

1964 REPORT OF THE VOCATIONAL AGRICULTURE
FARM ANALYSIS SERVICE IN EAST SOUTH CENTRAL MINNESOTA

Charles M. Painter

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INTRODUCTION

This is the tenth year that an analysis has been made by the Austin Area Vocational-Technical School. This type of analysis follows the same pattern as that used by the Farm Management Division of the University of Minnesota. These techniques have been developed through studies made with farm management association members since 1928.

We are indebted to Truman Nodland and his associates in the Farm Management Division for the many years of service rendered to vocational agriculture. The analysis of veterans agriculture farm account books and those of cooperating vocational agriculture adult farmers has been the principle, but by no means the only contribution to vocational agriculture by the Farm Management Division.

We would like to express our appreciation to J. A. Kentta, Printing Instructor of the Austin Public Schools, and his class for preparing our cover page and assembling the report. The special design on the cover is characteristic of Jack's creativeness.

Some main purposes of the farm analysis services in this area are (1) to assist instructors and cooperating farmers in farm accounting techniques (2) to aid the farmer in the study of his farm business through analysis reports and (3) to provide case study material that can be used by farmers and farm groups to study management problems. The analysis also has some research value.

This report and the analysis of records included in the report were done under the direction of Charles M. Painter, Vocational Agriculture Coordinator, Austin Area Vocational-Technical School. Analysis assistants were: Madge Anderson, Dexter; Elaine Harber and Eileen Heimsness, Austin; Audrey Anhorn and Donna Qualey of Faribault and Margaret Dobberstein of New Richland. Helen Bergh and Lynda Planz, school secretaries, did the typing and duplicating. Without the excellent work and team effort of these people this report would not have been possible.

Directing in a supervisory capacity for this and the other cooperating projects were: G. R. Cochran, State Supervisor of Agricultural Education; S. K. Wick, Director of Vocational Education; Morton A. Carney, Director of the Austin Area Vocational-Technical School and Irwin T. Mickelson, Austin Superintendent of Schools. William Knaak, former Assistant Director of Vocational Education, assisted in the early development of the program. Technical assistance was provided by the University Agricultural Education Department under the direction of Dr. Milo Peterson. The professional assistance of the University Division of Agricultural Economics and the Agricultural Extension Service have done much to bring farm management study up to date. Financial assistance from the Hill Family Foundation helped to initiate the program from 1954 through 1957.

Farmers pay a fee to cover clerical costs, data processing, paper and stencils.

A "first" this year was the data processing of the information tabulated from the farm account books. Agricultural Records Cooperative of Madison, Wisconsin was responsible for the programming and making the calculations. As with any new venture, problems were encountered, but the final results were truly amazing. Our only loss was in setting our release date back three weeks. Since the time saved per book was nearly five hours, we think that in future years the analysis report will actually be released earlier than before.

The following schools submitted 1964 farm records for analysis:

<u>NAME OF SCHOOL</u>	<u>NO. OF BOOKS</u>	<u>INSTRUCTORS</u>
Adams	13	Dwain Vangness*
Alden	1	John Nelson*
Austin	16	Leland Arneson*
Blooming Prairie	33	Eugene Francis* Truman Tilleraas
Faribault	56	Ralph Palan* Paul Day
Hayfield	10	Bruce Oxton* Bert Fuller Frank Moon
Kenyon	16	Dennis Kluver* John Shelstad
LeRoy	2	Donald Haugland*
Lyle	6	Pete Godfredson*
New Richland	28	Wayne Broecker* Gary Leske
Owatonna	3	John Zwiebel* Glenn Edin
Spring Valley	4	Ed Morine* Dale Peters
Wanamingo	2	Brian Ingvalson*
West Concord	6	Hilbert Hoof*
Waseca	3	Jurgen Peters*
Zumbrota	3	Gerald Halvorson*

* Instructor responsible for the adult agriculture program.

TABLE 1 SUMMARY OF FARM INVENTORIES 1964

ITEMS	ADJUSTMENTS	Average of 175 farms*	
		Jan. 1	Dec. 31
Size of farm (acres)			260
Size of business (work units)			519
Dairy and dual purpose cows		\$ 3826	\$ 3789
Other dairy and dual purpose cattle		1942	1932
Beef cattle (including feeders)		2800	2278
Hogs		2795	2989
Sheep (including feeders)		56	55
Poultry (including turkeys)		172	189
Productive livestock (total)		<u>\$11591</u>	<u>\$11232</u>
Crop, seed and feed		8492	7964
Power machinery (farm share)		3495	3872
Crop and general machinery		4565	4660
Livestock equipment		<u>1391</u>	<u>1638</u>
Machinery & equipment (total)		<u>\$ 9451</u>	<u>\$10170</u>
Miscellaneous		----	----
Land		\$30419	\$30419
Buildings, fences, etc.		<u>15404</u>	<u>15429</u>
Total farm capital		\$75357	\$75214

ITEMS	44 Most Profit. Farms		44 Least Profit. Farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)	304		260	
Size of business (work units)**	575		480	
Dairy & dual purpose cows	\$ 4022	\$ 4019	\$ 3000	\$ 2875
Other dairy & dual purpose cows	2362	2154	1705	1553
Beef cattle (including feeders)	2191	1737	5876	4953
Hogs	3458	4136	2399	2394
Sheep (including feeders)	102	85	34	42
Poultry	<u>93</u>	<u>100</u>	<u>232</u>	<u>233</u>
Productive livestock (total)	<u>\$12228</u>	<u>\$12231</u>	<u>\$13246</u>	<u>\$12050</u>
Crop, seed and feed	\$10368	\$11244	\$ 8849	\$ 6367
Power machinery (farm share)	4100	5057	3249	3628
Crop & general machinery	5552	5614	4841	4623
Livestock equipment	<u>1622</u>	<u>1918</u>	<u>1460</u>	<u>1549</u>
Machinery & equipment (total)	<u>\$11274</u>	<u>\$12589</u>	<u>\$ 9550</u>	<u>\$ 9800</u>
Land	\$33164	\$33164	\$30749	\$30749
Buildings, fences, etc.	<u>18413</u>	<u>19051</u>	<u>15774</u>	<u>15198</u>
Total farm capital	\$85447	\$88279	\$78168	\$74164

* Some books arrived too late to be included in the averages. Others were omitted for various reasons. See page 2. For the purpose of comparison, all the data shown in this report, with the exception of household expenses, are presented on a full-owner basis. The assets, expenses and receipts of the landlord were included in the records from rented farms.

** See explanation of WORK UNIT on page 9.

TABLE 2 SUMMARY OF FARM EARNINGS (CASH STATEMENT) 1964

ITEMS	ADJUSTMENTS	Average of 175 farms	44 most profit. farms	44 least profit. farms
<u>FARM RECEIPTS</u>				
Dairy & dual purpose cattle		\$ 1570	\$ 2214	\$ 1425
Dairy products		6237	7037	4430
Beef cattle (inc. feeders)		3781	3093	7921
Hogs		8196	11313	6357
Sheep & wool (inc. feeders)		82	198	62
Poultry		37	31	46
Eggs		712	458	660
Corn		2220	3403	1902
Small grain		431	725	220
Other crops		2894	4002	2701
Mach. & equip. sold, gas tax ref.		302	256	402
Income from work off the farm		299	278	334
Misc. farm income		1530	2832	1441
(1) Total farm sales		\$28291	\$35069	\$27902
(2) Increase in farm capital		-----	2832	-----
(3) Family living from the farm		317	368	264
(4) Total farm receipts (1+2+3)		\$28608	\$38269	\$28165
<u>FARM EXPENSES</u>				
Dairy & dual purpose cattle bought		\$ 273	\$ 289	\$ 346
Beef cattle bought (inc. feeders)		1635	1227	3970
Hogs bought		724	1062	552
Sheep bought (inc. feeders)		6	6	19
Poultry bought		138	70	92
Misc. livestock expense		601	641	582
Feed bought		4611	5252	4131
Fertilizers		1522	1991	1459
Other crop expenses		1153	1503	1142
Custom work hired		840	867	823
Gas, oil, grease bought (f.share)		1028	1068	1043
Rep. mech. power (f.share)		580	660	612
Rep. & upkeep of real estate		323	336	317
Rep. & upkeep of crop & gen. mach.		410	491	396
Rep. & upkeep of lvstk. equip.		193	270	159
Wages of hired labor		470	496	498
Electricity expense (f.share)		319	369	278
Real estate & pers. prop. tax		1277	1514	1288
General farm expenses		389	429	388
(5) Total cash operating expense		\$16492	\$18641	\$18095
(6) Cap. purc.mech. pow. (f.share)		1126	1764	1166
(7) Cap. purc.crop & gen. mach.		1037	1204	772
(8) Cap. purc. lvstk. equip.		380	552	376
(9) Cap. purc. buildings-fences		1072	1699	438
(10) Total farm purchases (5-9)		\$20107	\$23860	\$20847
(11) Decrease in farm capital		143	-----	4004
(12) Interest on farm capital		3764	4343	3808
(13) Unpaid family labor		658	880	719
(14) Board furnished hired labor		78	91	74
(15) Total farm expenses (10-14)		\$24750	\$29174	\$29452
(16) Labor earnings (4-15)		\$ 3858	\$ 9095	\$-1287

See footnote on page 5

TABLE 3 SUMMARY OF FARM EARNINGS (ENTERPRISE STATEMENT) 1964*

ITEMS	ADJUSTMENTS	Average of 175 farms	44 most profit. farms	44 least profit. farms
<u>RETURNS AND NET INCREASES</u>				
Dairy and dual purpose cows		\$ 6154	\$ 7013	\$ 4329
Other dairy & dual purpose catt.		1794	2228	1278
Beef breeding herd		100	58	251
Feeder cattle		1406	1226	2707
Hogs		7714	10986	5842
Sheep (farm flock)		75	175	53
Sheep (feeders)		---	---	---
Turkeys		---	---	---
Chickens		647	439	628
All Productive Livestock		\$17890	\$22125	\$15088
Value of feed fed to livestock		-12497	-14071	-12016
Return over feed from livestock		\$ 5393	\$ 8054	\$ 3072
Crops, seed & feed		10133	14268	7529
Income from labor off farm		142	132	158
Agric. conservation payments		1064	1260	1167
Miscellaneous		466	801	274
(1) Total Returns & Net Increases		\$17198	\$24515	\$12200
<u>EXPENSES AND NET DECREASES</u>				
Truck		\$ 319	\$ 375	\$ 384
Auto (farm share)		461	515	453
Tractor		1204	1379	1138
Elec. & gas engine exp (f.share)		323	377	281
Hired power		431	431	440
Total Power		\$ 2738	\$ 3077	\$ 2696
Crop & general machinery		1411	1727	1423
Livestock equipment		322	542	422
Buildings, fences & tiling		1360	1394	1315
Misc. prod. livestock expense		601	641	582
Labor		1482	1752	1564
Real estate taxes		1082	1291	1083
Personal property taxes		195	222	205
Insurance		193	195	189
General farm expense		196	234	199
Interest on farm capital		3764	4343	3808
(2) Total Expenses & Net Decreases		\$13344	\$15418	\$13486
(3) Labor Earnings (1) - (2)		\$ 3854	\$ 9097	\$-1286

* Cash receipts and expenses are adjusted for changes in inventory for each enterprise and for each item of expense in order to show total receipts and net increases; total expenses and net decreases.

TABLE 4 CASH HOUSEHOLD AND PERSONAL EXPENSES FOR
THOSE FARMS WHICH KEPT COMPLETE ACCOUNTS OF THESE EXPENSES 1964

ITEMS	Average of 96 farms
Number of persons-family	5.1
Number of adult equivalent-family	3.5
Food and meals bought	\$1115
Operating and supplies	331
Furnishings and equipment	329
Clothing and clothing materials	397
Personal care-personal spending	184
Education-recreation-development	215
Gifts and special events	154
Medical care and health insurance	459
Church-welfare	182
Personal share truck & auto expense	213
Operator's share upkeep on dwelling	118
Personal share telephone & electric expense	<u>111</u>
Total Cash Living Expenses	\$3808
Personal share new auto & truck	152
Taxes and other deductions	90
Life insurance	283
Other savings and investments	<u>67</u>
Total Household & Personal Cash Expense	\$4400
Total Family Living From The Farm	<u>323</u>
Total Cash Expense and Prerequisites	\$4723
Income: Operators Labor Earnings	\$3882

TABLE 5 NET WORTH STATEMENT FOR THOSE FARMERS WHO KEPT A
COMPLETE RECORD OF ALL ASSETS AND LIABILITIES 1964 (OPERATOR'S SHARE)

	Owners 66 farms		Part Owners 48 farms		Renters 37 farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total farm capital	\$57980	\$58387	\$71341	\$71403	\$20489	\$22189
Auto (personal share)	479	477	553	777	486	446
Dwelling	3440	3495	4253	4517	---	---
Other personal assets	<u>6219</u>	<u>6621</u>	<u>5946</u>	<u>6549</u>	<u>4593</u>	<u>5156</u>
Total Assets	\$68118	\$68981	\$82092	\$83246	\$25568	\$27790
Real estate mortgages	\$21503	\$21058	\$19785	\$19363	\$ 85	\$ 726
Chattel mortgages	5993	6352	7824	7671	4478	4484
Notes	2382	1971	2281	2023	3287	3835
Accounts payable	<u>962</u>	<u>1010</u>	<u>1301</u>	<u>920</u>	<u>2261</u>	<u>1602</u>
Total Liabilities	\$30841	\$30391	\$31192	\$29978	\$10112	\$10647
Farmer's Net Worth	\$37277	\$38590	\$50900*	\$53268	\$15456	\$17144
Gain in Net Worth		\$ 1313		\$ 2368		\$ 1688

* Includes any partners' share in the farm business.

TABLE 6 SUMMARY OF FARM EARNINGS BY TENURE 1964 (OPERATOR'S SHARE)

ITEMS	74		61 Partners & 40	
	ADJUSTMENTS	Owners	Part Owners	Renters
<u>FARM RECEIPTS</u>				
Dairy and dual purpose cattle		\$ 1077	\$ 1291	\$ 1410
Dairy products		5549	5269	5485
Beef cattle (including feeders)		2598	6745	809
Hogs		8961	7667	5096
Sheep and wool (including feeders)		124	45	22
Poultry (including turkeys)		42	26	32
Eggs		671	629	694
Corn		1233	3073	707
Small grain		383	370	213
Other crops		1704	4075	1261
Machinery & equipment sold		218	417	243
Income from work off farm		269	273	384
Miscellaneous		1170	2065	713
(1) Total Farm Sales		\$23999	\$31946	\$17069
(2) Increase in farm capital		250	---	1465
(3) Family living from farm		299	312	273
(4) Total Farm Receipts (1)+(2)+(3)		\$24548	\$32258	\$18807
<u>FARM EXPENSES</u>				
Dairy and dual purpose catt. bought		\$ 286	\$ 109	\$ 287
Beef cattle bought (inc. feeders)		1299	3031	25
Hogs bought		741	804	465
Sheep bought (inc. feeders)		1	17	---
Poultry		76	67	334
Misc. livestock expense		577	518	526
Feed		4508	4511	3550
Fertilizers		1322	1773	821
Other crop expense		967	1344	692
Custom work hired		693	962	612
Gas-oil-grease		828	1241	884
Rep. tractor-truck-auto (f.share)		485	665	586
Rep. & upkeep of real estate		322	375	49
Rep. & upkeep of crop & gen. mach.		329	504	373
Rep. & upkeep of lvstk. equipment		203	197	127
Wages of hired labor		358	776	169
Electricity expense (f.share)		291	335	258
Real estate & pers. property taxes		1007	931	141
Cash rent		86	931	1102
General farm expenses		362	476	224
Interest paid		1375	1337	507
Total Cash Operating Expenses		\$16115	\$20904	\$11730
Mechanical power bought (f.share)		728	1866	610
Crop & general machinery bought		838	1301	959
Livestock equipment bought		417	291	355
New real estate improvements		1083	984	621
(5) Total Farm Purchases		\$19181	\$25346	\$14275
(6) Decrease in farm capital		-----	355	-----
(7) Interest on farm capital		1592	2177	562
(8) Unpaid family labor		530	877	562
(9) Board furnished hired labor		61	102	69
(10) Total Farm Expenses (5)+(6)+(7)+(8)+(9)		\$21364	\$28857	\$15468
(11) Labor Earnings (4) - (10)		3184	3400	3337
(12) Ret. to Cap. & Fam. Labor (7)+(8)+(11)		5305	6454*	4461

*Includes any partner's share that may be in this classification.

RANGE IN EARNINGS

LOW 1/5 OF COOPERATORS

MIDDLE 3/5 (RANGE ONLY)

HIGH 1/5 OF COOPERATORS

Range in earnings between the top and bottom groups was very pronounced. Yields were again a very important factor in determining labor earnings. Severe drouth in some instances tended to be something of an equalizer, but in other cases it made the spread greater.

\$16000

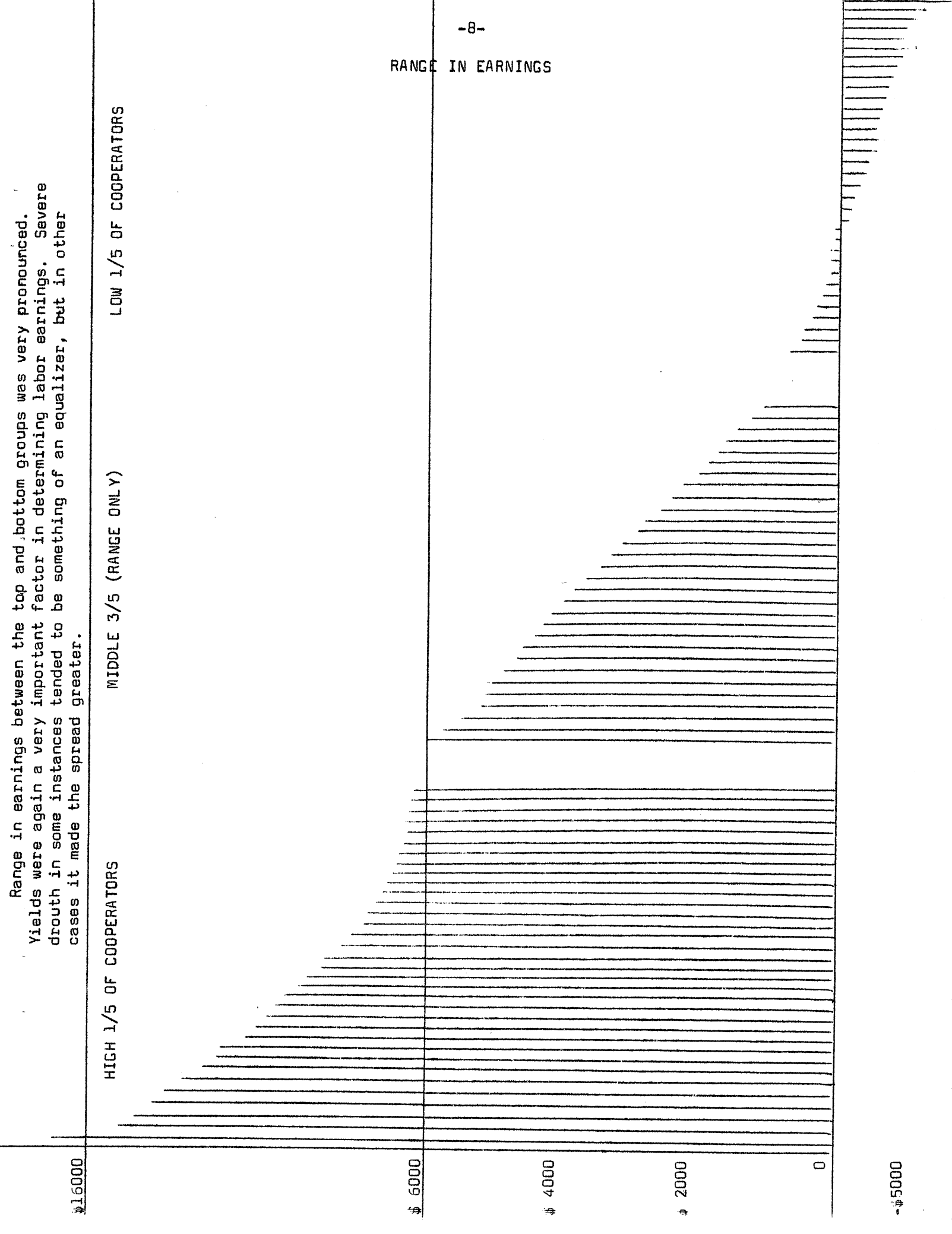
\$ 6000

\$ 4000

\$ 2000

0

\$5000



WORK UNITS

The total work units for any one farm is a measure of the size of that farm business. A work unit as used in this report is the average accomplishment of a farm worker in a ten hour day. The number of work units per farm or per worker may be interpreted differently for different farm situations. They may measure the degree of efficiency of labor due to mechanization or careful planning. They may also measure quality or quantity of work. Occasionally, high work units per worker indicate an excessive work load. The number of work units for each class of livestock and each acre of crop are presented in Table 7.

Table 7 Number of Work Units for Each Class of Livestock and Each Acre of Crop

Item	No. of Work Units	Item	No. of Work Units
Dairy & dual purpose cows	10.0 per cow	Small grain	.5 per acre
Other dairy & dual pur cattle	3.5 per an. unit*	Sugar beets	3.0 per acre
Beef Breeding Herd	3.5 per an. unit*	Sweet corn	.7 per acre
Feeder cattle	.25 per 100#	Corn, husked	.7 per acre
Sheep-farm flock	1.5 per an. unit*	Corn, hogged	.4 per acre
Sheep-feeders	.3 per 100#	Corn, shredded	1.5 per acre
Hogs	.2 per 100#	Corn, silage	1.0 per acre
Turkeys	.2 per 100#	Corn, fodder	1.0 per acre
Hens	20.0 per 100 hens	Alfalfa hay	.6 per acre
Canning peas	.5 per acre	Soybean hay	.8 per acre
Soybeans for grain	.5 per acre	Other hay crops	.4 per acre
Turkey hens	40.0 per 100 hens		

* Animal unit represents one dairy cow or bull, two other dairy cattle, one and one-fourth beef cows or bulls, one feeder steer or heifer, three and one-third other beef cattle, seven sheep, fourteen lambs, two and one-half hogs, five pigs, fifty laying hens, twenty-five turkey hens, eleven hundred pounds of turkey produced.

TABLE 8 MEASURES OF FARM ORGANIZATION AND MANAGEMENT EFFICIENCY 1964

Measures Used in Chart on Page 11	Average of 175 farms	44 most profitable farms	44 least profitable farms
Labor earnings	\$3858.00	\$9095.00	\$-1287.00
(1) Crop yields *	100	116	80
(2) Per cent tillable land in high return crops	66.7	69.8	65.2
Gross return per acre	\$ 62.21	\$ 71.28	\$ 50.95
(3) Return for \$100 feed to produce livestock *	100	108	91
(4) Productive livestock units per 100 acres **	32.0	31	33
(5) Size of business - work units	518	574	483
(6) Work units per worker	341	348	298
(7) Power, machinery, equipment & building expense per work unit	\$ 11.25	\$ 11.67	\$ 12.16
Items Related to Some of the Above Measures:			
(3) Index of return for \$100 feed from:			
Dairy cattle (see pp. 15 & 16)	100	110	92
Beef cattle - breeding herd (see p. 17)	100	111	90
Beef cattle - feeders (see p. 17)	100	103	100
Hogs (see pp. 13 & 14)	100	107	91
Sheep - farm flock (see p. 18)	100	109	135
Chickens (see p. 19)	100	110	92
(4) Number of animal units	76.9	82.2	79.5
(5) Work units on crop	147	164	156
Work units on productive livestock	371	410	327
(7) Power expense per work unit	\$5.28	\$5.35	\$5.60
Crop machinery expense per work unit	\$2.72	\$2.98	\$2.95
Livestock equip. expense per work unit	\$.63	\$.94	\$.89
Building & fence expense per work unit	\$2.62	\$2.40	\$2.72

* Given as a percentage of the average.

** Acres in timber not pastured, roads, waste and farmstead were not included.

THERMOMETER CHART

Using your figures from page 10, locate your standing with respect to the various measures of farm organization and management efficiency. The averages for the 175 farms included in this summary are located between the dotted lines across the center of this page.

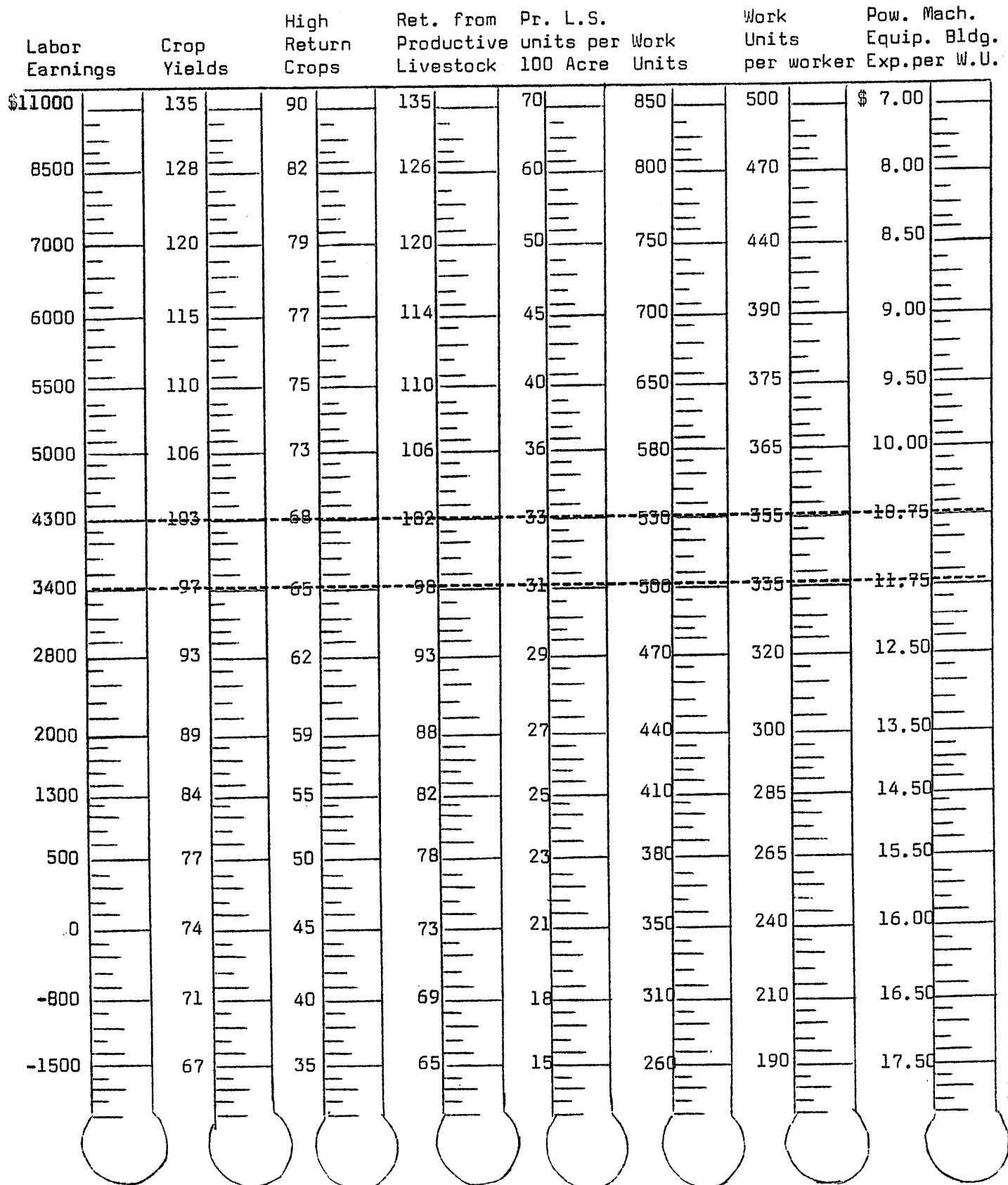


TABLE 9 DISTRIBUTION OF ACRES AND YIELD 1964

CROP	Crop rating	Number growing	Average acres of 175 farms	ADJUST-MENTS	Average yield
Canning peas	B	12	1.1		\$41.70
Wheat	C	80	7.2		24.9 bu.
Oat silage	C	17	1.1		8.0 ton
Oats for grain	D	139	<u>19.1</u>		65.3 bu.
Total Small Grain & Peas			28.5		
Sugar beets	A				
Corn grain	A	174	77.5		66.0 bu.
Canning corn	B	17	2.6		\$51.30
Soybeans	B	136	37.0		22.0 bu.
Corn silage	B	133	16.1		10.1 ton
Other crops		7	<u>2.6</u>		
Total Cultivated Crops			135.8		
Alfalfa hay	B	149	24.9		2.9 ton
Other legume & legume mixture	C	41	4.2		2.1
Miscellaneous hay & seed *	D		<u>.2</u>		
Total Tillable Land in Hay			29.3		
Alfalfa pasture	B	72	7.0		
Other legume pasture	(C or B)	14	.9		
Other tillable pasture	D	11	<u>.5</u>		
Total Tillable Land in Pasture			8.4		
Government program	A	103	22.5		
Tillable land not cropped (including plowdown & waterways)	D	8	.3		
Total Tillable Land			224.8		
Wild hay		10	.4		
Non-tillable pasture		96	13.9		
Timber		29	1.6		
Roads and waste			10.5		
Farmstead			8.8		
Total Acres in Farm			260 0		
Per cent land tillable			86.4		
Per cent in high return crops			66.7		

* Some crops were grouped because acreages for each were less than one acre. Included are legumes for seed and timothy for seed and emergency hay crops.

TOTAL FEED COSTS AND RETURNS FROM YOUR LIVESTOCK ENTERPRISES

The total "return over feed costs" for each class of livestock is shown in Table 10. This differs from the "return over feed" shown in the enterprise statement in that it is the total for each class of livestock instead of a return "per head," "per unit" or "per 100 pounds." These data indicate the relative importance of different classes of livestock as a source of income and as a market for feed. The value of milk consumed by calves is included in the total returns from dairy or dual purpose cattle. The value of milk consumed by calves is not included in either the total returns or the feed cost of "all dairy" or "all dual purpose" cattle. The return over feed is not a net return, but rather the amount available from the gross income, after paying the feed bill, to cover the outlay for hired labor, power, equipment, taxes, insurance, interest, and veterinary bills and to provide a return for the use of family labor and capital.

Table 10 Total Feed Costs and Returns from Your Livestock Enterprises 1964

	<u>Dairy or Dual Purpose Cattle</u>			<u>Beef -</u>
	<u>Cows</u>	<u>Other</u>	<u>All</u>	<u>Breeding</u> <u>Herd</u>
Total returns	_____	_____	_____	_____
Total feed cost	_____	_____	_____	_____
Total return over feed	_____	_____	_____	_____
	<u>Feeder</u> <u>Cattle</u>	<u>Hogs</u>	<u>Farm Flock</u> <u>of Sheep</u>	<u>Chickens</u>
Total returns	_____	_____	_____	_____
Total feed cost	_____	_____	_____	_____
Total return over feed	_____	_____	_____	_____

Feed is the largest single item of cost for all classes of livestock. The proportion of the total cost represented by feed varies between classes of livestock. Feed makes up approximately 45 per cent of the total costs of maintaining dairy cattle and poultry, 50 per cent in the case of a farm flock of sheep and 65 to 75 per cent for hogs, feeder cattle and feeder lambs. It is necessary to secure a relatively higher return over feed from dairy cattle and poultry than from the other livestock enterprises to cover costs other than feed.

TABLE 11 FEED COSTS AND RETURNS FROM HOGS 1964

ITEMS	ADJUSTMENTS	31 farms		31 farms	
		Average of 120 farms	high in return above feed	low in return above feed	
Feed per cwt. hogs produced - pounds:					
Corn		326	307		371
Small grain		33	25		33
Commercial feeds		59	55		66
Total Concentrates		418	387		470
Forage and Miscellaneous		6	8		2
Feed cost per cwt. hogs produced:					
Concentrates (plus forage & misc.)		\$10.94	\$10.00		\$12.01
Pasture		.01	.01		.01
Total Feed Costs		\$10.95	\$10.01		\$12.02
Net increase in value per cwt. hogs produced		\$14.94	\$15.72		\$13.30
Returns Above Feed Cost Per Cwt. Hogs Produced		\$ 3.99	\$ 5.71		\$ 1.28
Return for \$100 of Feed		\$136.00	\$157.00		\$111.00
Price received per cwt. hogs sold		\$ 15.11	\$ 15.36		\$ 14.77
Number of pigs born per litter		9.5	9.6		8.6
Number of pigs weaned per litter		7.4	8.0		6.4
Pounds of hogs produced		69309	90805		49803

Operators producing less than 10,000 pounds of pork are omitted from hog averages. Questionable records were omitted including those who produced hogs for only a portion of the year. Feeder pig operations were mistakenly included in the above. It is hoped that a separate analysis will be available later.

DAIRY AND DUAL PURPOSE CATTLE

No herds were classed as dual purpose. Several farms raising only dairy heifers were omitted as were herds with averages of less than five cows. Also omitted were those who had herds for only a portion of the year.

TABLE 12 FACTORS OF COST AND RETURNS FROM DAIRY COWS 1964

ITEMS	ADJUSTMENTS	Average of 105 farms	27 farms	22 farms
			highest ret. over feed cost	lowest ret. over feed cost
Pounds of butterfat per cow		387	430	326
Pounds of milk per cow		10771	12081	9313
Per cent of butterfat in milk		3.6	3.6	3.5
Price rec'd per lb. BF sold (¢)		93.9	94.9	92.1
Price rec'd per cwt. milk sold		\$ 3.37	\$ 3.42	\$ 3.10
Feed per cow - pounds:				
Corn		3145	3265	2959
Small grain		600	489	518
Commercial feeds		554	435	697
Legume hay		4739	4003	4671
Other hay		387	689	497
Total Concentrates		4299	4189	4174
Total Dry Roughage		5126	4692	5168
Silage		9388	8621	14900
Feed cost per cow:				
Concentrates		\$104.50	\$ 99.70	\$108.56
Roughages		83.34	75.71	100.38
Pasture		8.16	7.86	7.96
Total Feed Costs		\$196.00	\$183.27	\$216.90
Value of produce per cow:				
Butterfat sales		\$353.48	\$398.00	\$290.30
Dairy products used in home		4.28	5.15	3.99
Milk to livestock		5.97	4.99	6.23
Net increases in value of cows		-14.92	-10.65	-14.69
Total Value Produced		\$348.81	\$397.49	\$285.83
Return Above Feed Cost Per Cow		\$152.81	\$214.22	\$ 68.93
Returns for \$100 of Feed		\$178.00	\$217.00	\$132.00
Feed Cost Per Pound BF (¢)		50.6	42.7	66.4
Number of cows		26.7	25.3	22.9

TABLE 13 FEED COSTS AND RETURNS FROM OTHER DAIRY & DUAL PURPOSE CATTLE 1964

ITEMS	ADJUSTMENT	Average	27 farms	22 farms
		of 105 farms	highest ret. over feed cost	lowest ret. over feed cost
Feeds per head - pounds:				
Concentrates		1025	626	1026
Hay and fodder		1745	1743	2013
Silage		2640	2400	3790
Whole milk		146	136	159
Feed cost per head:				
Concentrates		\$29.79	\$16.62	\$29.79
Roughages		27.89	21.90	33.70
Milk		4.83	4.28	4.93
Pasture		2.98	2.74	2.63
Total Feed Costs Per Head		\$65.49	\$45.54	\$71.05
Net increase in value of other cattle		\$82.93	\$100.66	\$69.14
Returns above feed cost per head		\$17.44	\$55.12	\$-1.91
Returns for \$100 of feed		\$127.00	\$221.00	\$ 97.00
Number of head of other cattle		32.9	29.4	29.0

TABLE 14 FEED COSTS & RETURNS FROM ALL DAIRY & DUAL PURPOSE CATTLE 1964

ITEMS	ADJUSTMENT	Average of 105 farms	27 farms highest ret. over feed cost	22 farms lowest ret. over feed cost
Feed per animal unit - pounds:				
Concentrates		3399	3339	3351
Hay and fodder		4498	4243	4720
Silage		8167	7207	10907
Total Feed Costs Per Animal Units		\$167.71	\$155.71	\$185.70
Value of produce per animal unit:				
Dairy products		\$225.03	\$257.59	\$183.91
Net increase in value of dairy cattle		<u>53.81</u>	<u>67.28</u>	<u>44.48</u>
Total Value Produced		\$278.84	\$324.87	\$228.39
Returns above feed per animal unit		\$111.13	\$169.16	\$ 42.52
Returns per \$100 of feed		\$166.00	\$209.00	\$123.00
Animal units of cattle		43.2	40.0	37.5

TABLE 15 FEED COST AND RETURNS FROM BEEF CATTLE 1964

ITEMS	ADJUSTMENTS	Average of 4 farms
<u>Beef Breeding Herd:</u>		
Feeds per animal unit - pounds:		
Concentrates		164
Legume hay		728
Silage		7153
Other hay		1821
Feed cost per animal unit:		
Concentrates		\$ 4.44
Roughages		44.23
Pasture		<u>14.11</u>
Total Feed Costs		\$62.78
Total Value Produced		\$77.60
Returns Above Feed Cost Per Animal Unit		\$14.82
Returns for \$100 of Feed		\$124.00
Number of cows and herd bulls		34
Number of animal units in the herd		32.6
Pounds of beef produced		10888
<u>Feeding Cattle: 32 farms</u>		
Feeds per cwt. beef produced - pounds:		
Corn		490
Small grain		5
Commercial feeds		51
Legume hay		205
Other hay and fodder		26
Total Concentrates		546
Total Hay and Fodder		231
Silage		1062
Feed cost per cwt. beef produced:		
Concentrates		\$12.08
Roughages		5.63
Pasture		<u>.09</u>
Total Feed Costs		\$17.80
Net increase in value of feeders		19.16
Returns Above Feed Cost Per Cwt. Beef Produced		1.36
Return for \$100 of Feed		\$108.00
Price received for feeder cattle sold		19.33
Number of animal units		64.7
Pounds of beef produced		36615

Several cooperators had beef breeding animals and also feeders but sometimes failed to make a distinction. These were not included in the averages. In some cases club calves and project animals represented the only beef produced. Only those producing 8000 pounds or more of beef were included in the feeder cattle operations.

SHEEP

Farm flocks in this area are small and the feed consumption is often impossible to determine. Flocks were carefully screened for reliability. Only three of the twenty reporting sheep were used. Costs and returns are determined on a per ewe basis.

TABLE 16 FEED COSTS AND RETURNS FROM A FARM FLOCK OF SHEEP 1964

ITEMS	ADJUSTMENTS	Average of 3 farms
Feeds per ewe (lbs.):		
Concentrates		306
Legume hay		748
Other hay		
Silage		40
Feed cost per ewe:		
Concentrates		\$ 6.70
Roughages		7.35
Pasture		3.04
Total Feed Costs		\$17.09
Value of produce per head:		
Wool		\$ 6.92
Net increase in value of sheep		19.16
Total Value Produced		\$26.08
Returns Above Feed Cost Per Head		\$ 8.99
Returns For \$100 of Feed		\$152.56
Price per cwt. of lambs sold		\$20.50
Price per lb. wool sold (cents)		.67
Pounds of wool per sheep sheared		10.3
Number of ewes kept for lambing		92.7
Per cent lamb crop		150.0
Per cent death loss		19.1
Average number of ewes		107.4

* Wool return including incentive payment.

CHICKENS

Flocks from 25 farms are included in this report. Only those flocks averaging 200 or more hens and having a full years production are included in the averages.

TABLE 17 FEED COSTS AND RETURNS FROM CHICKENS 1964 *

ITEMS	ADJUSTMENTS	Average of 25 farms	13 farms highest in return above feed	12 farms lowest in return above feed
Feed per hen - pounds:				
Grain		76	77	74
Commercial Feeds		<u>45</u>	<u>33</u>	<u>56</u>
Total Concentrates		121	110	130
Total Feed Cost Per Hen		\$ 3.54	\$ 3.46	\$ 3.62
Value of produce per hen:				
Eggs sold & used in the home		\$ 5.19	\$ 5.42	\$ 4.98
Net increase in value of chickens		<u>-.60</u>	<u>-.37</u>	<u>-.80</u>
Total Value Produced		\$ 4.59	\$ 5.05	\$ 4.18
Returns above Feed Cost Per Hen		\$ 1.05	\$ 1.59	\$.56
Returns for \$100 of Feed		\$130.00	\$146.00	\$115.00
Price rec'd per doz. eggs sold (¢)		27.4	27.6	27.2
Eggs laid per hen		227	236	220
Average number hens on farm during year		876	796	962
Per cent death loss of hens **		14.6	10.5	18.3

* Includes feeds and returns from laying flock and chicks raised.

** Basis used by Agricultural Records Cooperative gives a considerably higher percentage of death loss than would be true if previous basis was used.

Table 18 Feed Costs and Returns from Feeder Pigs 1964

	Your farm	Average of 14 farms
Feed per cwt. hogs produced:		
Corn		298#
Small grain		14#
Commercial feeds		61#
Total feed		373#
Total feed cost		\$9.62
Net increase in value per cwt. produced		\$12.86
Return over feed cost per cwt. produced		\$3.24
Return per \$100 feed		\$134.00
Average price received		\$15.00
Pounds pork produced		78290#

Table 19 Average Prices Used for Feed 1964

			(Pasture per head per mo)
Ear corn	\$ 1.10	Dairy & beef cows-bulls	\$3.00
Oats per bushel	.65	Young cattle	1.50
Alfalfa hay per ton	22.00	Hogs	.16
Red or Alsike clover hay-1 ton	18.00	Pigs	.08
Non-legume per ton	14.00	Ewes	.40
Corn silage per T \$3 (drouth corn) to	7.00	Lambs	.20

Table 20 Power and Crop Machinery Expense Per Crop Acre 1964

	Your farm	175 farms	High 44	Low 44
Acres per farm in crops		193.	224.(est)	191.(est)
Power expense per acre of crop		\$14.16	\$13.74	\$14.12
Crop machinery expense per acre of crop		7.31	7.71	7.45

Labor Earnings Correlated with Excelled Factors

Studies of earnings of farmers in this area are measured by seven major management factors causing variations in earnings among farmers within a given year. These seven factors are (1) crop yields (2) choice of crops (3) returns from livestock (4) amount of livestock (5) size of business (6) accomplishments per worker and (7) control over expenses. The combined or cumulative influence of these seven management factors on earnings is shown in Table 21. Comparisons of how each individual was related to income levels is shown in Table 8.

Table 21 179 Farms

Number of factors in which farmers excelled	Number of farms	Average Labor Earnings		
		\$2000	\$4000	\$6000
0 or 1	20	-X		-\$218.
2 or 3	76	XXXXXXXXXXXXX		\$3503.
4 or 5	64	XXXXXXXXXXXXXXXXX		\$4042.
6 or 7	19	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		\$8624.

EARNINGS OF 27 OPERATORS NOT INCLUDED IN THE AVERAGES

These farms were omitted mainly because of three factors (1) ten books were submitted too late (2) eight records were not considered to be sufficiently reliable and (3) nine were not typical farming operations (one business was incorporated, some were part-time operations, while others had unusual situations or combinations.)

Labor earnings from all farms averaged \$4040. The top nine farms averaged \$11718. The nine lowest income farms averaged \$-3867.

CORRECTIONS

Page 12 - Government program payment average - \$52.52 per acre.

As we carry over from year to year, certain changes are made in the inclusions. At one time only those who participated in the analysis were listed on page 2. This year we had intended to list all instructors. We apologize for having inadvertently omitted Donald Ritland, Austin; Roger Ruehling, Lyle; and Lyn Lagerstedt, Adams and Elkton.

SUMMARY OF FARM EARNINGS BY YEARS

ITEMS	1959	1960	1961	1962	1963	1964
<u>FARM RECEIPTS</u>						
Dairy cattle	\$ 1828	\$ 1160	\$ 1602	\$ 1402	\$ 1348	\$ 1570
Dairy products	4492	4726	4776	5050	5073	6237
Beef cattle (including feeders)	5130	6958	5585	4645	3813	3781
Hogs	5895	6426	8751	8346	7860	8196
Sheep and wool	221	181	147	155	234	82
Horses	3	-	-	-	-	-
Poultry (including turkeys 1959-60)	1879	2280	78	49	25	37
Eggs	917	1628	989	676	546	712
Corn	1473	1468	883	1601	2137	2220
Small grain	495	401	505	507	726	431
Other crops	975	961	1179	1491	2472	2894
Machine equipment sold & gas tax refund	194	172	208	266	281	302
Income from work off the farm	357	406	174	228	327	299
Miscellaneous	237	239	875	983	1478	1530
(1) Total Farm Sales	\$24096	\$27006	\$25752	\$25399	\$26320	\$28291
(2) Increase in farm capital	2754	1795	3180	669	2554	----
(3) Family living from the farm	271	326	341	368	330	317
(4) Total Farm Receipts (1)+(2)+(3)	\$27121	\$29127	\$29273	\$26436	\$29204	\$28608
<u>FARM EXPENSE</u>						
Dairy cattle bought	\$ 539	\$ 373	\$ 333	\$ 250	\$ 221	\$ 273
Beef cattle bought (inc. feeders)	3290	3493	3949	2386	2829	1635
Hogs bought	387	530	537	669	590	724
Sheep bought (inc. feeders)	287	43	17	5	36	6
Poultry bought	475	720	117	92	57	138
Miscellaneous livestock	546	777	568	570	582	601
Feed bought	4585	5546	4604	4238	4341	4611
Fertilizers	1112	1085	1000	1065	1327	1522
Other crop expenses	894	695	699	716	973	1153
Custom work hired	593	607	592	629	722	840
Gas-oil-grease bought (f.share)	949	991	951	1010	1083	1028
Repair of mechanical power (f.share)	487	533	522	534	595	580
Repair & upkeep of real estate	377	324	332	375	336	323
Repair & upkeep of crop & gen. mach.	354	397	347	357	440	410
Repair & upkeep of livestock equipment	97	139	168	158	172	193
Wages of hired labor	606	570	459	348	538	470
Electricity expense (f.share)	257	309	292	300	299	319
Real estate & personal property tax	838	906	934	1066	1206	1277
General farm expense	302	330	293	310	333	389
(5) Total Cash Operating Expense	\$16975	\$18368	\$16714	\$15078	\$16680	\$16492
(6) Cap. purch. mech. power bought	920	697	560	992	693	1126
(7) Crop and general machinery bought	1448	1174	995	1090	923	1037
(8) Livestock equipment bought	400	628	216	320	423	380
(9) New real estate improvements	1136	1360	1010	1036	1095	1072
(10) Total Farm Purchases (5)-(9)	\$20879	\$22227	\$19495	\$18516	\$19814	\$20107
(11) Decrease in farm capital	-----	-----	-----	-----	-----	143
(12) Interest on farm capital	2839	3106	3077	3138	3528	3764
(13) Unpaid family labor	380	529	550	638	634	658
(14) Board furnished hired labor	41	51	68	67	66	78
(15) Total Farm Expense (10)-(14)	\$24139	\$25913	\$23190	\$22359	\$24042	\$24750
(16) Labor Earnings (4)-(15)	\$ 2982	\$ 3214	\$ 6083	\$ 4077	\$ 5162	\$ 3858

