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1973
Farm Business
Summary
By Type of Farming
for East Central Minnesota

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1973 FARM BUSINESS SUMMARY BY TYPE OF FARMING FOR EAST CENTRAL MINNESOTA

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INTRODUCTION

This report summarizes 1973 farm business records by type of farming for 345 East Central Minnesota farmers. The summaries of records by type of farm were compiled from farm records summarized by the area vocational-technical institute at St. Cloud. The counties included in this study are Anoka, Benton, Isanti, Kanabec, Meeker, Mille Lacs, Morrison, Sherburne, Stearns, Todd, and Wright.

The purpose of this report is to present specific information concerning costs and returns from actual farming operations by type of farming. This information should be of use to farmers and individuals working with farmers in determining the most profitable types of farming and in providing information for farm planning.

Records were obtained from three types of farming for this report (table 1). Farms were classified according to the proportion of cash income received from the various livestock enterprises and from the sale of crops. The following classifications were used in this report:

1. Specialized farms - 80 percent or more of the cash income was from one enterprise or source.
2. Two enterprise farms - 80 percent of the income was from two enterprises with a minimum of 20 percent from the smaller of the two.

Specialized dairy farms are further divided into five categories based on the average number of dairy cows maintained.

Table 1. Number of Farms by Type, 1973

Type	Number
Dairy, under 25 cows	48
Dairy, 25-34 cows	95
Dairy, 35-44 cows	87
Dairy, 45-54 cows	35
Dairy, 55 cows and over	32
Dairy and cash crops	34
Dairy and hogs	<u>14</u>
Total	345

Records included are for only one year. Farm earnings in 1973 were significantly higher than in 1972.¹ Differences in climatic conditions as well as variations in general price levels are two important factors that cause farm income to vary widely from year to year and among types of farms. The increases in farm earnings in 1973 was due primarily to higher farm product prices and an increase in production.

1. For a comparison with 1972, see O'Connell, E. J., "1972 Farm Business Management Report," Agri-Industry Education Department, St. Cloud Area Vocational-Technical Institute, St. Cloud, Minnesota.

CAPITAL MANAGED AND EARNINGS

The average value of capital used per farm for the various types of farming is shown in table 2. These data represent values as reported by farmers in their farm business records and deviate somewhat from current market values for assets with a long useful life, such as real estate. Real estate improvements are valued

Table 2. Summary of Inventories by Type of Farming, 1973

Item	Dairy, under 25 cows	Dairy, 25-34 cows	Dairy, 35-44 cows	Dairy, 45-54 cows	Dairy, 55 cows & over	Dairy, cash crops	Dairy and hogs
1. No. of farms	48	95	87	35	32	34	14
2. Acres in farm	209	236	254	306	405	417	304
Average capital managed January 1, 1973							
3. Dairy cows	\$ 7532	\$12013	\$15401	\$19756	\$26057	\$10727	\$10964
4. Other dairy cattle	3968	6357	8269	9863	15174	7632	7725
5. Beef cattle	24	130	788	416	150	510	331
6. Hogs	222	297	301	231	28	595	4717
7. Sheep	-	-	-	-	-	179	-
8. Other livestock	<u>2</u>	<u>2</u>	<u>3</u>	<u>-</u>	<u>17</u>	<u>1</u>	<u>4</u>
9. Total livestock	\$11748	\$18799	\$24762	\$30266	\$41426	\$19644	\$23741
10. Crops, seed, feed	\$ 2869	\$ 6471	\$ 7453	\$ 9740	\$14281	\$ 9114	\$ 8335
11. Auto & truck (farm share)	\$ 845	\$ 981	\$ 1183	\$ 1384	\$ 2951	\$ 1428	\$ 2023
12. Tractors & crop mach.	4207	8410	11842	13730	18589	15146	13414
13. Livestock equip.	<u>1189</u>	<u>2803</u>	<u>4388</u>	<u>6818</u>	<u>11779</u>	<u>3155</u>	<u>2800</u>
14. Total equip.	\$ 6241	\$12194	\$17413	\$21932	\$33319	\$19729	\$18237
15. Land	\$14520	\$19566	\$20878	\$25055	\$25762	\$36306	\$35986
16. Buildings, fencing*	<u>9109</u>	<u>13301</u>	<u>17374</u>	<u>25433</u>	<u>33560</u>	<u>17945</u>	<u>13965</u>
17. Total capital	\$44487	\$70331	\$87880	\$112426	\$148348	\$102738	\$100264
Average capital managed December 31, 1973							
18. Total capital	\$53566	\$83232	\$103225	\$138213	\$178224	\$130257	\$126773

* Not including farm dwelling.

at cost and depreciated on the basis of estimated life. These book values tend to be below present market values because of changes in the price level. Also, land is valued at cost and has not been corrected for price inflation or for the increase in real value which has occurred since many of the farms were purchased. Thus, the value of land depends to a certain extent on date of purchase. Capital managed also includes the values of any assets furnished by landlords.

The data in table 3 show total and per acre investment in real estate based on "book values." Average per acre real estate values varied from \$147 per acre on the small dairy and the dairy and cash crop farms to \$188 per acre on the 45-54 cow dairy farms.

Table 3. Average Investment in Real Estate, by Type of Farming, 1973

Item	Dairy, under 25 cows	Dairy, 25-34 cows	Dairy, 35-44 cows	Dairy, 45-54 cows	Dairy, 55 cows & over	Dairy, cash crops	Dairy and hogs
Land (beginning of year)	\$14520	\$19566	\$20878	\$25055	\$25762	\$36306	\$35986
Farm buildings	9109	13301	17374	25433	33560	17945	13965
Estimated investment in dwelling	7000	7000	7000	7000	7000	7000	7000
Total investment in real estate	30629	39867	45252	57488	66322	61251	56951
Number of acres	209	236	254	306	405	417	304
Average investment per acre	\$147	\$169	\$178	\$188	\$164	\$147	\$187

Capital managed per farm varied widely among types of farming included in this study. Factors contributing to the wide variation in capital managed are number of acres per farm, investment in livestock, and the buildings and equipment associated with each type of farm. Types of farming which can be classified as extensive require large amounts of capital. For example, where cash crops are a major enterprise, large amounts of capital are used. More intensive farms, such as those with dairy cattle, tend to have smaller capital investments, except for

those farms with large numbers of dairy cows.

Earnings are presented on a cash basis in table 4. In order to make all farms comparable, receipts and expenses of landlords are included. "Labor and management earnings" (line 45) is the amount that would be left as a salary to the farm operator if he paid hired man's wages for the labor of other members of the family and six percent interest on all capital managed.

Increases in farm capital are reported as a receipt and decreases in farm capital are reported as an expense in table 4. Increases or decreases are the differences in the average farm capital between January 1, 1973 and December 31, 1973, as shown in table 2. This summarizes in one figure the net effect of the following changes:

1. Products produced but not sold during the year, so they are on the end of year inventory.
2. Products that were produced during the previous year or years (on hand at the beginning of the year) and sold this year.
3. Products bought but not fully used up during the year, such as fertilizer, depreciable assets, etc.
4. Products sold that were previously purchased, such as feeder pigs and feeder cattle.
5. Depreciation on capital items.
6. Casualty losses.

Labor and management earnings varied from \$9500 for small dairy farms with less than 25 cows to a high of \$36,481 for large dairy farms with 55 or more dairy cows. It is important to keep in mind that the relative profitableness of various types of farms can and often do vary considerably from year to year. There is also a wide variation in earnings within a particular farm type. Thus, one cannot assume that the type of farm which ranked first in profitability in 1973 will be most profitable in succeeding years, nor that having a particular type of farm is most profitable. These data should be studied in the light of current prices, yields and similar information.

Approximately 50 percent of each dollar of sales is required to pay cash operating expenses (table 5). Purchased feeds were an important item. Capital expenditures showed more variation. The amount of net cash income above all purchases was 13 to 26 percent. This is the amount available for living expenses, interest on money borrowed, debt retirement, and other savings.

Table 5. Purchases per \$100 of Total Sales, by Type of Farming, 1973*

Item	Dairy, under 25 cows	Dairy, 25-34 cows	Dairy, 35-44 cows	Dairy, 45-54 cows	Dairy, 55 cows & over	Dairy, cash crops	Dairy and hogs
1. Dairy cattle	\$ 6.57	\$ 4.33	\$ 4.10	\$ 2.98	\$ 4.16	\$ 5.69	\$ 3.80
2. Beef cattle	-	.94	-	.53	-	.75	1.71
3. Other lvstk.	.39	.66	.31	.03	-	.16	1.37
4. Misc. lvstk. exp.	3.46	3.59	3.89	3.96	3.79	2.65	2.24
5. Feed	16.60	13.50	13.96	16.72	14.98	8.19	15.14
6. Fertilizer	2.08	3.66	3.68	4.47	3.86	6.15	5.33
7. Other crop exp.	2.88	3.34	3.29	3.45	4.07	5.32	3.53
8. Custom work hired	3.45	3.58	3.55	3.52	3.02	2.68	2.56
9. Gas, oil, grease	4.04	3.49	3.21	2.57	3.11	3.74	2.72
10. Rep. auto, truck, tractor, crop machinery	5.07	4.41	4.25	4.59	4.72	5.72	4.72
11. Rep. real estate	1.58	2.02	1.75	1.61	1.22	1.12	.79
12. Rep. lvstk. equip.	.69	.93	.99	.83	.91	.78	1.18
13. Wages of hired labor	1.40	1.03	1.77	2.43	3.11	1.88	1.21
14. Electricity exp.	1.70	1.38	1.30	1.21	1.31	1.08	.86
15. Real est. taxes	1.99	1.82	1.76	1.47	1.49	2.20	1.40
16. Gen. farm exp.	<u>2.00</u>	<u>1.76</u>	<u>1.89</u>	<u>1.67</u>	<u>1.75</u>	<u>1.66</u>	<u>1.13</u>
17. Total operating expense	\$53.90	\$50.44	\$49.70	\$52.04	\$51.50	\$49.75	\$49.69
18. New power and machinery	15.35	11.76	10.24	10.65	10.72	18.80	18.17
19. New livestock equipment	3.28	4.54	5.34	3.99	4.71	2.27	1.62
20. New buildings	<u>7.99</u>	<u>9.76</u>	<u>8.34</u>	<u>17.58</u>	<u>9.73</u>	<u>15.79</u>	<u>8.59</u>
21. Total purchases	\$80.52	\$76.50	\$73.62	\$84.26	\$76.66	\$86.61	\$78.07

* Total purchases and sales are shown in table 4.

Table 6. Summary of Earnings - Enterprise Statement, by Type of Farming, 1973

Item	Dairy, under 25 cows	Dairy, 25-34 cows	Dairy, 35-44 cows	Dairy, 45-54 cows	Dairy, 55 cows & over	Dairy, cash crops	Dairy and hogs
RECEIPTS AND NET INCREASES							
1. Milk cows	\$13550	\$22035	\$28891	\$38462	\$54637	\$20959	\$20532
2. Other dairy cattle	4794	7714	9073	12797	17527	7683	10501
3. Beef breeding herd	17	68	143	-	-	107	177
4. Feeder cattle	-	130	444	612	493	567	446
5. Hogs	550	759	899	462	41	1120	18976
6. Sheep	-	2	-	-	-	110	-
7. Other livestock	30	45	28	2	38	28	37
8. Total produc. livestock	\$18941	\$30753	\$39478	\$52335	\$72736	\$30574	\$50669
9. Feed fed	9057	15185	19653	26643	36762	17276	22521
10. Value added by livestock	\$ 9884	\$15568	\$19825	\$25692	\$35974	\$13298	\$28148
11. Crops, seed, feed	8908	15360	19691	25800	35752	35674	23227
12. Miscellaneous farm income	807	628	1102	1225	1111	715	697
13. Total value added	\$19599	\$31556	\$40618	\$52717	\$72837	\$49687	\$52072
EXPENSES AND NET DECREASES							
14. Truck & auto (farm share)	\$ 923	\$ 1262	\$ 1383	\$ 1688	\$ 2431	\$ 1684	\$ 2034
15. Electricity expense	308	431	510	615	939	493	415
16. Tractors & crop machinery	2281	3923	4774	5792	8457	6594	6221
17. Livestock equipment	404	928	1404	1598	2844	972	1213
18. Buildings, fencing	887	1565	2151	2835	2916	1728	2075
19. Misc. livestock expense	627	1118	1527	2015	2726	1210	1076
20. Labor*	1006	918	1780	3078	3914	1753	242
21. Real estate taxes	360	567	695	746	1073	1006	675
22. General farm expense	362	548	743	851	1259	757	544
23. Interest at 6%	2941	4606	5733	7519	9797	6989	6811
24. Total expenses	\$10099	\$15866	\$20700	\$26737	\$36356	\$23186	\$21306
25. Labor & mgmt. earnings	\$ 9500	\$15690	\$19918	\$25980	\$36481	\$26501	\$30766

* Includes wages paid and value of board to hired labor, unpaid family labor, a charge for partners above one full time individual, and the labor part of the payment for custom work hired less income received for work off the farm.

Rate earned on capital managed is increasingly becoming a factor to consider, particularly when the contribution of capital managed to earnings is greater than the value of the operator's labor. Small dairy farms received a modest return to labor and 10.3 percent on capital. Large dairy farms, on the other hand, yielded a return to capital managed of 23.4 percent and \$8000 return to the farm operator for his labor. (See table 8.) However, if current market prices are applied to real estate in lieu of book values, rate earned on capital would be considerably smaller. Also, crop prices in 1973 were unusually high relative to the previous year.

Table 8. Rate Earned on Capital Managed, by Type of Farming, 1973

Item	Dairy, under 25 cows	Dairy, 25-34 cows	Dairy, 35-44 cows	Dairy, 45-54 cows	Dairy, 55 cows & over	Dairy, cash crops	Dairy and hogs
1. Labor earnings	\$10099	\$15866	\$20700	\$26737	\$36356	\$23186	\$21306
2. Interest on cap. managed	<u>2941</u>	<u>4606</u>	<u>5733</u>	<u>7519</u>	<u>9797</u>	<u>6989</u>	<u>6811</u>
3. Total (2 + 3)	\$13040	\$20472	\$26433	\$34256	\$46153	\$30175	\$28117
4. Est. wage for operator	<u>8000</u>	<u>8000</u>	<u>8000</u>	<u>8000</u>	<u>8000</u>	<u>8000</u>	<u>8000</u>
5. Return to capital (3-4)	\$ 5040	\$12472	\$18433	\$26256	\$38153	\$22175	\$20117
6. Ave. capital managed	\$49026	\$76781	\$95553	\$125319	\$163286	\$116498	\$113519
7. Rate earned on capital mgd.	10.3%	16.2%	19.3%	21.0%	23.4%	19.0%	17.7%

LAND USE AND CROP YIELDS

Tables 9 and 10 show the distribution of acres per farm and the average yields for the more important crops. Forty-five percent or more of the income is derived from crop production, as was shown in table 7. This stresses the need for a good livestock manager to be able to manage crop production as well.

Oats, corn for grain and for silage, and alfalfa hay are the predominant crops. The cropping system reflects the need for feed for livestock. Small dairy farms

only had 52 percent tillable land, while the larger dairy farms had 73 percent tillable.

Crop yields do not appear to be related to size of farm, except for the small dairy farms where average yields were quite low. Average yields of corn for grain exceeded 80 bushels per acre and average yields of oats exceeded 57 bushels per acre for most of the types of farms.

Table 9. Distribution of Acres in Farm, by Type of Farming, 1973

Item	Dairy, under 25 cows	Dairy, 25-34 cows	Dairy, 35-44 cows	Dairy, 45-54 cows	Dairy, 55 cows & over	Dairy, cash crops	Dairy and hogs
1. Oats	20.5	27.7	29.9	29.5	37.4	54.0	29.7
2. Other sm. grains	<u>.3</u>	<u>2.0</u>	<u>.5</u>	<u>2.0</u>	<u>2.8</u>	<u>14.6</u>	<u>16.4</u>
3. Total sm. grains	20.8	29.7	30.4	31.5	40.2	68.6	46.1
4. Corn grain	24.7	40.4	50.4	65.1	86.7	97.7	82.7
5. Corn silage	19.2	24.8	28.4	40.0	56.2	19.6	15.4
6. Soybeans	-	.5	3.0	6.3	5.5	38.9	4.0
7. Other cult. crops	<u>-</u>	<u>.4</u>	<u>-</u>	<u>-</u>	<u>1.8</u>	<u>1.6</u>	<u>-</u>
8. Total cult. crops	43.9	66.1	81.8	111.4	150.2	157.8	102.1
9. Alfalfa hay	25.0	37.6	39.3	57.9	76.4	53.5	45.9
10. Other hay	<u>13.5</u>	<u>9.6</u>	<u>14.3</u>	<u>10.1</u>	<u>20.0</u>	<u>5.0</u>	<u>-</u>
11. Total till. land in hay	38.5	47.2	53.6	68.0	96.4	58.5	45.9
12. Total till. land in pasture	1.8	2.3	2.0	.7	2.3	5.6	2.3
13. Land not cropped	<u>2.8</u>	<u>3.4</u>	<u>4.8</u>	<u>4.2</u>	<u>7.7</u>	<u>14.3</u>	<u>14.3</u>
14. Total till. land	107.8	148.7	172.6	215.8	296.8	304.8	210.7
15. Non-till. pasture	58.1	26.8	34.7	26.2	29.9	38.0	15.7
16. Other non-till. land	<u>42.7</u>	<u>60.1</u>	<u>46.4</u>	<u>64.2</u>	<u>78.2</u>	<u>73.9</u>	<u>78.0</u>
17. Total acres in farm	208.6	235.6	253.7	306.2	404.9	416.7	304.4
18. Percent land tillable	51.6%	63.1%	68.0%	70.5%	73.3%	73.2%	69.2%

Feed costs and returns from other dairy cattle are shown in table 12. These are mostly replacements for the milking herd. Return over feed cost per head and return for \$100 of feed are highest for small herds. The information in table 13 shows feed costs and returns from the entire dairy herd on a per cow basis. The information presented in this table is especially valuable for planning a dairy operation or for expanding an existing herd, since it includes replacement stock. A typical dairy herd averages about 1.3 head of young stock per cow.

Feed costs and returns from hogs are shown in table 14. All farms included maintained a complete (farrowing to market) hog enterprise. Thus, the overhead cost of maintaining breeding stock is included in the reporting of feed and other costs.

Table 11. Factors of Costs and Returns from Dairy Cows, by Type of Farming, 1973

Item	Dairy, under 25 cows	Dairy, 25-34 cows	Dairy, 35-44 cows	Dairy, 45-54 cows	Dairy, 55 cows & over	Dairy, cash crops	Dairy and hogs
Number of cows	20	30	40	50	71	30	33
Pounds of milk per cow	10447	11406	11246	11753	11827	10764	11085
Price received per cwt. of milk	\$6.19	\$6.31	\$6.44	\$6.47	\$6.39	\$6.33	\$6.12
Value produced per cow:							
Dairy product sales	\$632.09	\$708.25	\$714.63	\$751.40	\$748.62	\$665.87	\$667.26
Dairy produce used in home	4.88	5.51	4.16	4.38	5.44	5.63	4.32
Milk to livestock	9.50	6.30	5.74	4.52	4.15	9.57	6.20
Net increase in value of cows	<u>14.33</u>	<u>7.16</u>	<u>3.20</u>	<u>8.94</u>	<u>10.24</u>	<u>17.60</u>	<u>43.16</u>
Total value produced	\$660.80	\$727.22	\$727.73	\$769.24	\$768.45	\$698.67	\$720.94
Feed per cow, pounds:							
Corn	2772	3168	3276	3785	3761	3788	3154
Small grain and complete ration	1854	1368	1569	1597	981	1662	1036
Protein, salt, min.	606	668	862	727	704	542	953
Total concentrates	5232	5204	5707	6109	5446	5992	5143
Total hay	612	6042	5593	5816	5312	6864	6115
Total silage	8992	13573	12378	15698	16564	11785	11766
Feed cost per cow:							
Concentrates	\$180.20	\$198.78	\$207.23	\$224.10	\$216.72	\$215.70	\$192.64
Roughages	123.38	148.05	136.62	161.00	159.49	161.13	135.23
Pasture	<u>11.00</u>	<u>5.35</u>	<u>5.97</u>	<u>2.54</u>	<u>1.08</u>	<u>9.33</u>	<u>3.98</u>
Total feed cost	\$314.58	\$352.18	\$349.82	\$387.64	\$377.29	\$386.16	\$331.85
Return above feed cost per cow	\$346.22	\$375.04	\$377.91	\$381.60	\$391.16	\$312.51	\$389.09
Return for \$100 of feed	\$210	\$206	\$208	\$198	\$204	\$181	\$217
Feed cost per cwt. milk produced	\$3.01	\$3.09	\$3.11	\$3.30	\$3.19	\$3.59	\$2.99

Table 12. Feed Costs and Returns from Other Dairy Cattle, by Type of Farming, 1973

Item	Dairy, under 25 cows	Dairy, 25-34 cows	Dairy, 35-44 cows	Dairy, 45-54 cows	Dairy, 55 cows & over	Dairy, cash crops	Dairy and hogs
Number of head	25	37	46	57	83	41	46
Net increase in value per head	\$189.03	\$207.01	\$195.54	\$224.90	\$209.11	\$188.31	\$227.28
Feed per head, pounds:							
Concentrates	1047	1088	1209	1274	1294	1215	1767
Hay	2086	2049	2310	2204	2226	2677	2195
Silage	2607	4779	5115	5652	5620	3174	2695
Whole milk	122	81	77	61	55	101	77
Total feed cost per head	\$ 84.57	\$ 99.84	\$106.14	\$114.69	\$113.98	\$113.95	\$106.51
Return above feed cost per head	\$104.46	\$107.17	\$ 89.40	\$110.21	\$ 95.13	\$ 74.36	\$120.77
Return for \$100 of feed	\$223	\$207	\$184	\$196	\$183	\$165	\$213

Table 13. Feed Costs and Returns from All Dairy Cattle, on a per Cow Basis, by Type of Farming, 1973

Item	Dairy, under 25 cows	Dairy, 25-34 cows	Dairy, 35-44 cows	Dairy, 45-54 cows	Dairy, 55 cows & over	Dairy, cash crops	Dairy and hogs
Value of produce per cow:							
Dairy products	\$646.42	\$720.07	\$724.51	\$760.30	\$758.20	\$681.03	\$677.78
Net increase in value	<u>246.62</u>	<u>261.75</u>	<u>231.74</u>	<u>264.88</u>	<u>256.75</u>	<u>273.67</u>	<u>360.24</u>
Total value prod.	\$893.04	\$981.82	\$956.25	\$1025.18	\$1014.95	\$954.70	\$1038.02
Feed per cow, pounds:							
Concentrates	6534	6535	7129	7566	6960	7658	7621
Hay	8891	8702	8294	8325	7956	10505	9178
Silage	12197	19563	18357	22130	23283	16101	15526
Total feed cost per cow	\$418.55	\$475.54	\$473.90	\$518.16	\$511.25	\$541.07	\$480.42
Return above feed cost per cow	\$474.49	\$506.28	\$482.35	\$507.02	\$503.70	\$413.63	\$557.60
Return for \$100 of feed	\$213	\$206	\$202	\$198	\$199	\$176	\$216
Misc. lvstk. expenses per cow	\$25.97	\$30.23	\$28.69	\$33.00	\$28.75	\$32.33	\$30.49
Veterinary expenses per cow	11.19	13.27	14.66	12.86	14.53	16.53	13.01

Table 14. Feed Costs and Returns from Hogs, 1973

Item	Average of 14 herds
Pounds produced	43914
Per cwt. produced:	
Net increase in value	\$45.92
Feed cost	<u>19.04</u>
Return above feed cost	\$26.88
Return for \$100 of feed	\$241
Price received per cwt.	\$40.08
Weight per hog sold, pounds	222
Miscellaneous costs per cwt. produced*	\$.45
Feed per cwt. hogs produced, pounds:	
Corn	329
Small grain	68
Commercial feeds**	<u>77</u>
Total concentrates	474
Total number of litters raised	32
Number of pigs born per litter	9.3
Number of pigs weaned per litter	7.6

* Miscellaneous costs include items such as veterinary expense, purchased bedding, breeding fees, etc.

** This includes protein feed and purchased complete hog feeds which have not been divided between corn, small grains and protein.

CONCLUDING STATEMENT

A summary of earnings, resources used, size of business, and expenses is presented in table 15. Small dairy farms showed the lowest earnings. They had \$13,040 available to pay for the operator's labor and capital managed. Large dairy farms had a return large enough to provide \$8000 for labor performed by the operator and yield 23.4 percent return on the "book value" of capital managed.

Acres per farm varied from 209 for small dairy farms to 417 for dairy and cash crop farms. All types of farms included in this report had a relatively large amount of non-tillable land. Dairying tends to be located on small farms where there is non-tillable land and where the production of roughages has an advantage over grain crops.

The number of workers per farm varied from 1.3 on the small dairy farms to 2.0 on the large dairy farms. Most of the farms are operated with family labor and a quite limited amount of hired labor. Total work units and work units per worker on the large dairy farms was much larger than that reported by the other groups. Large dairy farms reported 761 work units, 2.0 workers and 380 work units per worker, compared to 225 work units, 1.3 workers and 173 work units per worker on the small dairy farms. The operators of large dairy farms were able to handle a greater work load than the other groups, partly because of some increase in number of workers but also by employing considerably larger amounts of capital in total and per worker. All groups required about 50 percent of total sales to pay operating expenses.

Table 15. Some Characteristics of Various Types of Farms, East Central Minnesota, 1973

Item	Dairy, under 25 cows	Dairy, 25-34 cows	Dairy, 35-44 cows	Dairy, 45-54 cows	Dairy, 55 cows & over	Dairy, cash crops	Dairy and hogs
Earnings							
1. Net cash income	\$ 3531	\$ 7316	\$10362	\$ 8007	\$16787	\$ 6114	\$10552
2. Labor & mgmt. earnings	\$ 9500	\$15690	\$19918	\$25980	\$36481	\$26501	\$30766
3. Rate earned on investment	10.3	16.2	19.3	21.0	23.4	19.0	17.7
Land							
4. Acres in farm	209	236	254	306	405	417	304
5. Tillable acres	108	149	173	216	297	305	211
6. % till. land in							
Small grain	19	20	18	15	14	22	22
Cult. crops	41	44	47	51	51	52	48
Hay & pasture	37	33	32	32	33	21	23
Not cropped	3	3	3	2	2	5	7
Labor							
7. No. of workers	1.3	1.4	1.5	1.7	2.0	1.7	1.4
8. Work units per worker	173	249	289	320	380	254	328
Capital							
9. Total capital managed	\$49026	\$76781	\$95553	\$125319	\$163286	\$116498	\$113519
10. Capital managed per worker	\$37712	\$54844	\$63702	\$ 73717	\$ 81643	\$ 68528	\$ 81085
Size of business							
11. Total work units	225	348	433	544	761	431	459
12. Net value added							
% by livestock	50	49	49	49	49	27	54
% by crops	46	49	48	49	49	72	45
% by miscellaneous	4	2	3	2	2	1	1
Expenses							
13. Total oper. expense	\$ 9774	\$15704	\$19523	\$26487	\$37040	\$22722	\$23916
14. Purchase of capital items	\$ 4827	\$ 8115	\$ 9393	\$16399	\$18094	\$16833	\$13661
15. Power, machinery, equipment & bldg. expense per WU	\$21.35	\$23.30	\$23.61	\$23.03	\$23.11	\$26.61	\$26.05
16. Tractor & machinery expense per crop acre	\$22.10	\$27.43	\$28.79	\$27.46	\$29.49	\$23.14	\$32.05
17. Total operating expense per \$100 of sales	\$53.90	\$50.44	\$49.70	\$52.04	\$51.50	\$49.75	\$49.69