+1,596.00	1,272.09
Machinery and Equipment	3,824.40	____	2,316.00	2,825.30
Purchased Breeding Stock	37.14	____	166.00	6.48
Total Depreciation	6,110.18	____	4,078.00	4,103.87
Capital Investment				
Purchased Breeding Stock	5.36	____	756.00	110.44
Raised Breeding Stock	182.14	____	3,882.00	617.67
Market Livestock	27,198.79	____	25,795.00	29,723.71
Grain, Hay and Supplies	16,436.71	____	16,951.00	11,370.50
Supplies and Fertilizer	159.29	____	67.00	1,786.93
Machinery and Equipment	18,831.70	____	13,903.00	17,469.47
Buildings, Fence, Tile	34,093.67	____	30,572.00	19,342.80
Land	101,178.57	____	133,350.00	92,022.00
Total Capital Investment	198,086.23	____	225.879.00	172,443.58
Capital Efficiency				
Interest Not Yet Charged (5%)	6,044.00	____	8,979.00	6,168.00
Gross Income Per $1,000 Invested	254.00	____	129.00	205.00
Overhead Expenses				
Total	19,322.00	____	19,591.00	15,708.00
As % of Gross Income	38%	____	55%	44%
Income				
Gross Income Per Farm	50,218.00	____	35,877.00	35,370.00
Gross Income Per Man	38,861.00	____	21,104.00	22,680.00
Family Labor & Management Income Per Farm	9,300.00	____	-11,958.00	682.00

Table 4 presents information that was combined with data from Tables 2 and 3 in calculating various measures of income and also efficiency in use of capital.

The first section, Capital Gain or Loss, reports the net income from sale of capital items such as breeding stock and machinery.

Net Inventory Change measures change in inventory of production items. This is important in getting a true picture of the year's production and income

Capital investment is an average of beginning and closing inventories, representing average investment for the year. Gross income per $1,000 invested is one measure of efficiency in use of capital. Here the high group demonstrat efficient capital use. The low income group showed inefficient capital use.

Interest not yet charged was calculated by taking 5% of the total capital investment and subtracting interest on notes and motgages. (Cash expenses, Tabl

TABLE 5. CROP SUMMARY

	High 25%		My	Low 25%		Medium 50%	
	Acres	Yield	Farm	Acres	Yield	Acres	Yield
Total Harvested Crop Acres	283	--	____	320	--	294	--
Total Value of General Crops	25,112	--	____	19,872	--	23,066	--
Value of Crops Per Harvested Acre	97	--	____	68	--	87	--
% of Cropland in Corn and Soybeans	68%	--	____	67%	--	73%	--
Machinery Investment Per Harvested Crop Acre	67	--	____	41	--	60	--
Power and Machinery Costs Per Harvested Crop Acre	28	--	____	16	--	21	--

Table 5 presents the crop summary. Value of crops per harvested acre is a measure of cropping intensity and productivity.

TABLE 6. LIVESTOCK SUMMARY

	High 25%	My Farm	Low 25%	Medium 50%
Value of Feed Fed				
Crops Fed	13,033	____	11,545	14,693
Purchased Feed	8,569	____	9,258	6,117
Pasture	449	____	514	251
Total Value Feed Fed	$21,851	____	$21,317	$21,061
Value of Net Livestock Increase	34,932	____	23,427	25,573
Returns Per $1.00 Feed Fed	1.60	____	1.10	1.21
Beef Cattle Fattened	294	____	178	204

In the livestock summary, feed costs are brought together, using average market prices for the home grown crops fed. The total feed bill on these farms was quite high. Net livestock increase was calculated by taking all cash receipts from livestock and livestock products, subtracting feeder livestock purchases, adding capital gain or loss from raised and purchased breeding stock, and net inventory change in raised breeding stock and market livestock. This net livestock increase measures total livestock production in dollars. Dividing it by total value of feed fed gives returns per dollar of feed fed--a measure of feeding efficiency.

TABLE 7. LABOR EFFICIENCY

	High 25%	My Farm	Low 25%	Medium 50%
Total Production Man Work Units	545	____	421	450
Man-Year Equivalents of Labor Efficiency	1.3	____	1.7	1.6
P.M.W.U. Per Man Equivalent	419	____	247	281
Gross Income Per Man Equiv.	$38,861	____	$21,104	$22,680

In Table 7 a productive man work unit is a standard labor unit, representing 10 hours of man labor at standard efficiency levels. By calculating P.M.W.U.'s and dividing by man year equivalents of labor we can measure labor efficiency. P.M.W.U. per man equivalent should be over 300 for this type of farm.

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