

1957

ANNUAL REPORT

OF

VOCATIONAL AGRICULTURE  
FARM MANAGEMENT PROGRAM

BY

THE

AGRICULTURE DEPARTMENT

ST. CLOUD AREA VOCATIONAL-TECHNICAL SCHOOL

ST. CLOUD PUBLIC SCHOOLS

ST. CLOUD, MINNESOTA

COOPERATING AGENCIES

STATE AND COUNTY SERVICES OF U. S. D. A.

INSTITUTE OF AGRICULTURE, UNIVERSITY OF MINNESOTA

VOCATIONAL DIVISION, MINNESOTA DEPARTMENT OF EDUCATION

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### PRIMARY FACTORS OF MANAGEMENT

1. Adequate size of enterprise and whole farm business
2. A high percent of tillable land in high return crops
3. High yields and lowest possible cost of crop production
4. High returns for feed consumed by livestock
5. Intensity and efficiency in livestock production
6. A high amount of work accomplished per worker
7. Careful control over fixed and operating expenses and capital

"There is more in the MAN than there is in the LAND."

## INTRODUCTION

The vocational agriculture program in farm management education and the supplementary service of analyzing farm accounts for 1957 has resulted from our experience in offering such a program to organized adult education groups in our tri-county area since 1946. During 1956 and 1957, we have extended our services to meet the needs of a similar adult education program in the agriculture departments of high schools located in a Central Minnesota 14 county area. The present program operates under the area vocational-technical school as a means of extending the opportunities of vocational education among those schools who desire to cooperate in developing vocational education in their community.

Farm management education is based on the collective and individual needs and attitudes of farmers in solving the problems of farm planning, organization, and operation. Each school contributing data to this report carried on a series of group meetings during the past year. In addition, each instructor had from four to ten or more individual on-farm conferences in regard to the individual confidential management problems and financial affairs of the farm family.

Farm account records basic to this type of comparison study are most adaptable for comparative and individual analysis when kept in the Minnesota Farm Record Book. Records are kept for use in the preparation of income tax and social security reports, credit reference or an individual partnership or corporation forms to have an accurate record of financial operations. Records in this program are desirable for the purpose of knowing facts in making decisions about ones own private business. Records will also assist the instructor in arriving at the best understanding possible in assisting farmers to make decisions giving greatest return for labor and investment.

In this system, the local instructor who calls on the farm closes the record book with the farmer and proceeds to complete the forms pertinent to the individual farm analysis. This teacher-farmer individual summary becomes an individual analysis of the whole farm and its parts and matches in general the comparative report prepared by our area school. A copy of the individual analysis is sent to the analysis center for use in compiling a comparative report. It is returned to the local instructor after figures from each farm become an unidentifiable part of the area report sent to each farmer. It is expected that the local instructor may desire a copy of the individual report for further study and assistance in on-farm follow-up conferences with a cooperator. Therefore, the record book remains with the farmer or local instructor, wherein, both parties are familiar with details basic to their responsibility for the correctness, completeness, and accuracy of the individual analysis data submitted.

The analysis of a collection of individual records and the preparation of reports from such data are done at the St. Cloud Area Vocational-Technical School Vo-Ag department. We, nor other local vo-ag departments in our area, do not have the funds or the staff to run a research center comparable to that found at the University of Minnesota. Therefore, we have simplified the system, divided the labors, used cooperative effort, cut the costs, stressed individual instructor-farmer analysis, and instructor relationship to an area operation from an expanded center at an area school.

We are indebted to the staff working on farm management in the Agriculture Economics Department, Institute of Agriculture, University of Minnesota, for their assistance in this type of work over the past several years. We plan to operate our area vo-ag program in cooperation, not in competition, with the University of Minnesota in the field of farm management. We desire to extend the use of the University to more people in our area by use of their research and staff in cooperation with area programs.

During the past we have also had splendid cooperation from other agencies in our area. We expect our efforts will coordinate and integrate with work of the Soil Conservation Service, Production Credit Association, local bankers, Farmers' Home Administration, County Extension Service, local school administration, and school boards as well as the Vocational Division, State Department of Education.

This report was prepared from individual farm analysis reports submitted by the following instructors and schools:

School	Number of Accounts	Instructor
Foley	13	Lawrence Reiten
Little Falls	29	Joe V. Raine
		John M. Smith
St. Cloud	<u>15</u>	Raymond A. Anderson
Area Report	57	E. J. O'Connell, Area Instructor

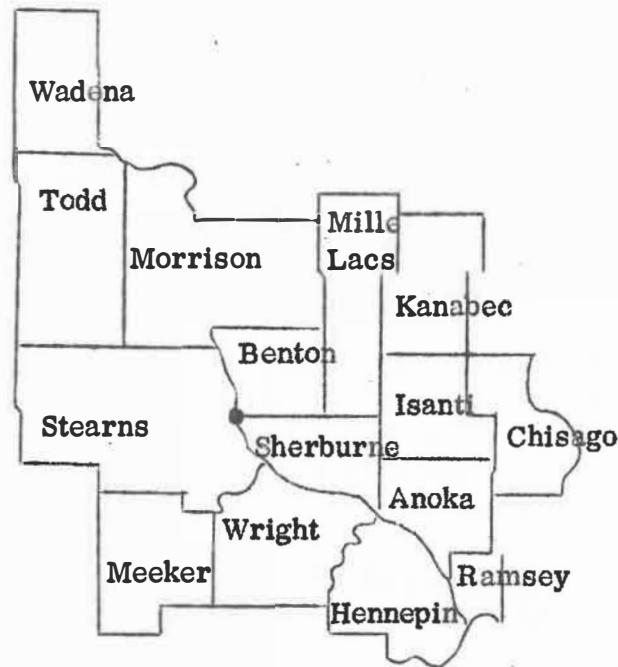
The cooperative spirit and volunteer effort put into the job of preparing the individual analysis summaries sent our center is most highly commendable. I trust that you will find the comparison of results in this report functional material of complementary use with your individual farm analysis and counseling program.

I submit this report to the cooperating individuals and agencies with full appreciation that we may progress toward a sound program of adult farmer education in the agriculture departments in the Central Minnesota area.

Edward J. O'Connell, Director  
Agriculture Department  
St. Cloud Area Vocational-Technical School  
St. Cloud, Minnesota

# Map of Counties Included in the Farm Management Area

## St. Cloud Area Vocational-Technical School



Agriculture departments are located in the following towns. County line borders do not prohibit acceptance of the farm management program when any farmer is a part of the educational program of the local department.

<b>Anoka County</b> Anoka St. Francis	<b>Kanabec County</b> Mora	<b>Sherburne County</b> Elk River	<b>Todd County</b> Bertha Browerville Clarissa Eagle Bend Long Prairie Pillager Staples
<b>Benton County</b> Foley Sauk Rapids	<b>Meeker County</b> Cosmos Dassel Grove City Litchfield	<b>Wadena County</b> Sebeka Verndale Wadena	
<b>Chisago County</b> Linstrom-Center City North Branch Rush City Taylor Falls	<b>Mille Lacs County</b> Milaca Princeton	<b>Stearns County</b> Albany Belgrade Eden Valley Kimball Melrose Paynesville St. Cloud Sauk Centre	<b>Wright County</b> Annandale Buffalo Maple Lake Monticello
<b>Hennepin County</b> Minneapolis Roosevelt	<b>Morrison County</b> Little Falls Swanville Upsala		
<b>Kanabec County</b> Mora			

**Parochial Schools:** St. Boniface High School, Cold Spring, Stearns County  
Pierz Memorial High School, Pierz, Morrison County

The crop analysis survey is somewhat broader and yet specific in application because your individual farm analysis is organized for a more careful and complete survey of your land use and feed production problem.

In our area livestock, primarily the dairy herd, provide the market for crops produced on the land. Pasture surveys are not a part of this years report but are indicated as a key factor in milk production by economical roughage use.

Survey of the crops analysis in correlation with livestock enterprise return and land use practices may bring out for all or individual farmers the correlation of all key factors of management necessary for the man to get the best returns from livestock, land, and equipment.

A fourth column of figures on "your farm" are not placed in this report because each farmer and instructor have the individual report of confidential nature. Either or both parties may not desire individual data to be identifiable in a comparison report pamphlet.

**CASH STATEMENT OF EXPENSES**  
**Grouped on Basis of Labor Earnings**

Expenses-Form 1	Average of 57 Farms	12 Most Profitable Farms	12 Least Profitable Farms
Dairy cows bought	\$ 297.37	\$ 283.98	\$ 404.46
Other dairy cattle bought	61.07	6.67	77.69
Beef breeding cattle bought	49.52	235.25	
Feeder cattle bought	115.26		90.00
Hogs bought	70.86	38.33	14.84
Sheep bought	.53		
Horses bought	3.50	4.16	
Chickens bought	26.90	13.89	46.46
Breeding fees	76.15	117.42	39.04
Miscellaneous livestock expense	187.20	341.90	85.15
Feed bought	1366.20	2688.79	844.15
Miscellaneous crop expense	694.24	1184.18	580.57
Custom work hired	532.00	654.72	349.40
Machinery, equipment, real estate bought	2900.16	3363.99	3415.04
Gas, oil, grease - farm share	606.10	918.55	557.97
Repair, upkeep, tractor, truck, car	330.65	557.28	255.74
Repair, upkeep, real estate	125.67	220.20	81.55
Repair, upkeep, crop machinery	244.73	426.84	191.46
Repair, livestock equipment	74.13	152.73	40.28
Wages - hired labor	299.02	584.84	149.26
Telephone - farm share	33.15	41.93	48.56
Electricity - farm share	174.52	241.63	118.54
Taxes - real and personal property	255.22	336.91	174.05
Rent paid	227.11	295.15	275.75
General farm expense	94.58	112.11	65.63
Total cash purchases	\$ 8843.65	\$12821.44	\$ 7905.60



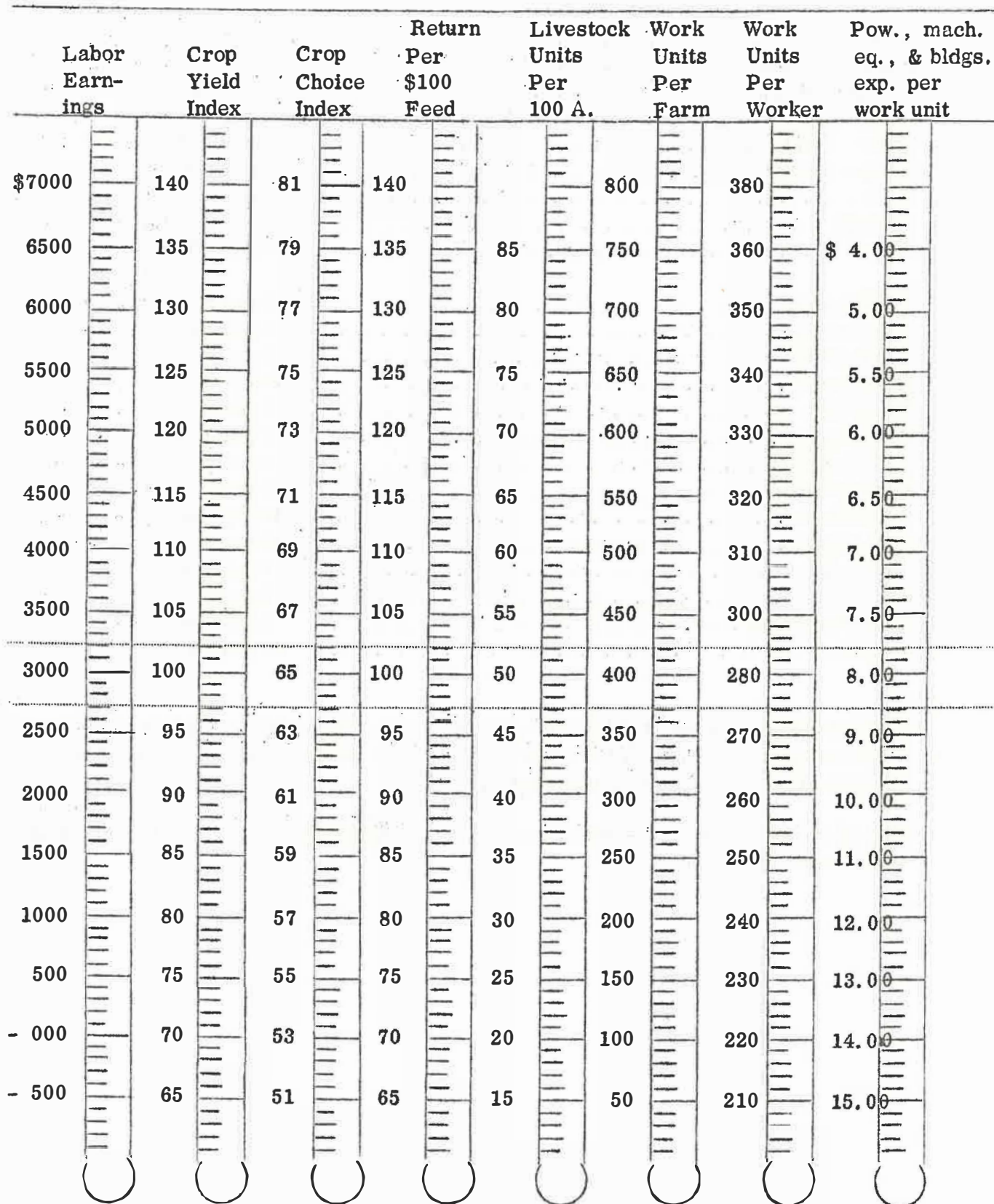
**ACCRUAL STATEMENT OF RECEIPTS AND EARNINGS**  
Ranked on Basis of Labor Earnings

Form 3 Returns and Net Increases	Average of 57 Farms	12 Most Profitable Farms	12 Least Profitable Farms
1. Ending inventory	\$ 6062.50	\$ 8956.33	\$ 4443.55
2. Livestock sales	3254.46	5488.97	2063.14
3. Livestock butchered (or in item 12)	93.54	71.85	72.25
4. Transferred out	699.77	1065.41	562.66
5. Total of 1 + 2 + 3 + 4	\$10110.27	\$15582.57	\$ 7141.61
6. Beginning inventory	5240.19	8040.42	3711.96
7. Livestock purchases	623.02	582.25	633.44
8. Transfers in	699.77	1065.41	562.66
9. Total of 6 + 7 + 8	\$ 6562.98	\$ 9688.10	\$ 4908.07
10. Livestock increase or decrease 5 - 9	3547.29	5894.47	2233.53
11. Livestock products sold	5719.03	8893.61	3575.38
12. Products used in home milk-eggs-meat	289.76	417.64	196.46
13. Products fed to stock	310.16	642.68	278.22
14. Total value livestock products 11 + 12 + 13	\$ 6318.95	\$ 9953.93	\$ 4050.07
15. Livestock products and increase 14 + 10	9866.24	5848.41	6283.60
Dairy	5994.32	9410.17	3580.28
Other dairy cattle	1507.96	2593.72	1111.82
Beef cattle	59.19	26.53	87.89
Feeder stock	141.59	217.83	28.93
Swine	1830.56	3319.20	1043.20
Sheep	42.11	10.41	98.26
Horses	2.19		
Poultry	288.32	270.55	333.22
16. Feed cost for livestock	4929.62	7568.92	3696.74
17. Livestock return over feed cost 15 -16	4936.62	8279.49	2586.86
18. Crop, seed, feed increase	3165.53	925.13	2349.35
19. Gas tax refund	87.93	123.20	71.59
20. Off farm labor income	118.93	44.97	6.41
21. Miscellaneous income	210.62	588.08	75.97
22. Total returns and increases	8519.63	12960.87	5090.18
23. Total expenses, decreases, and costs	5520.60	7943.50	4115.93
24. Operator's labor earning 23 - 24	\$ 2999.03	\$ 5017.37	\$ 974.25



# THERMOMETER CHART

Using your figures from the analysis, locate your standing with respect to the various measures of farm organization and management efficiency. The averages for the 57 farms included in this summary are located between the dotted lines across the center of this page.



**SUPPLEMENTARY DATA ON COMPARISON  
OF MANAGEMENT AND OPERATION RESULTS**

Items of Comparison	Average of 57 Farms	12 Most Profitable Farms	12 Least Profitable Farms
1. Labor earnings per farm worker	\$2126.97	\$2683.08	\$ 749.42
Cash sales per dollar cash expense	\$ 1.14	\$ 1.28	\$ .79
Returns and increase per expenses and decreases	\$ 1.54	\$ 1.63	\$ 1.23
2. Crop yield:			
All crops	99.1	114	93.2
Corn-silage	93	101	73
Corn-grain	104	101	77
Alfalfa hay	151	166	129
Crop selection index would be improved by selection of high yield and return crops.			
3. Returns per Dollar feed cost per enterprise: (multiply by 100 to get return per \$100 feed cost)			
All livestock	\$ 2.00	\$ 2.09	\$ 1.70
Dairy cows	2.13	2.34	1.72
Hogs-pork	1.74	2.34	1.32
feeder pigs	2.59	4.41	1.74
Poultry	1.25	1.53	- .67 less
Other dairy cattle	1.77	2.13	1.68
Beef cattle	2.23		
Sheep	1.73		
4. Work unit distribution:			
Dairy (BF basis)	212.2	293.0	165
Swine	19.5	29.5	10.5
Poultry	13.5	9.1	18.2
Other cattle	51.2	71.9	48.7
Total stock	296.4	403.5	242.8
Total crop	96.5	132.4	90
Total per farm	392.9	535.9	332.8
Average number of workers per farm	1.41	1.87	1.3
Work units per worker	278.6	286.5	255
5. Power and Machinery cost:			
Power cost per tillable acre	\$ 15.75	\$ 14.84	\$ 14.55
Machinery cost per tillable acre	5.74	6.41	5.74
Total power and machinery cost	\$ 21.49	\$ 21.25	\$ 20.29
Power, machinery, bldg. exp. per work unit	\$ 7.92	\$ 8.38	\$ 7.55

# COMPARISON OF CROP YIELDS, CROP SELECTION, AND LAND USES - 1957

Crop Description	Average-57 Farms				Average-12 Most Profitable Farms				Average-12 Least Profitable Farms			
	No. of Growers	Acres Grown	Acre Yield	Yield Index	No. of Growers	Acres Grown	Acre Yield	Yield Index	No. of Growers	Acres Grown	Acre Yield	Yield Index
Corn-silage	54	15.9	8.1	93	12	24.6	10.3	101.4	12	12.8	5.7	73
Corn-grain	54	27.3	47.2	104	11	44.4	46.7	101	11	22.4	34.9	77
Soybeans grain	17	41.6	12.7	81	4	77.5	12.6	80	6	30.8	11.9	76
Cats	47	23.2	38.5	101	6	22.6	47.4	124	12	21.7	32.8	87.5
Rye	6	14.8	17.8	111	1	17	12	85	3	11.3	19	137
Wheat	4	7.9	14.8	77	1	10	15	75	2	5.8	12.8	59
Barley	1	24	33.3	118								
Buckwheat	1	7	20	100	1	7	20	100				
Sorghum	2	13.5	7.6	130	1	11	22	100				
Sorghum silage	1	2	9	120								
Oat & pea silage	1	9.5	6.1	94					1	9.5	6.1	94.7
Oats silage	9	22	3.7	112	3	32.6	3.3	115				
Grass silage	1	5	6	100	1	5	6	100				
Alfalfa silage	3	12.8	5.4	85								
Soybean hay	1	2	2	100								
Alfalfa hay	48	24.8	2.6	151	12	33	2.8	166	10	21.6	2.2	129
Clover hay	9	22.2	2	123.5	1	50	2	122	1	15	1.7	102
Mixed hay	10	13.9	1.9	122	1	20	1.4	95	2	14.5	2.5	152
Oat hay	1	3	1	60								
Upland hay	3	14	1.2	74	1	28	1.1	67	2	7	1.4	87
Bluegrass hay	8	28.6	2.1	129					2	27.5	1.8	112
Grass pasture	1	4	1.5	75								
Total harvested acres		111.8				156				102.5		
Harvested crop yield index				99.1				114				93.2

**ANALYSIS OF DAIRY ENTERPRISE**  
**Herds Ranked on Operator Labor Earning Basis**

Items of Comparison	57 Pro- ducers Average	Top 12 in O. L. E.	Low 12 in O. L. E.
<b>Herd statistics:</b>			
Cows per herd	21.3	29.3	16.5
Total pounds butterfat	6667	10331	5044
Value of product plus increase	\$5994.32	\$9410.16	\$3585.02
Total feed cost	<u>2801.35</u>	<u>4266.00</u>	<u>1870.18</u>
Return over feed cost	\$3192.97	\$5144.16	\$1714.84
<b>Per Cow statistics:</b>			
Pounds butterfat	313	352	304
Total returns	\$ 282.49	\$ 320.80	\$ 216.18
Total feed cost	<u>132.01</u>	<u>145.42</u>	<u>112.75</u>
Return over feed cost	\$ 150.48	\$ 175.38	\$ 103.43
<b>Returns breakdown:</b>			
Return per dollar feed cost	\$ 2.13	\$ 2.20	\$ 1.90
Total return per pound butterfat	.89	.91	.71
Feed cost per pound butterfat	<u>.42</u>	<u>.42</u>	<u>.37</u>
Net return per pound butterfat	\$ .47	\$ .49	\$ .34
Work units per farm	213	293	165
Net return per work unit	\$ 15.04	\$ 17.53	\$ 10.35
<b>Feed consumption per cow:</b>			
Roughage, tons	2.7 T	2.6 T	2.46 T
Silage, tons	4.8 T	6.3 T	3.88 T
Corn-grain, pounds	1905 lbs.	2753 lbs.	1322 lbs.
Oats, pounds	425	254	481
Purchased concentrates, pounds	<u>681</u>	<u>802</u>	<u>497</u>
Total pounds of concentrates	3011	3809	2300
<b>Feed costs per cow:</b>			
Roughage	\$ 41.001	\$ 37.51	\$ 39.91
Silage	24.54	31.33	18.88
Pasture	<u>3.29</u>	<u>2.79</u>	<u>3.78</u>
Total, hay, silage, pasture	\$ 68.83	\$ 71.63	\$ 62.57
Corn-grain	\$ 31.20	\$ 42.19	\$ <del>52.84</del> 22.84
Oats	8.44	5.28	9.77
Purchased concentrates	<u>23.65</u>	<u>26.32</u>	<u>17.57</u>
Total cost of concentrates	\$ 63.18	\$ 73.78	\$ 50.18
Total feed cost per cow	\$ 132.01	\$ 145.42	\$ <del>103.43</del> 112.75
<b>Market grades of product:</b>			
A in bulk or cans	10	3	1
B in bulk or cans	22	7	5
Process or manufacture	20	1	4
Cream	5	1	2

# FEED COSTS AND RETURNS FROM HOGS 1957

## (Feeder Pig)

This analysis of pork production in this section refers to 22 farms whose records indicated that sows were kept and litters sold as feeder pigs at a price per farmer of \$11.00 to \$15.00 per pig.

Items of Comparison	Average of 22 Farms	5 Farms Highest in Returns Above Feed	5 Farms Lowest in Returns Above Feed
Pounds of pork per farm	4311	3133	2425
Pounds of feed used per farm	23389	12725	25804
Total value of pork per farm	\$1270.38	\$1152.69	\$ 923.21
Total feed cost per farm	<u>490.77</u>	<u>261.16</u>	<u>528.33</u>
Return over feed cost per farm	\$ 779.61	\$ 891.53	\$ 394.88
Feed Consumed per cwt. pork:			
Corn	235	150	204
Grain	167	113	239
Hay	17	5	92
Commercial feeds	87	76.7	161
Milk products	<u>36</u>		<u>217</u>
Total concentrates	525	339.7	821
Feed cost per cwt. of pork produced:			
Corn	\$ 3.72	\$ 2.15	\$ 3.88
Grain	3.44	2.12	5.53
Hay	.15	.03	.19
Commercial feeds	3.68	2.76	5.80
Milk products	<u>.40</u>		<u>1.95</u>
Total feed cost	\$ 11.39	\$ 7.06	\$ 17.35
Total returns per cwt. pork	\$ 29.48	\$ 31.20	\$ 30.34
Returns over feed cost per cwt. of hogs grown	\$ 18.09	\$ 24.13	\$ 12.99
Total return per dollar feed cost	\$ 2.59	\$ 4.41	\$ 1.74
Return over feed cost per work unit (.21 cwt.)	\$ 88.18	\$ <del>50.88</del> 120.66	\$ 65.02
Farrowing data:	On 16 of 22 Average Farms	On 4 of 5 With High- est Returns	On 3 of 5 With Lowest Returns
Spring litters per farm	3		
Pigs born per litter	7.1		
Pigs weaned per litter	5.7		
Percent saved per litter	80.4%		



## FEED COSTS AND RETURNS FROM OTHER DAIRY CATTLE 1957

Feed costs and returns on other dairy cattle for the most of the farms in this report cover cost of raising young stock and heifers up to production age or until they are sold for cash. Adequate data on pasture feeding and weights of milk products were not available and thus were not identified in terms of amounts. All animals were converted to the animal unit basis of one mature head of stock. The groups were divided on the same group basis as the herds were or on the basis of butterfat production.

Items of Comparison on the Animal Unit Basis	Average of 57 Farms	12 Highest in Butterfat Per Cow	12 Lowest in Butterfat Per Cow
<b>Feed consumed, pounds:</b>			
Hay	2720	2800	3700
Silage	3800	3940	2840
Pasture			
Corn-grain	560	743	315
Oats-grain	172	1955	112
Concentrates bought	111	227	38
<b>Feed cost:</b>			
Hay	\$18.46	\$14.99	\$20.85
Silage	9.43	10.02	7.25
Pasture	2.36	1.75	3.32
Corn-grain	9.94	13.34	5.65
Oats-grain	3.20	4.04	2.26
Concentrates bought	5.20	8.05	2.34
Milk products	12.25	7.73	15.68
Total feed cost per animal unit	\$60.88	\$59.92	\$57.35
Net increase in cattle value	\$108.39	\$128.08	\$ 96.68
Returns above feed cost	<del>\$ 37.51</del> 47.51	\$ 68.16	\$ 39.33
Return per dollar of feed cost	\$ 1.77	\$ 2.13	\$ 1.68
Number of animal units per farm	14.6	20.25	11.5
Number of work units per farm	49.6	70.8	40.2
Returns over feed costs per work unit	\$ 13.56	\$ 19.45	\$ 11.24

## FEED COSTS AND RETURNS FROM FARM SHEEP FLOCKS 1957

Only three of the farmers in this summary submitted reports on the sheep enterprise considered to be of the farm flock type. Those reports submitted were not complete enough for recording as a sound survey of sheep production. For the sake of comparison and enterprise consideration of records for next year, we have included the results on 26 farm flocks for 1956 as reported in Report No. 231 of the Department of Agriculture Economics, University of Minnesota.

Items of Comparison	Average of 26 Farms Report No. 231	Average of 3 Farms in This Report
Feed consumption, pounds:		
Concentrates	110	54
Legume hay	427	501
Other hay	19	
Fodder and stover	1	
Silage	179	236
Feed costs per head:		
Concentrates	\$ 2.43	\$ 1.45
Roughage and silage	4.58	4.84
Pasture	2.37	
Total feed cost	\$ 9.38	\$ 6.30
Value of products per head:		
Wool produced	\$ 3.95	
Net increase in value of sheep	9.50	
Total value produced	\$ 13.45	\$ 10.91
Return above feed cost per head	\$ 4.07	\$ 4.61
Return per dollar feed cost	\$ 1.57	\$ 1.73
Number of head in the flock	45.5	73.3
Pounds of mutton produced by flock	2537	
Pounds of mutton produced per head		
Market price received per cwt.	\$ 19.16	
Pounds of wool sheared from flock		
Pounds of wool sheared per head	9.5	
Market price received per pound	\$ .537	
Number of ewes kept for lambing	31	
Number of lambs born		
Percent of lamb crop born	101%	
Percent death loss on lambs	8.1%	