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1965
ANNUAL REPORT
WEST CENTRAL MINNESOTA
FARM MANAGEMENT SERVICE

UNIVERSITY OF MINNESOTA
Institute of Agriculture
and
Vocational Division
MINNESOTA DEPARTMENT OF EDUCATION
Cooperating

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1965 REPORT OF THE FARM MANAGEMENT SERVICE FOR VOCATIONAL
AGRICULTURE IN WEST CENTRAL MINNESOTA

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INDEX

	Page
Introduction	1
Farm Inventories	2
Farm Earnings.	2
Family Living from the Farm	6
Household and Personal Expenses and Receipts	6
Net Worth	7
Summary of Farm Earnings by Tenure	9
Returns to Capital and Family Labor	10
Range in Earnings	10
Explanation of "Work Units"	11
Measures of Farm Organization and Management Efficiency	12
Thermometer Chart	13
Distribution of Acres in Farm	14
Crop Yields	15
Power and Machinery Expenses	15
Amount of Livestock	15
Total Feed Costs and Returns from Livestock Enterprises	16
Hogs	16
Dairy Cattle	17
Beef Cattle	20
Chickens	21
Summary of Miscellaneous Items by Years	22
Summary of Farm Earnings by Years	24

INTRODUCTION

The Department of Agricultural Economics and Agricultural Education, the West Central School and Station and the Agricultural Extension Service of the University of Minnesota are cooperating with the Vocational Division, Minnesota Department of Education, in maintaining a farm management service. The service was initiated during 1952 and is available to farmers who are enrolled in adult or young farmer classes in public schools.

The purpose of the project as far as the schools are concerned is (1) to give assistance to the instructors in the mechanics of keeping farm records and (2) to aid in the analysis of the farm business through the use of records as a basis for vocational guidance. The enrollment is on a voluntary basis insofar as the number of schools participating and the number of farmers enrolled in the service.

The analysis of the records and the preparation of the reports for West Central Minnesota are handled by T. R. Nodland of the University of Minnesota, Department of Agricultural Economics, with assistance from Ed Hartog, Area Vo-Ag Coordinator, Willmar Community College. The Department of Agricultural Education was represented by M. J. Peterson and the Agricultural Extension Service by Paul Hasbargen. The State Department of Education was represented by G. R. Cochrane, State Supervisor of Agricultural Education.

Each farmer pays an annual fee \$22.00 which covers a portion of the cost. The balance of the costs were defrayed by the University of Minnesota.

* The authors are indebted to Janet Otis, Barbara Miller and Dorothy Spreck for their assistance in the preparation of this report.

This report deals with farmers enrolled in nine schools in West Central Minnesota. The following tabulation shows by schools the number of 1965 farm records submitted:

School	No. of Records	Instructor
Alexandria	29	Bernard Sonstegard Carl Thompson
Appleton	2	Norman Brakken
Canby	8	Norman Haugaard E. W. Neuharth
Hoffman	10	Russell Ruud
Lake Benton	1	Heimer Swanson
Olivia	2	Albert J. Byram
Renville	2	Marlyn Wacholz
Tyler	1	Robert J. Hill
Willmar	<u>18</u>	David Shodean
	73	

The data for 62 farms are shown in the tables on succeeding pages. Eleven farmers were omitted from the average because the records were not sufficiently complete.

The records kept included farm inventories, cash receipts and expenses, feed consumed by the various classes of livestock, family living secured from the farm, household and personal expenses and receipts, and the operator's liabilities and assets other than farm capital. All types of tenure arrangements are represented, ranging from full owners to partnerships in which the operator furnishes a relatively small amount of capital.

FARM INVENTORIES

The capital managed per farm varied from \$15,546 to \$163,806. The average investment for all farms included in this report and for the one-third high and one-third low in labor earnings is shown in Table 1.

Landlords or partners supplied some capital in 42 out of the 62 cases included in this report. The landlord's investment has been included in Table 1 in order to show the total amount used per farm.

FARM EARNINGS

Labor earnings is a measure of the relative financial success of a farmer as compared with other farmers and represents the returns above all farm expenses and a charge for the use of farm capital. For purposes of comparison, the earnings are presented on a full-owner basis.

There are two methods of computing labor earnings. Table 2 shows the earnings statement on a cash basis and Table 3 shows the earnings on an enterprise or accrual basis. The principal difference in the two statements is in the method of handling the net increase or decrease in the value of farm capital. In the cash statement the net increase or decrease in farm capital is entered as one item. In the enterprise statement, the net change in the inventory has been included in each enterprise in order to compute "total returns and net increases," or "total expenses and net decreases" by enterprises.

Table 1. Summary of Farm Inventories, 1965*

Items	Your Farm		Average of 62 farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)			290	
Size of business (work units)**			460	
Dairy cows			\$2723	\$2836
Other dairy cattle			1389	1630
Beef cattle (incl. feeders)			2929	3733
Hogs			1310	2355
Sheep (incl. feeders)			96	104
Poultry (incl. turkeys)			299	357
Productive livestock (total)			8746	11015
Horses			11	18
Crop, seed and feed			4146	5303
Auto (farm share)			806	864
Tractors			1581	1983
Crop and general machinery			3276	3770
Livestock equipment			1407	1470
Machinery and equipment (total)			\$7070	\$8087
Land			27708	27708
Buildings, fences, etc.			9132	8934
Total farm capital managed			\$56813	\$61065
Items	12 most profitable		12 least profitable	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)	377		245	
Size of business (work units)**	707		307	
Dairy cows	\$1288	\$1145	\$1691	\$1972
Other dairy cattle	786	755	946	1103
Beef cattle (incl. feeders)	7710	11137	2529	2825
Hogs	4017	8550	383	479
Sheep (incl. feeders)	379	372	9	10
Poultry (incl. turkeys)	706	1035	21	27
Productive livestock (total)	\$14886	\$22994	\$5579	\$6416
Horses	-	32	18	16
Crop, seed and feed	7647	10814	2536	2687
Auto (farm share)	1194	1405	707	693
Tractors	2790	3747	1837	2012
Crop and general machinery	4752	5950	2430	2759
Livestock equipment	2872	3105	372	519
Machinery and equipment (total)	\$11608	\$14207	\$5346	\$5983
Land	41085	41085	26095	26095
Buildings, fences, etc.	12888	13031	6049	5896
Total farm capital managed	\$88114	\$102163	\$45623	\$47093

* For the purpose of comparison, all the data shown in this report, with the exception of Tables 6 and 7, are presented on a full owner basis. The assets, expenses and receipts of the landlord were included in the records from rented farms.

** See page 11 for an explanation of "work units."

Table 2. Summary of Farm Earnings (Cash Statement), 1965

Items	Your farm	Average of 62 farms	12 most profitable farms	12 least profitable farms
FARM RECEIPTS				
Dairy cattle	_____	\$1236	\$744	\$553
Dairy products	_____	4205	2252	2254
Beef cattle (incl. feeders)	_____	4076	13240	1805
Hogs	_____	5081	17395	1058
Sheep and wool (incl. feeders)	_____	99	352	14
Poultry	_____	79	200	5
Eggs	_____	1151	2525	60
Corn	_____	682	1619	538
Small grain	_____	671	1519	238
Other crops	_____	2537	3954	2418
Mach. & equip. sold & gas tax	_____	242	359	142
Income from work off the farm	_____	505	342	714
Miscellaneous	_____	375	624	235
(1) Total farm sales	_____	\$20939	\$45125	\$10034
(2) Increase in farm capital	_____	4252	14049	1470
(3) Family living from the farm	_____	274	334	264
(4) Total farm receipts 1+2+3	_____	\$25465	\$59508	\$11768
FARM EXPENSES				
Dairy cattle bought	_____	\$317	\$23	\$457
Beef cattle bought (incl. feed.)	_____	1878	7017	586
Hogs bought	_____	183	297	265
Sheep bought (incl. feeders)	_____	15	31	-
Horses bought	_____	7	32	-
Poultry bought	_____	274	1035	15
Misc. livestock expense	_____	511	936	237
Feed bought	_____	4337	12096	1693
Fertilizers	_____	688	1429	420
Other crop expenses	_____	904	1361	819
Custom work hired	_____	688	1374	503
Gas, oil, grease (farm share)	_____	980	1510	699
Rep. of mech. power (farm share)	_____	586	896	422
Rep. & upkeep of real estate	_____	183	301	149
Rep. & upkeep of cr. & gen. mach.	_____	418	547	319
Rep. & upkeep of lvstk. equip.	_____	106	182	41
Wages of hired labor	_____	391	1192	156
Electricity (farm share)	_____	257	355	178
Real estate & pers. prop. taxes	_____	935	1369	788
General farm expense	_____	293	383	232
(5) Total cash oper. expense	_____	\$13951	\$32366	\$7979
(6) Mech. power bought (fm.sh.)	_____	976	2043	633
(7) Crop & gen. mach. bought	_____	1212	2376	808
(8) Livestock equip. bought	_____	335	898	232
(9) Bldgs. & fencings bought	_____	380	1130	184
(10) Total farm purchases	_____	16854	38813	9836
(11) Decrease in farm capital	_____	-	-	-
(12) Interest on farm capital	_____	2947	4757	2318
(13) Unpaid family labor	_____	501	668	255
(14) Board for hired labor	_____	36	92	22
(15) Total farm expenses	_____	\$20338	\$44330	\$12431
(16) Labor earnings 4-15	_____	5127	15178	-663

Table 3. Summary of Farm Earnings (Enterprise Statement), 1965*

Items	Your farm	Average of 62 farms	12 most profitable farms	12 least profitable farms
RETURNS AND NET INCREASES				
Dairy cows		\$4313	\$2245	\$2341
Other dairy cattle		1496	814	843
Beef breeding herd		472	461	789
Feeder cattle		2524	9170	647
Hogs		5986	21733	920
Sheep--farm flock		91	314	14
Chickens		1030	2024	77
All productive livestock		\$15912	\$36761	\$5631
Value of feed fed to livestock		9809	20624	4854
Ret. over feed from livestock		6103	16137	777
Crops, seed, and feed		8820	15982	5162
Income from labor off farm		216	109	357
Miscellaneous		400	624	235
(1) Total ret. & net increases		\$15539	\$32852	\$6531
EXPENSES AND NET DECREASES				
Truck		\$231	\$352	\$160
Auto (farm share)		430	476	387
Tractor		1084	2035	771
Elec. & gas eng. exp. (fm.sh.)		259	356	180
Hired power		284	504	200
Total power		\$2288	\$3723	\$1698
Crop and gen. machinery		1129	1857	707
Livestock equipment		362	805	126
Buildings, fencing, tiling		760	1288	486
Misc. prod. livestock expense		511	936	237
Labor		1187	2556	602
Real estate taxes		757	1090	673
Personal property taxes		178	279	115
Insurance		152	196	103
General farm		141	187	129
Interest on farm capital		2947	4757	2318
(2) Total exp. & net decreases		\$10412	\$17674	\$7194
(3) Labor earnings 1-2		5127	15178	-663

* 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, and total expenses and net decreases. The labor earnings are the same as those on page 4.

FAMILY LIVING FROM THE FARM

The family living from the farm is the estimated value of the farm produce used in the house furnished the farmer and his family by the farm. It is a part of the income of the farm and a part of the expenses of operating the household, even though cash transactions are not involved. The omission of the farm produce used in the home results in an incomplete record of both farm income and personal income.

The value of the family living as shown in Table 4 amounts to slightly more than 1.0 percent of the total farm receipts on those farms. The values assigned are a conservative market price on the farm. If these products had been purchased, the amount paid out would have been considerably higher.

Table 4. Family Living from the Farm, 1965

Items	Your farm	Average of 62 farms	Your farm	Average of 62 farms
Adult equivalent--family	_____	3.9		
others	_____	.1		
Whole milk	_____	739	_____	\$63
Skim milk	_____	4 qts	_____	-
Cream	_____	11 pts	_____	3
Beef	_____	817 lbs	_____	149
Pork	_____	225 lbs	_____	44
Poultry	_____	22 lbs	_____	6
Eggs	_____	38 lbs	_____	9
				<hr/> 274

HOUSEHOLD AND PERSONAL EXPENSES AND RECEIPTS

Household and personal accounts are important if the family is to manage its financial affairs wisely. The household and personal expenses and receipts are presented in Table 5. These farmers spent an average of \$304 per month for family living in addition to the food and housing furnished by the farm.

Table 5. Household and Personal Expenses for Those Farms which Kept Complete Accounts of These Expenses, 1965

Items	Your farm	Average of 30 farms	15 most profitable farms	15 least profitable farms
Number of persons - family	_____	4.5	3.9	5.1
Number of adult equivalent - family	_____	3.5	3.2	3.8
- other*	_____	-	-	-
Food and meals bought	_____	\$981	\$1011	\$952
Operating and supplies	_____	268	303	232
Furnishings and equipment	_____	259	354	164
Clothing and clothing materials	_____	289	361	218
Personal care, personal spending	_____	127	185	69
Education, recreation, development	_____	136	178	93
Gifts and special events	_____	101	134	68
Medical care and health insurance	_____	318	345	291
Church, welfare	_____	121	164	80
Personal share of auto expense	_____	164	170	157
Operator's share of upkeep of dwelling	_____	99	43	155
Household share of electric expense	_____	<u>138</u>	<u>134</u>	<u>141</u>
Total cash living expense	_____	\$3001	\$3382	\$2620
Household and personal share of new auto	_____	76	57	95
New dwelling	_____	243	361	127
Taxes and other deductions	_____	102	205	-
Life insurance	_____	155	228	81
Other savings and investments	_____	<u>69</u>	<u>92</u>	<u>45</u>
Total household and personal cash expense	_____	3646	4325	2968
Total family living from the farm	_____	<u>254</u>	<u>238</u>	<u>269</u>
Total cash expense and perquisites	_____	\$3900	\$4563	\$3237
Receipts:				
Return to capital and family labor	_____	\$4774	\$8402	\$1146
Income from outside investments	_____	84	85	83
Sale of investments	_____	88	177	-
Miscellaneous	_____	1081	926	1237

*Hired help or others boarded.

NET WORTH

A net worth statement includes a listing of all the assets and liabilities as of a given date. The difference between the farmer's total assets and his liabilities is his net worth. A net worth statement for owners, part owners and renters is presented in Table 6. Both the farm and personal assets and liabilities are included.

The difference between the operator's net worth at the beginning and at the end of the year shows the gain in net worth. It represents the financial progress that has been made during the year.

Table 6. Net Worth Statement for Those Farmers Who Kept a Complete Record of all Assets and Liabilities, 1965 (Operator's Share)

Items	Your farm		14 owners	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm			195	
Owned			195	
Rented			-	
Total farm capital			\$35452	\$36634
Stocks and bonds			-	-
Life insurance			109	121
Accounts receivable			-	-
Shares in co-ops			537	621
Outside real estate			743	664
Cash on hand			193	147
Household furnishings and clothing			2694	2778
Auto (personal share)			289	286
Dwelling			4072	4062
Total household and personal assets			\$8637	\$8679
TOTAL ASSETS			44089	45313
Federal Land Bank mortgage			1668	1595
FHA real estate mortgage			522	512
Other mortgages on land operated			11658	11509
Production Credit Association			1320	1209
FHA chattel mortgage			845	1226
Other chattel mortgages			3954	3936
Notes payable			714	673
Accounts payable			1014	907
TOTAL LIABILITIES			\$21695	\$21567
Farmer's net worth			22394	23746
Gain in net worth				+1352

Items	17 part-owners		14 renters	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm	320		301	
Owned	197		-	
Rented	123		301	
Total farm capital	\$44612	\$52199	\$18395	\$23377
Stocks and bonds	1979	1977	72	150
Life insurance	1091	1117	554	692
Accounts receivable	100	91	10	106
Shares in co-ops	811	967	113	145
Outside real estate	-	147	11	20
Cash on hand	616	1033	588	1718
Household furnishings and clothing	2329	2393	1843	1890
Auto (personal share)	243	302	435	417
Dwelling	3339	3555	-	-
Total household and personal assets	\$10508	\$11582	\$3626	\$5138
TOTAL ASSETS	55120	63781	22021	28515
Federal Land Bank mortgage	3466	3368	-	-
FHA real estate mortgage	3373	3320	-	-
Other mortgages on land operated	9554	10016	-	-
Production Credit Association	4992	5839	-	-
FHA chattel mortgage	718	718	792	914
Other chattel mortgages	3123	4186	3596	4661
Notes payable	1378	1795	4562	4613
Accounts payable	940	1146	1395	1568
TOTAL LIABILITIES	\$27544	\$30388	\$10335	\$11756
Farmer's net worth	27576	33393	11696	16759
Gain in net worth		+5817		+5073

Table 7. Summary of Farm Earnings by Tenure, 1965 (Operator's Share)

Items	Your farm	14 owners	17 part owners	14 renters
FARM RECEIPTS				
Dairy cattle		\$715	\$1209	\$359
Dairy products		3369	4374	1210
Beef cattle (including feeders)		1251	4053	4750
Hogs		1894	9103	5760
Sheep and wool (incl. feeders)		-	6	118
Poultry (incl. turkeys)		3	90	21
Eggs		151	1918	283
Corn		176	425	375
Small grain		143	515	598
Other crops		1456	2565	3038
Mach. and equip. sold, gas tax		152	293	276
Income from work off the farm		360	214	842
Miscellaneous		307	408	244
(1) Total farm sales		\$9977	\$25173	\$17874
(2) Increase in farm capital		1182	7587	4982
(3) Family living from the farm		229	321	171
(4) Total farm receipts 1+2+3		\$11388	\$33081	\$23027
FARM EXPENSES				
Dairy cattle bought		\$360	\$130	\$269
Beef cattle bought (incl. feeders)		-	2524	2018
Hogs bought		59	95	402
Sheep bought (incl. feeders)		-	-	41
Poultry bought (incl. turkeys)		7	224	24
Miscellaneous livestock expense		305	769	403
Feed bought		1947	6465	3699
Fertilizers bought		268	954	727
Other crop expense		412	954	1045
Custom work hired		465	887	574
Gas, oil, grease bought (farm sh.)		712	1075	1061
Rep. of mech. power (farm share)		485	628	531
Rep. & upkeep of real estate		105	195	68
Rep. & upkeep of crop & gen. mach.		325	365	450
Rep. & upkeep of livestock equip.		30	135	97
Wages of hired labor		84	805	323
Electric expense (farm share)		203	271	183
Real estate & pers. prop. taxes		577	697	148
Cash rent		-	377	1049
General farm expense		281	337	187
Interest paid		987	1263	602
(5) Total cash operating expense		7612	19150	13901
(6) Capital purchases -mach power		539	1933	527
(7) Capital purchases-c.& g. mach.		443	1506	1999
(8) Capital purchases-lvstk equip.		127	373	451
(9) Capital purchases-bldgs,land		44	453	391
(10) Total farm purchases		\$8765	\$23415	\$17269
(11) Decrease in farm capital		-	-	-
(12) Interest on farm capital		815	1157	442
(13) Unpaid family labor		266	438	86
(14) Board for hired labor		8	80	34
(15) Total farm expenses		\$9854	\$25090	\$17831
(16) Labor earnings 4-15		1534	7991	5196
(17) Ret. to cap. & family labor		2615	9586	5724
12+13+16				

RETURNS TO CAPITAL AND FAMILY LABOR

The return to capital and family labor represents the amount available to the operator for living expenses, payment on indebtedness, and savings. The landlord's expenses and receipts are not included.

The average return to capital and family labor for 14 owners, 17 part owners, and 14 renters is shown in Table 7. The statement includes only the operator's share of the earnings of a partnership. The earnings as shown in Table 7 are on an actual basis as compared to the full-owner basis in Table 2 and 3.

RANGE IN EARNINGS

Every study of farm earnings shows a wide variation in earnings among farmers in a given year (figure 1). The average labor earnings of those farmers ranking in the upper 20 percent of the range, according to earnings, was \$15178 and of those in the lower 20 percent, \$-663. This is a range of \$15841 between the average earnings of these two groups. Some of these causes for the differences in earnings, such as weather, may be beyond the control of the individual farmer. Other factors are within his control. The more important management factors affecting earnings are as follows: (These factors vary from year to year in their relative influence on earnings.)*

- | | |
|--------------------------|--------------------------|
| 1. Crop yields | 5. Size of business |
| 2. Choice of crops | 6. Work units per worker |
| 3. Return from livestock | 7. Control over expense |
| 4. Amount of livestock | |

Labor Earnings:

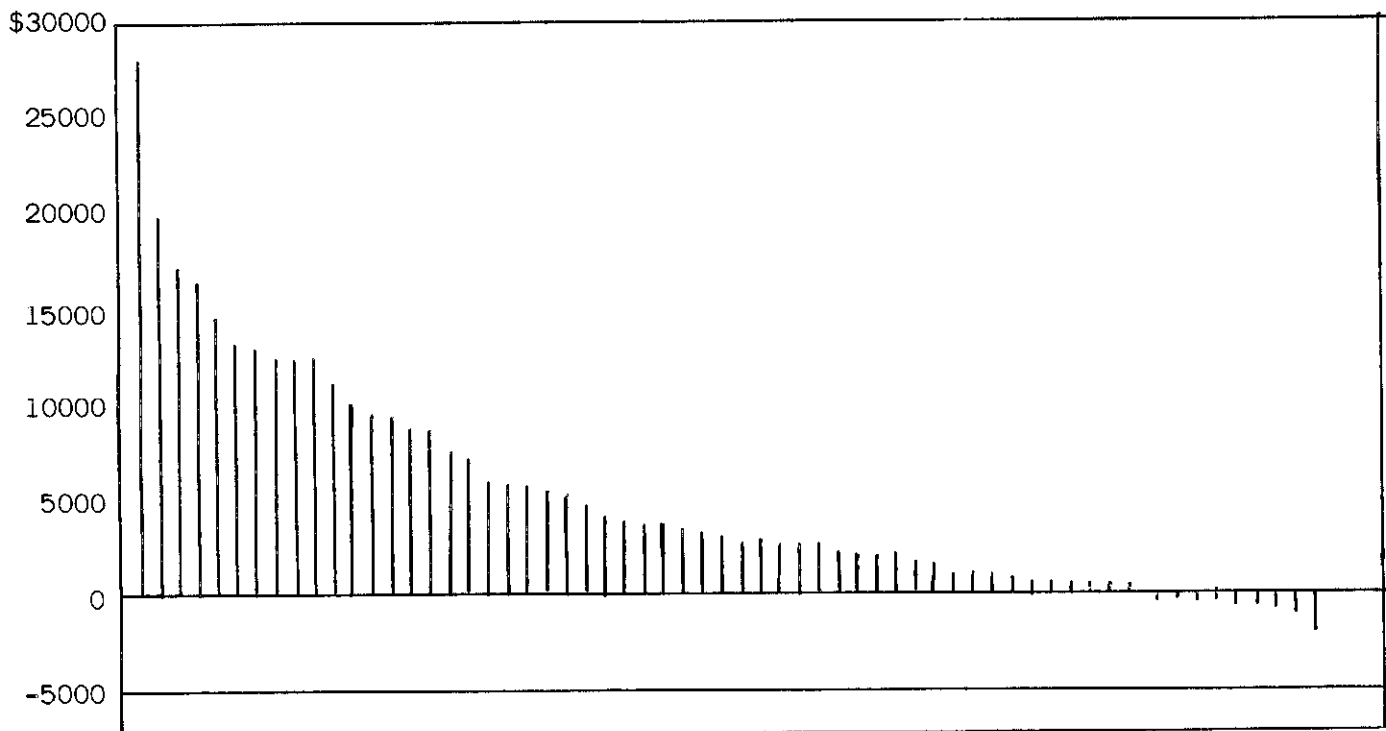


Figure 1. Range in labor earnings. Each line represents the earning of one farmer.

* See Pond, G.A., "Why Farm Earnings Vary." Minnesota Agricultural Experiment Station Bulletin 386, June 1945, and Nodland, T. R. and Pond, G. A., "Some Factors Affecting the Earnings of Farmers in Southwestern Minnesota." University of Minnesota Department of Agricultural Economics, No. 219, November 1954.

EXPLANATION OF "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, working on crops and productive livestock at average efficiency, or ten hours of work off the farm for pay. The number of work units for each class of livestock and each acre of crop are presented in Table 8.

Table 8. 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 cows	10.0 per cow	Small grain	.5 per acre
Other dairy cattle	3.5 per an. unit*	Sugar beets	1.5 per acre
Beef breeding herd	3.5 per an. unit	Sweet corn	.7 per acre
Feeder cattle	.25 per 100 pounds	Corn husked	.7 per acre
Sheep - farm flock	1.5 per an. unit	Corn silage	1.0 per acre
Sheep - feeders	.3 per 100 pounds	Alfalfa hay	.6 per acre
Hogs	.2 per 100 pounds	Soybean hay	.8 per acre
Turkeys	.5 per 100 pounds	Other hay crop	.4 per acre
Hens	20.0 per 100 hens	Canning peas	.5 per acre
		Soybeans for grain	.5 per acre

*Animal unit represents one dairy cow or bull, two other dairy cattle, $1\frac{1}{4}$ beef cows or bull, 1 feeder steer or heifer, $3\frac{1}{3}$ other beef cattle, 7 sheep, 14 lambs, $2\frac{1}{2}$ hogs, 5 pigs, 50 hens, or 1,100 pounds of turkeys produced.

Table 9. Measure of Farm Organization and Management Efficiency, 1965

Measures used in chart on page 13	Your farm	Average of 62 farms	12 most profitable farms	12 least profitable farms
Labor earnings	\$ _____	\$5127	\$15178	\$-663
(1) Crop yields	_____	100	118	89
(2) Percent tillable land in high return crops*	_____	56.9	63.1	60.4
(3) Return for \$100 feed fed to productive livestock**	_____	100	106	77
(4) Productive livestock units per 100 acres***	_____	24.8	40.6	15.3
(5) Size of business--work units	_____	460	707	307
(6) Work units per worker	_____	329	416	256
(7) Power, machinery, equipment building expense per work unit	_____	\$10.59	\$12.83	\$10.42

Items related to some of the above measures:

(3) Index of return for \$100 feed from:				
Dairy cattle (pp. 18 & 19)	_____	100	165	72
Beef breed herd (p. 20)	_____	100	100	91
Beef cattle feeders (p. 20)	_____	100	96	68
Hogs (p. 17)	_____	100	106	101
Sheep--farm flock	_____	100	-	-
Chickens (p. 21)	_____	100	84	75
(4) Number of animal units	_____	65.7	140.4	33.7
(5) Work units on crops	_____	122	181	100
Work units on prod. lvstk.	_____	320	517	177
Other work units	_____	18	9	30
(6) Number of family workers	_____	1.2	1.3	1.1
Number of hired workers	_____	.2	.4	.1
Total number of workers	_____	1.4	1.7	1.2
(7) Power expense per work unit	_____	\$5.56	\$6.52	\$6.01
Crop mach exp per work unit	_____	2.62	3.23	2.36
Lvstk equip exp per work unit	_____	.68	.97	.39
Bldg-fenc.exp. per work unit	_____	1.73	2.11	1.66

*Crops are marked in Table 10 as A, B, C, and D. All of the acres in A crops, one-half the acres in B crops, and one-fourth the acres in C crops are used in calculating percent of tillable land in high return crops.

**An index weighted by the animal units of livestock.

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

THERMOMETER CHART

Using your figures from page 12, locate your standing with respect to the various measures of farm organization and management efficiency. The average for the 62 farms included in this summary are located between the dotted lines across the center of this page.

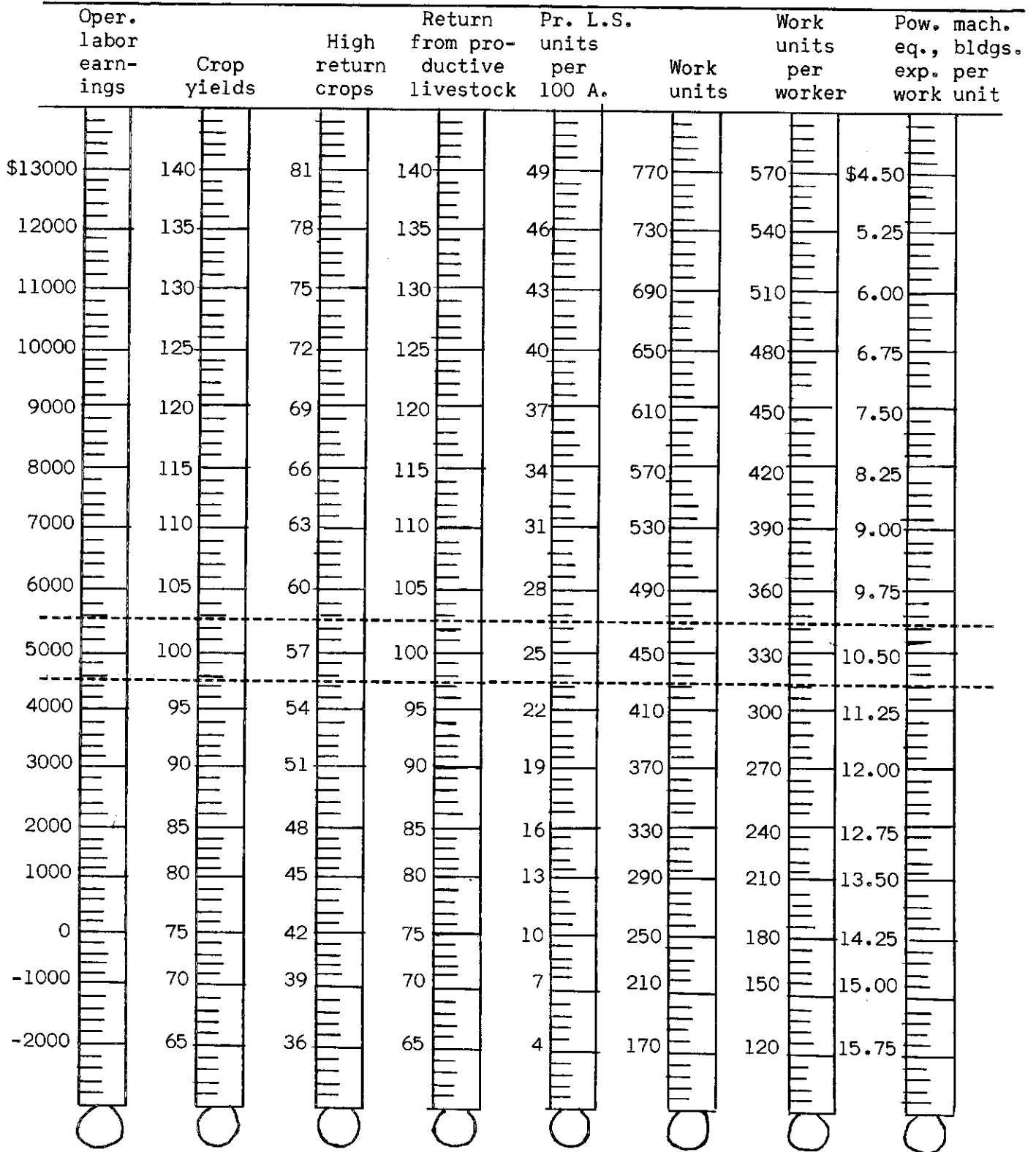


Table 10. Distribution of Acres in Farm, 1965

Crop	Crop ratings*	Number growing this crop	Your farm	Average of 62 farms	Ave. per farm growing each crop
Flax	C	12	_____	5.6	28.9
Barley	C	3	_____	.5	10.7
Wheat	C	21	_____	6.2	18.2
Oat silage	C	5	_____	.8	10.4
Oats and oat mixture	D	55	_____	29.1	32.8
Miscellaneous	D	2	_____	.4	26.0
Total small grain and peas		59	_____	42.6	
Potatoes	A	1	_____	.1	5.0
Corn grain	A	56	_____	59.1	65.5
Soybeans for grain	B	36	_____	28.7	49.4
Sweet corn	B	1	_____	.6	37.0
Corn or sorghum silage	B	54	_____	21.9	25.2
Total cultivated crops		62	_____	110.4	
Alfalfa hay	B	59	_____	33.0	34.6
Other hay and seed crops	D	8	_____	2.2	17.2
Total tillable land in hay		59	_____	35.2	
Alfalfa pasture	B	21	_____	6.5	19.2
Other tillable pasture	D	15	_____	2.1	8.5
Total tillable land in pasture		27	_____	8.6	
Soil bank	B	40	_____	20.3	31.4
Tillable land not cropped	D	12	_____	2.2	11.6
Total tillable land		62	_____	219.3	
Wild hay		24	_____	4.5	11.7
Non-tillable pasture		42	_____	30.0	44.3
Timber (not pastured)		16	_____	4.9	18.9
Roads and waste			_____	22.2	
Farmstead			_____	9.5	
Total acres in farm			_____	290.4	
Percent land tillable			_____	76	
Percent tillable land in high return crops			_____	57	

* The crops are classified as A, B, C, or D crops on the basis of their average net returns per acre.

Table 11. Crop Yields per Acre, 1965

Crop	Your farm	Average of farms growing each crop
Flax, bu.	_____	16.2
Barley, bu.	_____	66.9
Wheat, bu.	_____	21.9
Oat silage, tons	_____	5.6
Oats, bu.	_____	60.1
Corn grain, bu.	_____	48.8
Soybeans, bu.	_____	14.2
Corn silage, tons	_____	7.4
Alfalfa hay, tons	_____	2.9
Soil bank, dollars	_____	\$47.18
Wild hay, tons	_____	.6

POWER AND MACHINERY EXPENSES

Power and machinery expense per crop acre is an indication of the economy with which capital is invested in these items. The crop acres per farm ranged from 62 to 447, with an average of 193 (table 12). The expenses are high on the farms with a small acreage. In some cases, the low expenses for labor might be offset by high power and equipment costs. The farmer is interested in operating at the lowest cost for power, machinery and labor combined.

Table 12. Power and Machinery Expenses per Crop Acre, 1965

Item	Your farm	Average of 62 farms	12 most profitable farms	12 least profitable farms
Crop acres per farm	_____	193	289	154
Tractor expense per crop acre	_____	\$5.72	\$7.19	\$5.30
Crop & general machinery expense per crop acre	_____	5.90	6.57	4.71

Table 13. Amount of Livestock, 1965

Item	Your farm	Average of 62 farms	12 most profitable farms	12 least profitable farms
Number of milk cows	_____	14.3	6.4	10.3
Number of other dairy cattle	_____	18.2	9.7	11.5
Number of beef cows	_____	4.7	8.8	9.5
Number of feeder cattle	_____	16.2	53.3	4.9
Number of ewes	_____	5.7	22.9	.6
Number of hens	_____	259	651	23
Litters of pigs raised	_____	14.9	50.4	.7
Pounds of feeder cattle produced	_____	9822	34362	3115
Pounds of hogs produced	_____	25435	92910	4008

TOTAL FEED COSTS AND RETURNS FROM YOUR LIVESTOCK ENTERPRISES

The total "return over feed costs" for each class of livestock is shown in Table 14. 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 total return is the same as the returns and net increases shown on page 5. The value of milk consumed by calves is included in the total returns from dairy or dual purpose cows and in the total feed cost for other 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 14. Total Feed Costs and Returns from Your Livestock Enterprises, 1965

	Dairy cattle			Beef breeding
	Cows	Other	All	
Total returns				
Total feed cost				
Total return over feed				
	Feeder cattle	Hogs	Farm flock of sheep	Chickens
Total returns				
Total feed cost				
Total return over feed				

Feed is the largest single item of cost for all classes of livestock. However, the proportion of the total cost represented by feed varies considerable between classes of livestock. Feed makes up approximately 45 percent of the total costs of maintaining dairy cattle and poultry, 50 percent in the case of a farm flock of sheep, and 75 to 90 percent for hogs, feeder cattle and feeder lambs. Consequently, it is necessary to secure a relatively higher return over feed from dairy cattle and poultry than from the other livestock enterprises in order to be able to cover all the costs other than feed.

HOGS

The return over feed cost per 100 pounds of hogs produced averaged \$12.06 for 32 farms with breed stock. Some of the important factors that affected return over feed were:

1. Quantity of feed required to produce 100 pounds of hogs.
2. Price received.
3. Number of pigs born per litter.
4. Number of pigs weaned per litter.

Table 15. Feed Costs and Returns from Hogs, 1965

Items	Your farm	Average of 32 farms	Average of 29 farms with breeding stock		Average of 3 farms buying feeder pigs
			23 selling market hogs	6 selling feeder pigs	
Feed per cwt. hogs produced, lbs.:					
Corn	_____	294	284	320	317
Small grain	_____	86	83	122	36
Commercial feeds	_____	100	94	122	105
Total concentrates	_____	480	461	564	458
Feed cost per cwt. produced	\$ _____	\$12.50	\$11.92	\$14.86	\$12.18
Net increase in value per cwt. produced	\$ _____	24.56	23.80	29.31	20.82
Return above feed cost per cwt. produced	\$ _____	12.06	11.88	14.45	8.64
RETURN FOR \$100 FEED	\$ _____	\$202	\$206	\$199	\$177
Price received per cwt. sold	\$ _____	\$21.67	\$21.08	\$25.98	\$17.58
Total number of litters raised	_____	29	36	16	0
No. of pigs born per litter	_____	9.1	9.0	9.4	-
No. of pigs weaned per litter	_____	7.6	7.5	8.1	-
No. of feeder pigs purchased	_____	8	-	-	72
Total weight of feeders purchased	_____	248	-	-	2207
Price paid per feeder pig	_____	\$12.78	-	-	\$13.17
Pounds of hogs produced	_____	48458	63419	8270	14324

DAIRY CATTLE

The quantity of feed consumed, value of feeds and returns from dairy cattle are presented in Tables 16, 17, and 18.

The return over feed cost per cow varied from \$-95.92 to \$243.80 among the 39 herds covered by this study. Some of the important factors that affected the return over feed were:

1. Rate of production (pounds butterfat and pounds of milk per cow)
2. Price received for butterfat and for milk.
3. Feeding efficiency.
4. Quality of ration.
5. Economy of ration (feed cost per pound butterfat).

Table 16. Factors of Cost and Returns from Dairy Cows, 1965

Items	Your Farm	Average of 39 farms	13 farms highest in butterfat per cow	13 farms lowest in butterfat per cow
Pounds of butterfat per cow	_____	316	415	221
Pounds of milk per cow	_____	8702	11429	6135
Percent fat in milk	_____	3.6	3.6	3.6
Price rec. per lb. B.F. sold (¢)	_____	91.0	94.1	88.3
Price rec. per 100 lbs. milk	_____	\$3.33	\$3.46	\$3.19
Feeds per cow, lbs.:				
Corn	_____	1747	2089	1659
Small grain	_____	946	1499	585
Commercial feeds	_____	978	1463	537
Legume hay	_____	5108	5502	5388
Other hay	_____	86	13	111
Total concentrates	_____	3671	5051	2781
Total dry roughage	_____	5194	5515	5499
Silage	_____	9247	10379	8360
Feed cost per cow:				
Concentrates	_____	\$83.90	\$111.99	\$62.51
Roughages	_____	94.19	103.13	92.55
Pasture	_____	9.13	7.97	9.74
TOTAL FEED COSTS	_____	187.22	223.09	164.80
Value of produce per cow:				
B. F. sales	_____	\$277.31	\$384.85	\$183.43
Dairy produce used in house	_____	5.86	3.88	8.79
Milk to livestock	_____	7.95	1.73	8.18
Net increase in value of cows	_____	-5.18	-4.99	-9.72
TOTAL VALUE PRODUCED	_____	285.94	385.47	190.68
RETURNS ABOVE FEED COST PER COW	_____	\$98.72	\$162.38	\$25.88
RETURNS FOR \$100 FEED	_____	\$153	\$173	\$116
Feed cost per lb. B. F. (Cents)	_____	59.2	53.8	74.6
Number of cows*	_____	22.6	28.4	19.0

*All dairy cows which have at some time in the past freshened are included in the dairy herd, and affect the average number of cows used in computing this table. There is some variation in the number of months of dry period per cow; however, this variation is small for the majority of farms.

Table 17. Feed costs and Returns from Other Dairy Cattle, 1965

Items	Your Farm	Average of 39 farms	13 farms highest in butterfat per cow	13 farms lowest in butterfat per cow
Feeds per head, lbs.:				
Concentrates	_____	700	765	561
Hay and fodder	_____	1969	2083	1875
Silage	_____	2572	2903	1810
Whole milk	_____	231	39	267
Feed cost per head:				
Concentrates	_____	\$19.94	\$18.18	\$20.59
Roughages	_____	34.39	34.75	35.51
Milk	_____	9.21	1.31	13.54
Pasture	_____	4.83	3.32	7.50
TOTAL FEED COSTS PER HEAD	_____	\$68.37	\$57.56	\$77.14
Net inc. in value of other cattle	_____	99.92	86.35	133.91
RETURNS ABOVE FEED COST PER HEAD	_____	31.55	28.79	56.77
RETURNS FOR \$100 OF FEED	_____	\$146	\$150	\$173
Number of head of other cattle	_____	28.8	42.7	20.0

Table 18. Feed Costs and Returns from all Dairy Cattle, 1965

Items	Your Farm	Average of 39 farms	13 farms highest in butterfat per cow	13 farms lowest in butterfat per cow
Feeds per cow, lbs.:				
Concentrates	_____	4588	6420	3259
Hay and fodder	_____	7694	8712	7551
Silage	_____	12806	15113	10827
TOTAL FEED COSTS PER COW	_____	\$255.47	\$314.15	\$212.52
Value of produce per cow:				
Dairy products	_____	\$283.18	\$388.73	\$192.23
Net inc. in value dairy cattle	_____	95.56	130.33	65.87
TOTAL VALUE PRODUCED	_____	378.74	519.06	258.10
RETURNS ABOVE FEED PER COW	_____	123.27	204.91	45.58
RETURNS PER \$100 OF FEED	_____	\$152	\$165	\$127

Table 19. Feed Costs and Returns from Beef Cattle, 1965

Items	Your farm	Average of all farms
Beef breeding herd: No. of farms:		8
Feeds per animal unit, lbs.:		
Concentrates	_____	654
Legume hay	_____	2154
Other hay	_____	687
Silage	_____	7004
Feed cost per animal unit:		
Concentrates	\$ _____	\$14.86
Roughages	_____	56.55
Pasture	_____	16.65
TOTAL FEED COST	\$ _____	88.06
Value of produce per animal unit:		
Dairy products	\$ _____	\$1.31
Net increase in value of animal	_____	95.41
TOTAL VALUE PRODUCED	\$ _____	96.72
RETURNS ABOVE FEED COST PER ANIMAL UNIT	\$ _____	\$ 8.66
RETURNS FOR \$100 OF FEED	\$ _____	\$119
Pounds of beef produced	_____	16109
Number of cows and herd bulls	_____	35.7
Number of other beef cattle	_____	27.9
Number of animal units in the herd	_____	37.0
Feeder cattle: No. of farms:		19
Feed per cwt. beef produced, lbs.:		
Corn	_____	424
Small grain	_____	34
Commercial feeds	_____	39
Legume hay	_____	269
Other hay	_____	12
Total concentrates	_____	497
Total hay and fodder	_____	281
Silage	_____	710
Feed cost per cwt. beef produced:		
Concentrates	\$ _____	\$11.46
Roughages	_____	5.81
Pasture	_____	.56
TOTAL FEED COSTS	\$ _____	17.83
Net increase in value of feeders	\$ _____	23.85
RETURNS ABOVE FEED COST PER CWT. BEEF PRODUCED	\$ _____	6.02
RETURNS FOR \$100 OF FEED	\$ _____	\$154
Price paid per cwt. beef bought	\$ _____	\$20.32
Price received for feeder cattle sold	\$ _____	21.90
Number of animal units	_____	52.4
Pounds of beef produced	_____	31805

CHICKENS

The average return over feed from the 15 flocks included in this report was 60 cents per hen (Table 20).

Some of the important factors that affected the return over feed were:

1. Quantity of feed required per hen.
2. Price received per dozen eggs sold.
3. Eggs laid per hen.
4. Percent of hens that are pullets.
5. Percentage death loss of hens

Table 20. Feed Costs and Returns from Chickens, 1965*

Items	Your Farm	Average of 15 farms
Feed per hen, lbs.:		
Grain	_____	68
Commercial feed	_____	40
Total Concentrates	_____	108
TOTAL FEED COST PER HEN	_____	\$3.28
Value of produce per hen:		
Eggs sold & used in house	_____	\$4.01
Net increase in value of chickens	_____	-.13
TOTAL VALUE PRODUCED	_____	3.88
RETURNS ABOVE FEED COST PER HEN	_____	.60
RETURNS FOR \$100 OF FEED		\$118
Price rec'd per doz. eggs sold (cts)	_____	24.9
Eggs laid per hen	_____	194
Ave. No. hens on farm during year	_____	1066
Percent of hens that are pullets	_____	57
Percent death loss of hens	_____	16
No. of chicks bought - pullets	_____	461
- straight run	_____	47
- cockerels	_____	13
No. of hens bought	_____	470

*Includes feeds and returns from laying flock and rearing flock.

Table 21. Summary of Miscellaneous Items by Years

	Average 1953-54	Average 1955-59	Average 1960-64	1963	1964	1965
Acres in Farm						
Small grains	91.6	56.8	69.4	66.4	56.6	42.6
Cultivated crops	65.6	114.8	129.0	98.2	117.6	110.4
Tillable land in hay	31.6	31.7	36.2	37.9	44.0	35.2
Tillable land in pasture	9.7	11.6	9.1	10.5	7.5	8.6
Soil Bank	--	1.8	15.0	11.8	10.3	20.3
Tillable land not cropped	2.7	1.3	1.1	1.1	.5	2.2
Total tillable land	201.2	218.0	259.8	225.9	236.5	219.3
Wild hay & non-till. past.	31.8	26.6	32.5	34.2	37.1	34.5
Other non-tillable land	31.4	33.6	29.4	31.0	35.8	36.6
Total acres in farm	264.4	278.2	321.7	291.1	309.4	290.4
Yields per acre						
Flax, bu.	10.0	10.4	11.8	12.5	12.5	16.2
Barley, bu.	27.0	35.4	40.1	44.9	48.8	66.9
Wheat, bu.	13.8	24.0	24.3	26.6	19.6	21.9
Oats, bu.	34.6	44.2	52.8	55.8	44.6	60.1
Corn grain, bu.	46.0	50.3	52.8	65.0	36.7	48.8
Soybeans, bu.	20.1	19.2	19.2	24.8	13.1	14.2
Corn silage, tons	8.2	9.3	9.9	10.2	7.5	7.4
Alfalfa hay, tons	2.6	2.6	2.7	3.4	2.4	2.9
Measures of farm org. & management:						
Percent of land in high return crops	47.8	56.2	56.5	55.3	54.9	56.9
Prod. L.S. units per 100 A	19.0	23.1	26.8	29.5	32.1	24.8
Size of bus. work units	342	384	507	513	545	460
Work units per worker	230	255	326	342	341	329
Exp. per work unit	\$9.94	\$11.86	\$10.99	\$10.47	\$9.86	\$10.59
Return above feed cost per:						
Dairy cow	\$60.33	\$108.62	\$144.94	\$124.88	\$151.81	\$98.72
An. unit in beef breeding herd	-10.66	49.83	19.27	23.43	-10.97	8.66
100 lbs. feeder cattle prod.	-3.14	3.93	3.25	-3.06	1.62	6.02
100 lbs. hogs produced	8.12	4.30	4.83	3.55	3.15	12.06
Hen	1.00	1.02	.94	.72	.57	.60
Feed cost per:						
Dairy cow	\$127.42	\$138.27	\$173.73	\$175.67	\$196.37	\$187.22
An. unit in beef breeding herd	76.89	75.41	77.14	98.99	92.15	88.06
100 lbs. feed cattle produced	19.92	18.77	17.47	20.59	17.19	17.83
100 lbs. hogs produced	13.34	10.81	10.68	10.90	11.82	12.50
Hen	4.20	3.62	3.31	3.43	3.16	3.28

Table 21. Summary of Miscellaneous Items by Years (Continued)

	Average 1953-54	Average 1955-59	Average 1960-64	1963	1964	1965
Misc. livestock information						
No. dairy cows	10.8	16.3	12.5	15.0	17.7	14.3
Lbs. beef produced	*	*	13297	15067	12952	9822
Litter of pigs	8.5	9.9	15.7	12.7	16.2	14.9
Lbs. hogs produced	13852	22931	29804	23261	27436	25435
Number of hens	176	284	283	229	343	259
Lbs. butterfat per cow	256	296	358	354	388	316
No. pigs weaned/litter	7.0	6.4	7.0	7.5	7.7	7.6
Eggs per hen	174	186	197	206	200	194
Price received per:						
Lb. butterfat (cts.)	*	*	89.9	87.7	91.6	91.0
100 lbs. fat cattle	\$19.23	\$20.82	\$21.95	\$20.52	\$20.07	\$21.90
100 lbs. hogs	21.30	16.25	15.93	15.27	15.33	21.67
Dozen eggs (cts)	35.5	29.3	27.2	26.8	24.9	24.9
Price of feed:						
Corn, bu.	\$1.32	\$1.11	\$.99	\$1.05	\$1.06	\$1.14
Oats, bu.	.70	.59	.61	.62	.63	.63
Barley, bu.	1.06	.92	.91	.84	.90	.98
Alfalfa hay, ton	17.25	18.65	19.30	18.50	20.00	23.00
Timothy hay, ton	9.95	11.10	11.15	10.70	11.60	13.00
Corn silage, ton	5.80	6.10	6.55	6.25	6.75	7.75
Soybean meal, cwt.	4.10	3.75	4.35	4.60	4.60	4.60

* Information not available.

Table 22. Summary of Farm Earnings by Years

	Average 1953-54	Average 1955-59	Average 1960-64	1962	1963	1964	1965
Number of farms	49	30	40	43	45	40	62
FARM RECEIPTS							
Dairy cattle	\$750	\$716	\$1118	\$ 997	\$ 1367	\$ 1487	\$ 1236
Dairy products	2122	2497	4010	3412	4621	6193	4205
Beef cattle	1620	6027	6065	6789	6301	5401	4076
Hogs	2950	2290	4886	5452	3547	4346	5081
Sheep and wool	167	103	385	313	238	171	99
Horses	7	4	-	-	-	-	-
Poultry	155	81	399	76	1579	83	79
Eggs	846	926	1677	1394	1361	1896	1151
Corn	816	1976	2353	2511	1774	936	682
Small grain	1578	1097	1562	1883	1283	689	671
Other crops	474	1242	1760	1931	1605	1407	2537
Machinery & equipment sold	226	206	350	487	336	309	242
Income from work off farm	397	312	429	414	475	339	505
Miscellaneous	172	197	465	856	348	416	375
Total farm sales	\$12280	\$18674	\$25459	\$26515	\$24835	\$23673	\$20939
Increase in farm capital	952	1738	2305	2448	3025	537	4252
Family living from farm	292	231	301	295	306	302	274
Total farm receipts	\$13524	\$20643	\$28065	\$29258	\$28166	\$24512	\$25465
FARM EXPENSES							
Dairy cattle bought	\$177	\$200	\$231	\$239	\$139	\$399	\$317
Beef cattle bought	592	2769	3375	3922	3493	2429	1878
Hogs bought	182	1128	540	607	295	293	183
Sheep bought	37	148	97	49	47	-	15
Horses bought	4	4	-	2	-	-	7
Poultry bought	112	128	344	282	461	540	274
Miscellaneous livestock exp.	189	337	594	612	658	621	511
Feed bought	1500	2854	4649	4701	5655	4385	4337
Fertilizers	300	518	800	795	669	890	688
Other crop expenses	409	597	847	953	796	841	904
Custom work hired	421	541	737	636	859	850	688
Gas, oil, grease bought	800	891	1077	1164	982	988	980
Repairs for mechanical power	302	426	594	624	573	593	586
Rep. & upkeep of real estate	168	160	268	321	271	323	183
Rep. of crop machinery	272	346	446	502	391	384	418
Rep. of livestock equipment	88	99	128	129	127	149	106
Wages of hired labor	442	524	621	799	502	497	391
Electricity expense	128	177	265	255	257	298	257
Real est. & pers. prop. taxes	483	666	1016	983	946	1016	935
General farm expense	164	208	296	304	287	346	293
Total cash operating exp.	\$ 6770	\$12721	\$16925	\$17879	\$17408	\$15842	\$13951
Cap. purch.-mech. power	644	703	669	939	542	765	976
Cap. purch.-cr. & gen. mach.	890	997	1138	1328	999	999	1212
Cap. purch.-lvstk. equip.	130	344	494	476	495	708	335
Cap. purch.-bldg. & fencing	492	590	1106	989	1479	892	380
Total farm purchases	\$ 8926	\$15355	\$20332	\$21611	\$20923	\$19206	\$16854
Decrease in farm capital	-	-	-	-	-	-	-
Interest on farm capital	1814	2539	3215	3238	2912	3147	2947
Unpaid family labor	295	321	482	341	604	738	501
Board for hired labor	80	111	81	147	65	57	36
Total farm expense	\$11115	\$18326	\$24110	\$25337	\$24504	\$23148	\$20338
Labor earnings	2409	2317	3955	3921	3662	1364	5127
Net cash income	3354	3319	5127	4904	3912	4467	4085