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1956 ANNUAL REPORT  
VOCATIONAL AGRICULTURE  
FARM MANAGEMENT SERVICE  
NORTHWESTERN MINNESOTA

UNIVERSITY OF MINNESOTA

Institute of Agriculture  
and  
Vocational Division

MINNESOTA DEPARTMENT OF EDUCATION

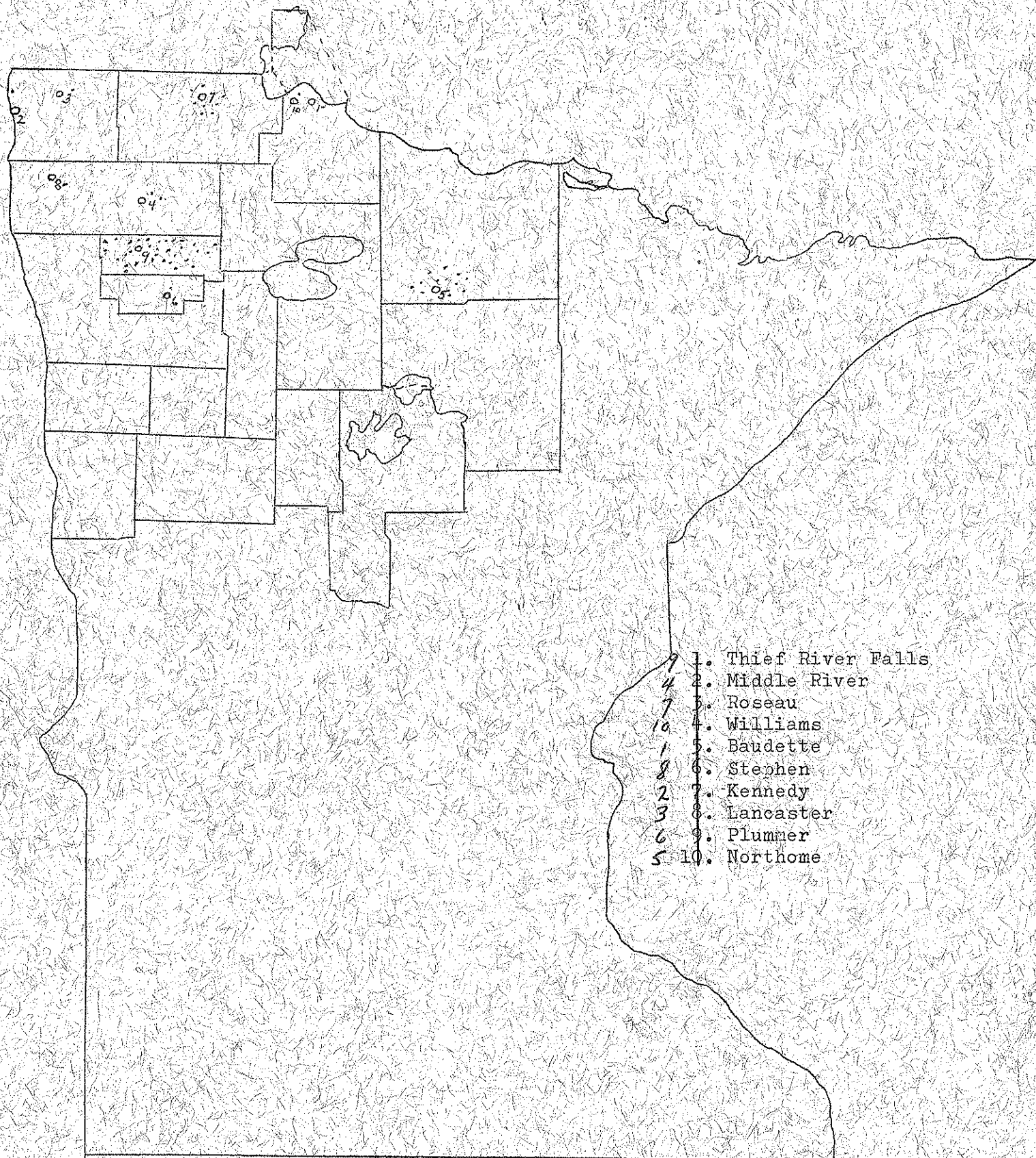
and

AREA VOCATIONAL TECHNICAL SCHOOL  
Thief River Falls, Minnesota  
Cooperating

March, 1957

USDA Leaflets

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1. Thief River Falls
2. Middle River
3. Roseau
4. Williams
5. Baudette
6. Stephen
7. Kennedy
8. Lancaster
9. Plummer
10. Northome

○ Schools Cooperating  
 . Farms Participating

1956 REPORT OF THE FARM MANAGEMENT SERVICE FOR VOCATIONAL  
AGRICULTURE IN NORTHWESTERN MINNESOTA  
STAN NELSON

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INTRODUCTION

The Department of Agricultural Education of the University of Minnesota, and the Thief River Falls Area Vocational-Technical School are cooperating with the Vocational Division, Minnesota Department of Education in maintaining a farm management service. The service was initiated during 1955 and is available to farmers who are enrolled in adult or young farmer classes in the 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 Northwestern Minnesota are handled by Stan Nelson of the Area Vocational-Technical School located at Thief River Falls. The project is under the general direction of Dr. Milo Peterson and Lauren Granger of the University of Minnesota Department of Agricultural Education. Dr. T. R. Nodland and Dr. G. A. Pond of the Department of Agricultural Education, Harland Routhe and E. Hartmans of the Agricultural Extension Service have been available as consultants. The State Department of Education was represented by S. K. Wick, Assistant Director of Vocational Education in charge of Area Vocational-Technical Schools and G. R. Cochran, State Supervisor of Agricultural Education.

1955 REPORT OF THE AGRICULTURAL EXTENSION SERVICE  
 UNIVERSITY OF MINNESOTA  
 AGRICULTURAL EXTENSION SERVICE  
 NORTH WISCONSIN

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INTRODUCTION

The Department of Agricultural Education of the University of Minnesota, and the North River Valley Vocational-Technical School are cooperating with the Vocational Division, Minnesota Department of Education in maintaining a farm management service. The service was initiated during 1955 and is available to farmers who are enrolled in adult or young farmer classes in the public schools.

The purpose of the project as far as the schools are concerned is (1) to give assistance to the farmer 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 limited to 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 farm management extension are handled by Dean Nelson of the Vocational-Technical School located at Thief River Falls. The project is under the general direction of Dr. W. H. Peterson and James Granger of the University of Minnesota Department of Agricultural Education. Dr. I. R. Mordant and Dr. A. J. Bond of the Department of Agricultural Education, Earlham College and E. Hartman of the Agricultural Extension Service have been available as consultants. The State Department of Education was represented by E. J. Wick, Assistant Director of Vocational Education in charge of the Vocational-Technical Schools and G. E. Cochran, State Supervisor of Agricultural Education.

Each farmer pays an annual fee which covers a portion of the cost. For the farmers in the Thief River Falls area, a portion of the cost of the analysis was contributed by the Thief River Falls Chamber of Commerce. The Farmers Home Administration and J. P. Rosengren, local County Supervisor, cooperated by encouraging clients to participate in the service. Through a grant of funds from the Hill Family Foundation, Lauren Granger was employed by the Department of Agricultural Education as a co-ordinator for the project.

This report deals with farmers enrolled in 10 schools in Northwestern Minnesota. The following tabulation shows by schools the number of 1956 farm records submitted:

Thief River Falls	32	Williams	1
Roseau	8	Middle River	2
Lancaster	1	Kennedy	1
Stephen	1	Northome	12
Plummer	1	Baudette	<u>1</u>
		TOTAL	60

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 operators liabilities and assets other than farm capital.

#### FARM INVENTORIES

The Capital investment per farm varied from \$6256 to \$66,635. The average investment for all farms included in this report and for the fifteen high and the fifteen low in operator's labor earnings is shown in Table 1.

#### FARM EARNINGS

Operator's 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.

There are two methods of computing operator's 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 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.

#### RETURNS TO CAPITAL

The return to capital and family labor represents the amount available to the operator for living expense, payment on indebtedness and savings. These figures are found on Table 5.



Table 1. Summary of Farm Inventories, 1956

Items	Your farm		Average of 60 farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)			377	
Size of business (work units)*			385	
Dairy and dual purpose cows			\$ 1711	\$ 1829
Other dairy & dual purpose cattle			883	968
Beef cattle (incl. feeders)			416	342
Hogs			85	142
Sheep (including feeders)			330	361
Poultry (including turkeys)			76	57
Productive livestock			3501	3699
Horses			24	25
Crop, seed and feed			1832	2500
Auto & truck (farm share)			989	911
Tractor & motors			1696	1609
Crop and general machinery			3149	3251
Livestock equipment			339	336
Machinery & equipment (total)			6173	6107
Land			8216	8216
Buildings, fences, etc.			3737	3699
Total farm capital			23483	24246

Items	15 most profitable farms		15 least profitable	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)	426		368	
Size of business (work units)*	455		371	
Dairy and dual purpose cows	\$ 2125	\$ 2155	\$ 1474	\$ 1410
Other dairy and dual purpose cattle	819	1014	956	916
Beef cattle (incl. feeders)	895	886	157	-
Hogs	97	128	89	203
Sheep (including feeders)	217	297	611	572
Poultry (including turkeys)	115	77	31	16
Productive livestock (total)	4268	4557	3318	3117
Horses	23	23	21	20
Crop, seed, and feed	2110	3587	1620	1994
Auto & truck (farm share)	1167	1232	889	776
Tractors and motors	2025	2104	1624	1430
Crop & general machinery	3801	4299	2719	2659
Livestock equipment	456	423	289	268
Machinery & equipment (total)	7449	8058	5521	5133
Land	8954	8954	7434	7434
Buildings, fences, etc.	4314	4409	3204	3164
Total farm capital	27119	29588	21118	20862

\* See page 8 for an explanation of "work units".

Table 1. Summary of Farm Inventories, 1956

Farm		Your farm		Average of 50 farms	
1956		1956		1956	
Value of farm (acres)		Value of farm (acres)		Value of farm (acres)	
Value of business (other assets)		Value of business (other assets)		Value of business (other assets)	
Barn and shed		Barn and shed		Barn and shed	
Other building and equipment		Other building and equipment		Other building and equipment	
Livestock (incl. horses)		Livestock (incl. horses)		Livestock (incl. horses)	
Hog		Hog		Hog	
Sheep (including feeders)		Sheep (including feeders)		Sheep (including feeders)	
Poultry (including turkeys)		Poultry (including turkeys)		Poultry (including turkeys)	
Productive livestock		Productive livestock		Productive livestock	
Horse		Horse		Horse	
Crop, seed and land		Crop, seed and land		Crop, seed and land	
Auto & truck (farm share)		Auto & truck (farm share)		Auto & truck (farm share)	
Tractor and motor		Tractor and motor		Tractor and motor	
Crop & general machinery		Crop & general machinery		Crop & general machinery	
Livestock equipment		Livestock equipment		Livestock equipment	
Machinery & equipment (total)		Machinery & equipment (total)		Machinery & equipment (total)	
Land		Land		Land	
Buildings, fences, etc.		Buildings, fences, etc.		Buildings, fences, etc.	
Total farm capital		Total farm capital		Total farm capital	

Farm		15 most profitable farms		15 least profitable farms	
1956		1956		1956	
Value of farm (acres)		Value of farm (acres)		Value of farm (acres)	
Value of business (other assets)		Value of business (other assets)		Value of business (other assets)	
Barn and shed		Barn and shed		Barn and shed	
Other building and equipment		Other building and equipment		Other building and equipment	
Livestock (incl. horses)		Livestock (incl. horses)		Livestock (incl. horses)	
Hog		Hog		Hog	
Sheep (including feeders)		Sheep (including feeders)		Sheep (including feeders)	
Poultry (including turkeys)		Poultry (including turkeys)		Poultry (including turkeys)	
Productive livestock		Productive livestock		Productive livestock	
Horse		Horse		Horse	
Crop, seed and land		Crop, seed and land		Crop, seed and land	
Auto & truck (farm share)		Auto & truck (farm share)		Auto & truck (farm share)	
Tractor and motor		Tractor and motor		Tractor and motor	
Crop & general machinery		Crop & general machinery		Crop & general machinery	
Livestock equipment		Livestock equipment		Livestock equipment	
Machinery & equipment (total)		Machinery & equipment (total)		Machinery & equipment (total)	
Land		Land		Land	
Buildings, fences, etc.		Buildings, fences, etc.		Buildings, fences, etc.	
Total farm capital		Total farm capital		Total farm capital	



Table 2. Summary of Farm Earnings (Cash Statement), 1956

Items	Your farm	Average of 60 farms	15 most profitable farms	15 least profitable farms
<b>FARM RECEIPTS</b>				
Dairy and dual-purpose cattle		\$ 833	\$ 1051	\$ 652
Dairy products		2606	4000	1537
Beef cattle (including feeders)		282	555	205
Hogs		298	501	242
Sheep and wool (including feeders)		262	191	488
Horses		1	-	-
Poultry		47	54	26
Turkeys		179	608	-
Eggs		271	461	61
Honey sold		70	237	-
Corn		14	49	-
Small grain		3318	4129	3149
Other crops		485	76	1520
Mach. & equip. sold & gas tax ref.		229	230	287
Pulp sold		173	-	375
Income from work off the farm		278	264	242
Miscellaneous		268	330	265
(1) Total farm sales		9614	12736	9049
(2) Increase in farm capital		535	2469	-
(3) Family living from the farm		284	338	182
(4) Total farm receipts (1)+(2)+(3)		10433	15543	9231
<b>FARM EXPENSES</b>				
Dairy and dual-purpose cattle bought		\$ 380	\$ 432	\$ 227
Beef cattle bought (incl. feeders)		22	69	5
Hogs bought		16	13	25
Sheep bought (incl. feeders)		21	27	43
Horses bought		4	-	-
Bees bought		29	100	-
Poultry bought		26	33	11
Turkeys bought		35	119	-
Misc. livestock expense		195	287	182
Feed bought		696	1201	461
Fertilizers		295	427	231
Other crop expense		573	592	779
Custom work hired		390	447	456
Gas, oil & grease bot.(farm share)		800	917	704
Rep. of mechanical power (f. share)		313	331	369
Rep. and upkeep of real estate		86	120	52
Rep. & upkeep of crop & gen. mach.		220	265	203
Rep. & upkeep of livestock equip.		47	80	31
Wages of hired labor		444	468	634
Electricity expense (farm share)		137	191	111
Real estate & pers. prop. taxes		345	368	359
Pulp expense		64	-	204
General farm expense		100	121	98
(5) Total cash operating expense		5238	6610	5185
(6) Cap.purchases-mech. pow.(f.share)		421	845	135
(7) " " -crop & gen. mach.		863	1306	1038
(8) " " -livestock equip.		61	54	25
(9) " " -bldgs. & fencing		254	416	208
(10) Total farm purchases (5) to (9)		6837	9231	6591
(11) Decrease in farm capital		-	-	965
(12) Interest on farm capital		1234	1418	1196
(13) Unpaid family labor		199	140	291
(14) Board furnished hired labor		72	126	54
(15) Total farm expenses (10) - (14)		8342	10915	9097
(16) Labor earnings (4) - (15)		2091	4628	134



Table 3. Summary of Farm Earnings (Enterprise Statement) 1956\*

Items	Your farm	Average of 60 farms	15 most profitable farms	15 least profitable farms
<u>RETURNS AND NET INCREASES</u>				
Dairy and dual-purpose cows		\$ 2627	\$ 3917	\$ 1559
Other dairy & dual-purpose cattle		885	1129	569
Beef breeding herd		213	564	60
Feeder cattle		20	17	-
Hogs		361	550	338
Sheep-farm flock		271	241	408
Sheep-feeders		1	3	-
Turkeys		144	488	-
Chickens		308	471	83
All productive livestock		4830	7382	3017
Value of feed fed to livestock		2615	3672	1834
Return over feed from livestock		2215	3710	1183
Crops, seed and feed		5187	7124	4401
Forestry products		124	49	172
Income from labor off the farm		194	187	160
Bees		41	141	-
Agricultural conservation payments		179	217	142
Miscellaneous		84	95	123
(1) Total returns & net increases		8024	11521	6181
<u>EXPENSES AND NET DECREASES</u>				
Horses		\$ 4	\$ 7	\$ 2
Truck		271	305	389
Auto (farm share)		306	318	231
Tractor		949	1153	867
Elec. & gas engine exp.(f. share)		147	198	123
Hired power		143	174	147
Total power		1819	2155	1759
Crop and general machinery		891	1050	920
Livestock equipment		103	142	75
Buildings, fencing, and tiling		388	443	333
Misc. productive livestock exp.		195	287	182
Labor		859	908	1127
Real estate taxes		216	199	209
Personal property tax		129	169	150
Insurance		48	57	56
General farm		52	65	42
Interest on farm capital		1233	1418	1196
(2) Total expenses & net decreases		5933	6893	6047
(3) Operator's earnings (1) - (2)		2091	4628	134

\* 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 operator's earnings are the same as those on page 4.

Assets (1) Liabilities (2) Equity (3)  
 Current Assets Current Liabilities Capital  
 Long-term Assets Long-term Liabilities Retained Earnings

1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890	1889	1888	1887	1886	1885	1884	1883	1882	1881	1880	1879	1878	1877	1876	1875	1874	1873	1872	1871	1870	1869	1868	1867	1866	1865	1864	1863	1862	1861	1860	1859	1858	1857	1856	1855	1854	1853	1852	1851	1850	1849	1848	1847	1846	1845	1844	1843	1842	1841	1840	1839	1838	1837	1836	1835	1834	1833	1832	1831	1830	1829	1828	1827	1826	1825	1824	1823	1822	1821	1820	1819	1818	1817	1816	1815	1814	1813	1812	1811	1810	1809	1808	1807	1806	1805	1804	1803	1802	1801	1800	1799	1798	1797	1796	1795	1794	1793	1792	1791	1790	1789	1788	1787	1786	1785	1784	1783	1782	1781	1780	1779	1778	1777	1776	1775	1774	1773	1772	1771	1770	1769	1768	1767	1766	1765	1764	1763	1762	1761	1760	1759	1758	1757	1756	1755	1754	1753	1752	1751	1750	1749	1748	1747	1746	1745	1744	1743	1742	1741	1740	1739	1738	1737	1736	1735	1734	1733	1732	1731	1730	1729	1728	1727	1726	1725	1724	1723	1722	1721	1720	1719	1718	1717	1716	1715	1714	1713	1712	1711	1710	1709	1708	1707	1706	1705	1704	1703	1702	1701	1700	1699	1698	1697	1696	1695	1694	1693	1692	1691	1690	1689	1688	1687	1686	1685	1684	1683	1682	1681	1680	1679	1678	1677	1676	1675	1674	1673	1672	1671	1670	1669	1668	1667	1666	1665	1664	1663	1662	1661	1660	1659	1658	1657	1656	1655	1654	1653	1652	1651	1650	1649	1648	1647	1646	1645	1644	1643	1642	1641	1640	1639	1638	1637	1636	1635	1634	1633	1632	1631	1630	1629	1628	1627	1626	1625	1624	1623	1622	1621	1620	1619	1618	1617	1616	1615	1614	1613	1612	1611	1610	1609	1608	1607	1606	1605	1604	1603	1602	1601	1600	1599	1598	1597	1596	1595	1594	1593	1592	1591	1590	1589	1588	1587	1586	1585	1584	1583	1582	1581	1580	1579	1578	1577	1576	1575	1574	1573	1572	1571	1570	1569	1568	1567	1566	1565	1564	1563	1562	1561	1560	1559	1558	1557	1556	1555	1554	1553	1552	1551	1550	1549	1548	1547	1546	1545	1544	1543	1542	1541	1540	1539	1538	1537	1536	1535	1534	1533	1532	1531	1530	1529	1528	1527	1526	1525	1524	1523	1522	1521	1520	1519	1518	1517	1516	1515	1514	1513	1512	1511	1510	1509	1508	1507	1506	1505	1504	1503	1502	1501	1500	1499	1498	1497	1496	1495	1494	1493	1492	1491	1490	1489	1488	1487	1486	1485	1484	1483	1482	1481	1480	1479	1478	1477	1476	1475	1474	1473	1472	1471	1470	1469	1468	1467	1466	1465	1464	1463	1462	1461	1460	1459	1458	1457	1456	1455	1454	1453	1452	1451	1450	1449	1448	1447	1446	1445	1444	1443	1442	1441	1440	1439	1438	1437	1436	1435	1434	1433	1432	1431	1430	1429	1428	1427	1426	1425	1424	1423	1422	1421	1420	1419	1418	1417	1416	1415	1414	1413	1412	1411	1410	1409	1408	1407	1406	1405	1404	1403	1402	1401	1400	1399	1398	1397	1396	1395	1394	1393	1392	1391	1390	1389	1388	1387	1386	1385	1384	1383	1382	1381	1380	1379	1378	1377	1376	1375	1374	1373	1372	1371	1370	1369	1368	1367	1366	1365	1364	1363	1362	1361	1360	1359	1358	1357	1356	1355	1354	1353	1352	1351	1350	1349	1348	1347	1346	1345	1344	1343	1342	1341	1340	1339	1338	1337	1336	1335	1334	1333	1332	1331	1330	1329	1328	1327	1326	1325	1324	1323	1322	1321	1320	1319	1318	1317	1316	1315	1314	1313	1312	1311	1310	1309	1308	1307	1306	1305	1304	1303	1302	1301	1300	1299	1298	1297	1296	1295	1294	1293	1292	1291	1290	1289	1288	1287	1286	1285	1284	1283	1282	1281	1280	1279	1278	1277	1276	1275	1274	1273	1272	1271	1270	1269	1268	1267	1266	1265	1264	1263	1262	1261	1260	1259	1258	1257	1256	1255	1254	1253	1252	1251	1250	1249	1248	1247	1246	1245	1244	1243	1242	1241	1240	1239	1238	1237	1236	1235	1234	1233	1232	1231	1230	1229	1228	1227	1226	1225	1224	1223	1222	1221	1220	1219	1218	1217	1216	1215	1214	1213	1212	1211	1210	1209	1208	1207	1206	1205	1204	1203	1202	1201	1200	1199	1198	1197	1196	1195	1194	1193	1192	1191	1190	1189	1188	1187	1186	1185	1184	1183	1182	1181	1180	1179	1178	1177	1176	1175	1174	1173	1172	1171	1170	1169	1168	1167	1166	1165	1164	1163	1162	1161	1160	1159	1158	1157	1156	1155	1154	1153	1152	1151	1150	1149	1148	1147	1146	1145	1144	1143	1142	1141	1140	1139	1138	1137	1136	1135	1134	1133	1132	1131	1130	1129	1128	1127	1126	1125	1124	1123	1122	1121	1120	1119	1118	1117	1116	1115	1114	1113	1112	1111	1110	1109	1108	1107	1106	1105	1104	1103	1102	1101	1100	1099	1098	1097	1096	1095	1094	1093	1092	1091	1090	1089	1088	1087	1086	1085	1084	1083	1082	1081	1080	1079	1078	1077	1076	1075	1074	1073	1072	1071	1070	1069	1068	1067	1066	1065	1064	1063	1062	1061	1060	1059	1058	1057	1056	1055	1054	1053	1052	1051	1050	1049	1048	1047	1046	1045	1044	1043	1042	1041	1040	1039	1038	1037	1036	1035	1034	1033	1032	1031	1030	1029	1028	1027	1026	1025	1024	1023	1022	1021	1020	1019	1018	1017	1016	1015	1014	1013	1012	1011	1010	1009	1008	1007	1006	1005	1004	1003	1002	1001	1000	999	998	997	996	995	994	993	992	991	990	989	988	987	986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# FAMILY LIVING FROM THE FARM

The family living from the farm is the estimated value of the farm products used in the house and shelter 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 expense.

The value of the family living as shown in Table 4 amounts to 2.7 per cent of the total farm receipts on these 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, 1956

Items	Your farm	Average 40 farms	Your farm	Average 40 farms
Adult equiv. - family	_____	3.1		
- others	_____	1.5		
Whole milk	_____	1314 qts.	_____	\$ 92
Skim milk	_____	306 qts.	_____	6
Cream	_____	156 pts.	_____	37
Beef	_____	572 lbs.	_____	82
Hogs	_____	185 lbs.	_____	29
Poultry	_____	56 lbs.	_____	15
Eggs	_____	88 doz.	_____	28
Potatoes	_____	1 bu.	_____	1
Vegetables & fruit	_____		_____	62
Fuel	_____		_____	11
Total	_____		_____	363

## 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 \$170 per month for family living in addition to the food, fuel and housing furnished by the farm.

# FAMILY LIVING FROM THE FARM

The family living from the farm is an estimated value of the farm products used in the house and shelter 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 products used in the home reveals in an incomplete record of both farm income and personal expenses.

The value of the family living is shown in Table 1, which is based on the total farm receipts on these farms. The values assigned are conservative. The market prices on the farm. If these products had been purchased, the amount paid out would have been considerably higher.

Table 1. Family living from the farm, 1935

Item	Year	Value	Year	Value	Year	Value
Whole milk	1935	1,074	1936	1,006	1937	1,074
Skim milk	1935	406	1936	416	1937	406
Cream	1935	186	1936	186	1937	186
Butter	1935	372	1936	372	1937	372
Eggs	1935	186	1936	186	1937	186
Poultry	1935	56	1936	56	1937	56
Swine	1935	48	1936	48	1937	48
Potatoes	1935	1.04	1936	1.04	1937	1.04
Vegetables & fruit	1935		1936		1937	
Wool	1935		1936		1937	
Total	1935	3,082	1936	2,984	1937	3,082

## HOUSEHOLD AND PERSONAL EXPENSES AND RECEIPTS

Household and personal accounts are important to the family in so many ways. The household and personal expenses and receipts are presented in Table 2. These figures are an average of \$170 per month for family living in addition to the food, fuel and housing furnished by the farm.

Table 5. Household and Personal Expenses for Those Farms which kept Complete Accounts of These Expenses, 1956

Items	Your	Average of 40 farms	15 most profitable farms	15 least profitable farms
Number of persons - family		4.3	4.1	3.8
Number of adult equiv. - family		3.1	2.9	2.8
other*		1.5	2.8	1.6
Food and meals bought		\$ 702	\$ 805	\$ 409
Operating and supplies		173	196	79
Furnishings and equipment		137	183	33
Clothing and clothing material		207	239	133
Personal care, personal spending		60	49	61
Education, recreation & development		101	94	49
Gifts and special events		84	99	24
Medical care and health insurance		181	233	86
Church, welfare		106	153	23
Personal share of auto & tr. exp.		138	100	80
Operator's sh. of upkeep on dwelling		52	74	4
Household sh. of electric & Tele. exp.		101	96	73
Total Cash living expense		\$ 2042	\$ 2321	\$ 1054
Social Security		27	44	15
H.H. & pers. share of new auto		70	100	37
New dwelling		54	48	73
Taxes and other deductions		26	28	7
Life insurance		32	7	20
Other savings and investments		37	85	1
Total household & personal cash exp.		2288	2633	1207
Total family living from the farm		363	338	195
Total cash exp. & perquisites		2651	2971	1402
Receipts:				
Return to capital & family labor		3173	5761	1219
Income from investments		104	145	164
Sale of outside investments		4	13	-
Miscellaneous income		173	6	169

\* 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 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, 1956

Items	Your farm		60 farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm			377	
Total farm capital			\$23483	\$24246
Stocks and bonds			541	542
Life Insurance			299	271
Accounts receivable			4	32
Shares in Mktg. organizations			333	387
Outside real estate			111	147
Cash on hand and in bank			551	668
Household goods and clothing			1464	1534
Pers. share of auto & truck			300	261
Dwelling			2393	2383
Total non-farm assets			5996	6225
TOTAL ASSETS			29479	30471
Federal Land Bank mortgage			484	484
FHA Real Estate mortgage			842	815
Other mortgage on land operated			2469	2319
Production Credit Association			390	242
FHA Chattel mortgage			214	302
Crop loans			215	415
Other chattel mortgages			1492	1428
Notes payable			396	456
Accounts payable			820	656
TOTAL LIABILITIES			7322	7117
Farmer's net worth			22157	23354
Gain or decrease in net worth				1197

# 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 live-stock at an average efficiency. The number of work units for each class of livestock and each acre of crop are presented in Table 7. Days of work off the farm for pay are not included in work unit computations in this report.

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	.7 per acre
Other dairy & du. pur. cattle	3.5 per an. unit*	Corn husked	1.1 per acre
Beef breeding herd	3.5 per an. unit*	Corn, silage	1.7 per acre
Feeder cattle	.25 per 100 lbs.	Corn, fodder	1.0 per acre
Sheep - farm flock	1.5 per an. unit*	Alfalfa hay	.9 per acre
Sheep - feeders	.3 per 100 lbs.	Other hay crops	.6 per acre
Hogs	.2 per 100 lbs.	Legume seed	1.0 per acre
Hens	20.0 per 100 hens	Grass silage	1.0 per acre
Potatoes	3.8 per acre		

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



## RANGE IN EARNINGS

Every study of farm earnings shows a wide variation in earnings among farmers in a given year (figure 1). The average operator's earnings of those farmers ranking in the upper 25 per cent of the range according to earnings was \$4628 and of those in the lower 25 per cent was \$134. This is a range of \$4494 between the average earnings of these two groups. Some of the causes for these 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/

1. Crop Yields
2. Choice of Crops
3. Return from Livestock
4. Amount of Livestock
5. Size of Business
6. Work Units per Worker
7. Control over Expenses

Operator's  
Earnings

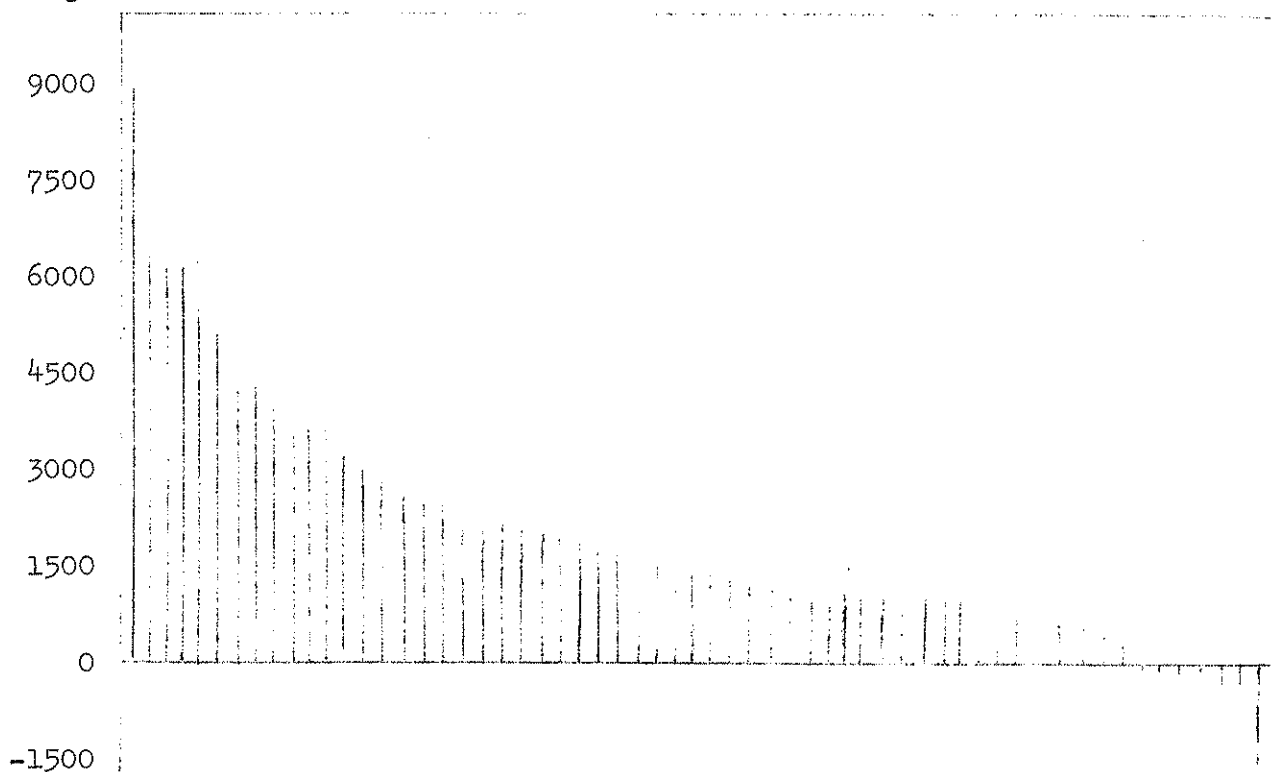


Fig. 1. Range in operator's earnings.  
Each line represents the earning of one farmer.

1/ See Pond, G. A. "Why Farm Earnings Vary". Minn. Agri. Expt. Sta. Bul. 386, June, 1945.

Nodland, T. R. and Pond, G. A. "Some Factors Affecting the Earnings of Farmers in Southwestern Minnesota". Univ. of Minn., Dept. of Ag. Econ., Report No. 219, November, 1954.

# REPORT ON EARNINGS

Every study of farm earnings shows a wide variation in earnings among farms in a given year (Figure 1). The average operator's earnings of those farmers ranking in the upper 25 per cent of the range according to earnings are \$4628 and of those in the lower 25 per cent was \$1757. There is a range of \$2871 between the average earnings of these two groups. Some of the factors for these differences in earnings, such as weather, may be beyond the control of the individual farmer. Other factors are within his control. The more important ones are listed following earnings and are believed to have factors very close to year to year in their relative influence on earnings.

1. Soil Fertility
2. Use of Crops
3. Return from Livestock
4. Amount of Livestock
5. Cost of Production
6. Farm Labor per Worker
7. Total Over Expenses

Operator's Earnings  
 1934-1935

9000  
 8000  
 7000  
 6000  
 5000  
 4000  
 3000  
 2000  
 1000  
 0

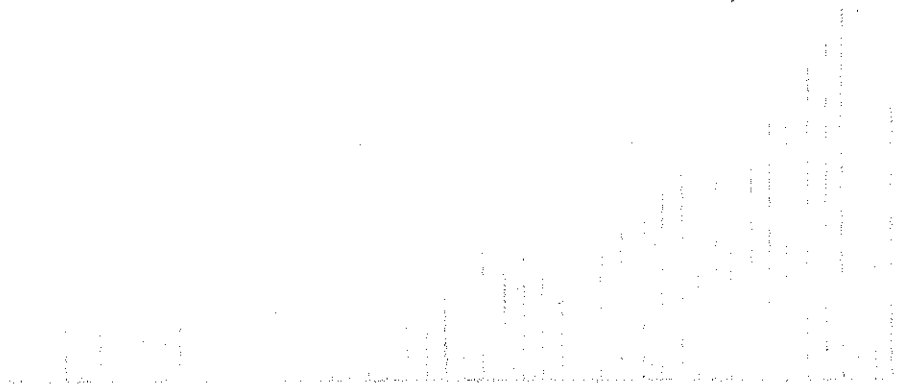


Fig. 1. Range in operator's earnings.  
 Each line represents the earnings of one farmer.

See also: G. A. Why Farm Earnings Vary, Econ. Agr. Res. Serv., June, 1942.  
 National T. and Food, G. A. Why Farm Earnings Vary, Econ. Agr. Res. Serv., June, 1942.  
 Farmers in Southwestern Minnesota, Univ. of Minn., Dept. of Agr. Econ., Report No. 219, November, 1934.

Table 8. Measures of Farm Organization and Management Efficiency, 1956

Measures used in chart on page 11	Your farm	Average of 51 farms	15 most profitable farms	15 least profitable farms
Operator's earnings	\$ _____	\$ 2091	\$ 4628	\$ 134
(1) Crop yields*	_____	100	118	88
(2) Per cent tillable land in high return crops**	_____	54.7	54.6	53.6
(3) Ret. for \$100 feed to prod. livestock***	_____	100	115	92
(4) Prod. livestock units per 100 A.****	_____	16.5	14.9	22.6
(5) Size of business - work units	_____	385	455	371
(6) Work units per worker	_____	269	314	264
(7) Pow., mach., equip., & bldg. exp. per work unit	\$ _____	\$8.30	\$8.42	\$8.59

Items related to some of the above measures:

(3) Index of ret. for \$100 feed from:				
Dairy cattle (see pages 15 & 16)	_____	100	116	89
Beef cattle-breeding herd(p.18)	_____	100	116	119
Hogs (see page 19)	_____	100	94	120
Sheep - farm flock (see pg. 17)	_____	100	136	88
Chickens (see page 18)	_____	100	86	90
(4) Number of animal units	_____	29.1	34.9	26.6
(5) Work units on crops	_____	197	231	208
Work units on prod. livestock	_____	182	224	162
			<del>435</del>	<del>376</del>
(6) Number of family workers	_____	1.2	1.2	1.2
Number of hired workers	_____	.2	.3	.1
Total number of workers	_____	1.4	1.5	1.3
(7) Power expense per work unit	\$ _____	\$4.80	\$4.77	\$5.02
Crop mach.exp. per work unit	_____	2.18	2.34	2.23
Livestock equip.exp. per work unit	_____	.29	.33	.27
Bldgs.& Fencing exp. " " "	_____	1.11	.98	1.36

\* Given as percentage of the average

\*\* Crops are marked in table 9 as (A), (B), (C), and (D). All of the acres in (A) crops, one half of acres in (B) crops, and one fourth of the acres in (C) crops are used in calculating per cent 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.

3001. *penicillium* *intermedium* *has* *exhibitorum* *amici* *de* *straw* *de* *alder*

resumption ends off to end of hatched seed!

# 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 60 farms included in this summary are located between the dotted lines across the center of this page.

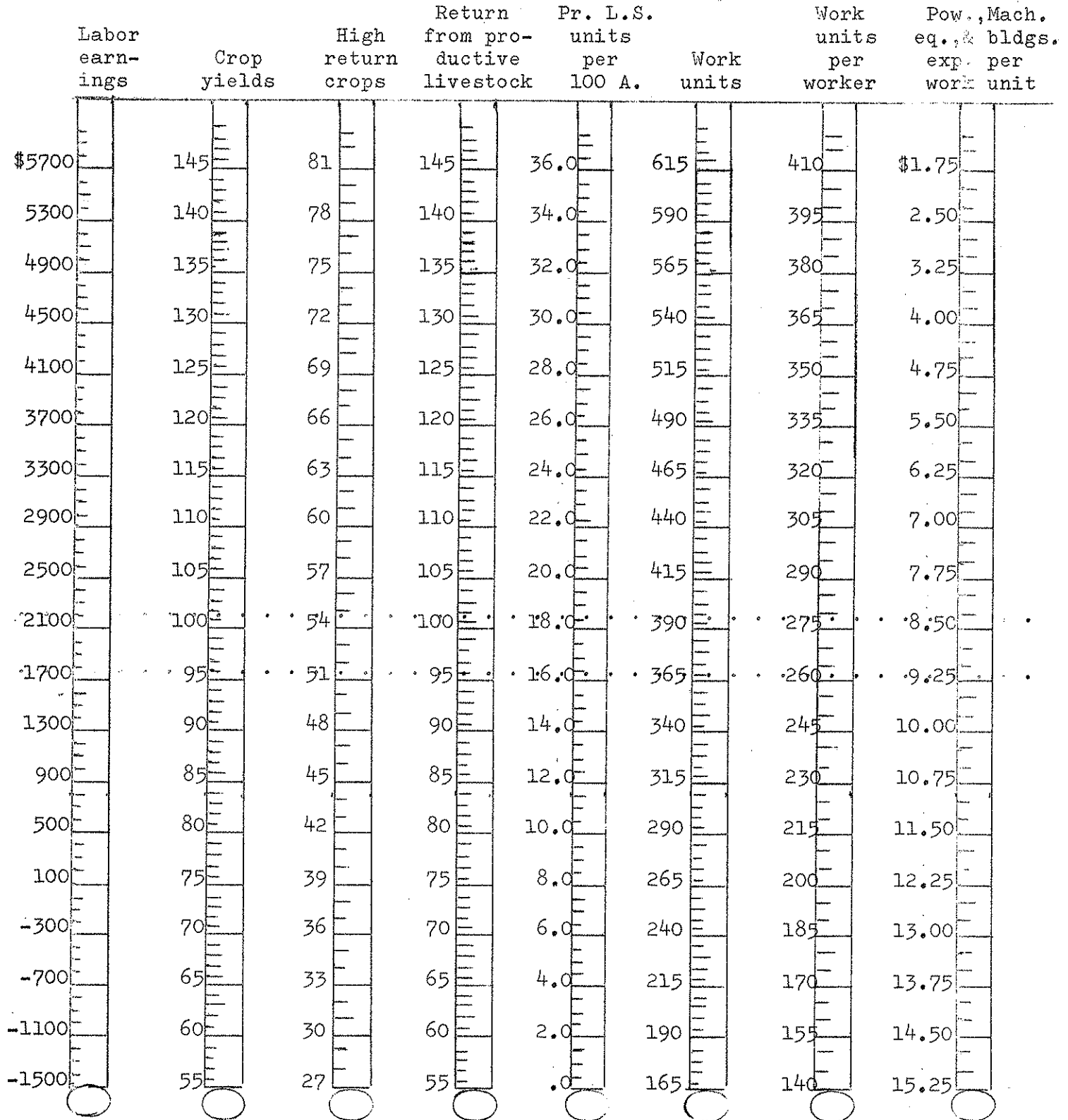






Table 9. Distribution of Acres in Farm, 1956

	Crop ratings*	Your farm	Average of 60 farms
Flax	A	_____	48.6
Barley	B	_____	22.9
Wheat	B	_____	17.5
Oats & oat mixtures	C	_____	51.7
Rye, millet	D	_____	2.1
Soybeans	C	_____	.1
Total small grain		_____	142.9
Potatoes	A	_____	4.3
Corn grain	C	_____	.2
Corn fodder	D	_____	.4
Corn silage	C	_____	6.9
Total cultivated crops		_____	11.8
Grass silage	A	_____	1.2
Alfalfa and Alfalfa mixture	A	_____	43.8
Alfalfa seed	B	_____	.1
Red or alsike clover hay	B	_____	3.9
Red or alsike clover seed	B	_____	6.8
Blue grass seed	C	_____	.8
Sweet clover seed	C	_____	3.9
Other legumes and legume mixture hay	C	_____	3.7
Brome and timothy grass seed	C	_____	2.1
Brome or timothy hay	D	_____	2.9
Wild hay	D	_____	2.5
Annual hay	D	_____	.4
Total tillable land in hay		_____	72.1
Alfalfa pasture	A	_____	5.5
Other legumes and mixtures	C	_____	6.0
Other tillable pasture	D	_____	10.1
Total tillable land in pasture		_____	21.6
Tillable land not cropped	D	_____	24.2
Total tillable land		_____	272.6
Wild hay		_____	7.4
Non-tillable pasture		_____	23.3
Timber (not pastured)		_____	36.8
Roads and waste		_____	14.7
Farmstead		_____	8.6
Brush		_____	11.3
Lake		_____	2.1
Total acres in farm		_____	376.8
Percent land tillable		_____	72.0
Percent tillable land in high return crops		_____	54.3

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

Table 1. Results of the 1978-1979 experiment

Year	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000	3001	3002	3003	3004	3005	3006	3007	3008	3009	3010	3011	3012	3013	3014	3015	3016	3017	3018	3019	3020	3021	3022	3023	3024	3025	3026	3027	3028	3029	3030	3031	3032	3033	3034	3035	3036	3037	3038	3039	3040	3041	3042	3043	3044	3045	3046	3047	3048	3049	3050	3051	3052	3053	3054	3055	3056	3057	3058	3059	3060	3061	3062	3063	3064	3065	3066	3067	3068	3069	3070	3071	3072	3073	3074	3075	3076	3077	3078	3079	3080	3081	3082	3083	3084	3085	3086	3087	3088	3089	3090	3091	3092	3093	3094	3095	3096	3097	3098	3099	3100	3101	3102	3103	3104	3105	3106	3107	3108	3109	3110	3111	3112	3113	3114	3115	3116	3117	3118	3119	3120	3121	3122	3123	3124	3125	3126	3127	3128	3129	3130	3131	3132	3133	3134	3135	3136	3137	3138	3139	3140	3141	3142	3143	3144	3145	3146	3147	3148	3149	3150	3151	3152	3153	3154	3155	3156	3157	3158	3159	3160	3161	3162	3163	3164	3165	3166	3167	3168	3169	3170	3171	3172	3173	3174	3175	3176	3177	3178	3179	3180	3181	3182	3183	3184	3185	3186	3187	3188	3189	3190	3191	3192	3193	3194	3195	3196	3197	3198	3199	3200	3201	3202	3203	3204	3205	3206	3207	3208	3209	3210	3211	3212	3213	3214	3215	3216	3217	3218	3219	3220	3221	3222	3223	3224	3225	3226	3227	3228	3229	3230	3231	3232	3233	3234	3235	3236	3237	3238	3239	3240	3241	3242	3243	3244	3245	3246	3247	3248	3249	3250	3251	3252	3253	3254	3255	3256	3257	3258	3259	3260	3261	3262	3263	3264	3265	3266	3267	3268	3269	3270	3271	3272	3273	3274	3275	3276	3277	3278	3279	3280	3281	3282	3283	3284	3285	3286	3287	3288	3289	3290	3291	3292	3293	3294	3295	3296	3297	3298	3299	3300	3301	3302	3303	3304	3305	3306	3307	3308	3309	3310	3311	3312	3313	3314	3315	3316	3317	3318	3319	3320	3321	3322	3323	3324	3325	3326	3327	3328	3329	3330	3331	3332	3333	3334	3335	3336	3337	3338	3339
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Table 10. Crop Yields Per Acre, 1956

Crop	Your farm	Average of farms growing each crop
Flax, bu.		7.9
Barley, bu.		26.4
Wheat, bu.		26.2
Oats, bu.		47.6
Rye, bu.		16.5
Soybeans, bu.		10.0
Potatoes, bu.		149.7
Corn Grain, bu.		27.0
Corn Fodder, tons		6.1
Corn silage, tons		5.4
Alfalfa Hay, tons		1.7
Alfalfa seed, lbs.		267.5
Red or alsike clover hay, tons		1.5
Red or alsike clover seed, lbs.		119.5
Bluegrass seed, lbs.		87.5
Sweet clover seed, lbs.		56.4
Other legumes and legume mixture hay, tons		1.4
Brome or timothy seed, lbs.		154.1
Brome or timothy hay, tons		1.4
Wild hay, tons		.5
Annual hay, tons		.8
Grass silage, tons		3.6

#### POWER AND MACHINERY EXPENSE

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 53 to 670 with an average of 236 (Table 11). The expenses are high on the farms with a small acreage. In some cases, 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 11. Power and Machinery Expenses Per Crop Acre, 1956

Items	Your farm	Average of 51 farms	15 most profitable farms	15 least profitable farms
Crop acres per farm		236	291	214
Tractor expense per crop acre		\$4.39	\$4.23	\$4.55
Crop & gen. mach. exp. per crop acre		3.77	3.92	3.90

#### AMOUNT OF LIVESTOCK

The farmers cooperating in this study are predominantly livestock farmers. 86% of these farmers maintained dairy cattle, 43% poultry, 20% raised sheep, 12% kept beef cattle and 30% raised one or more hogs.

Table 11. Crop yields per acre, 1955

Crop	Yield	Yield
Barley, bu.	1.5	1.5
Wheat, bu.	1.5	1.5
Oats, bu.	1.5	1.5
Rye, bu.	1.5	1.5
Soybeans, bu.	1.5	1.5
Potatoes, bu.	1.5	1.5
Corn Grain, bu.	1.5	1.5
Corn fodder, tons	1.5	1.5
Corn silage, tons	1.5	1.5
Alfalfa hay, tons	1.5	1.5
Alfalfa seed, lbs.	1.5	1.5
Red or white clover hay, tons	1.5	1.5
Red or white clover seed, lbs.	1.5	1.5
Bluegrass seed, lbs.	1.5	1.5
Sweet clover seed, lbs.	1.5	1.5
Other legumes and legume mixture hay, tons	1.5	1.5
Brome or timothy seed, lbs.	1.5	1.5
Brome or timothy hay, tons	1.5	1.5
Wild hay, tons	1.5	1.5
Annual hay, tons	1.5	1.5
Grass silage, tons	1.5	1.5

POWER AND MACHINERY EXPENSE

Power and machinery expense per crop acre is an indication of the amount of capital invested in these items. The crop acres per farm ranged from 25 to 870 with an average of 256 (Table 11). The expenses are high on the farms with a small acreage. In some cases, the expenses for labor might be offset by high power and equipment costs. The farmer is interested in getting at the lowest cost for power, machinery and labor combined.

Table 12. Power and Machinery Expenses Per Crop Acre, 1955

Power	Machinery	Exp. per crop acre
1.5	1.5	1.5
1.5	1.5	1.5
1.5	1.5	1.5
1.5	1.5	1.5
1.5	1.5	1.5
1.5	1.5	1.5
1.5	1.5	1.5
1.5	1.5	1.5
1.5	1.5	1.5
1.5	1.5	1.5

AMOUNT OF INVESTMENT

The farmers cooperating in this study are predominantly dairy-farmers. 85% of these farmers maintained dairy cattle, 47% poultry, 10% raised sheep. 12% kept beef cattle and 20% raised one or more pigs.

Table 12. Amount of Livestock, 1956

	Your farm	Average of 60 farms	15 most profitable farms	15 least profitable farms
Number of milk cows	_____	13.4	17.9	12.9
Number of other dairy cattle	_____	16.2	18.3	17.9
Number of beef cattle (incl. feeders)	_____	4.8	9.6	1.2
Number of ewes	_____	13.9	9.2	25.0
Number of hens	_____	65	31	6
Litters of pigs raised	_____	1.8	2.2	2.5
Pounds of hogs produced	_____	1990	3146	1873

# TOTAL FEED COSTS AND RETURNS FROM YOUR LIVESTOCK ENTERPRISES

The total "return over feed costs" for each class of livestock is shown in Table 13. 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 other 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 13. Total Feed Costs & Returns From Your Livestock Enterprises, 1956

	Dairy or dual purpose cattle			Beef
	Cows	Other	All	breeding herd
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 considerably between classes of livestock. Feed makes up approximately 45 per cent of the total cost of maintaining dairy cattle and poultry, 50 per cent in the case of a farm flock of sheep, and 75 to 90 per cent 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.



# DAIRY AND DUAL PURPOSE CATTLE

The quantity of feed consumed, value of feeds and returns from dairy cattle are presented in Tables 14, 15, & 16. The return over feed cost per cow varied from \$9.46 to \$237.95 among the 46 herds covered by this study. Some of the important factors that affected the return over feed were:

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

Table 14. Factors of Cost and Returns from Dairy Cows, 1956

Items	Your farm	Average of 46 farms	15 farms highest in butterfat per cow	15 farms lowest in butterfat per cow
Pounds of butterfat per cow		254	313	185
Price rec. per lb. B.F. sold (cream)		\$ .63	\$ .63	\$ .64
Price rec. per lb. B.F. sold (milk)		.90	.94	.78
Feeds per cow, lbs.:				
Corn		10	10	2
Small grain		1250	1872	620
Commercial feeds		355	519	185
Legume hay		6190	5666	6317
Other hay		1184	1470	1228
Fodder and stover		161	-	545
Total concentrates		1615	2401	807
Total dry roughage		7394	7136	7614
Silage		4006	4020	4216
Feed cost per cow:				
Concentrates	\$	\$34.56	\$52.93	\$16.17
Roughages		48.59	49.67	44.30
Pasture		7.84	7.38	8.10
TOTAL FEED COSTS		90.99	109.98	68.57
Value of produce per cow:				
Butterfat sales	\$	\$193.16	\$276.24	\$112.81
Dairy produce used in house		7.14	5.27	8.40
Milk to livestock		7.75	3.66	12.18
Net increase in value of cows		-14.06	-17.42	-19.09
TOTAL VALUE PRODUCED		193.99	267.75	114.30
RETURNS ABOVE FEED COST PER COW	\$	\$ 103	\$157.77	\$ 45.73
RETURNS FOR \$100 OF FEED		\$ 213	\$243	\$167
Feed cost per lb. B.F. (cents)	\$	\$ .36	\$ .35	\$ .37
Number of cows		14.8	18.2	13.4

ADDITIONAL INFORMATION: 1. UC 690 Y4.7 A6



Table 15. Feed Costs and Returns from Other Dairy & Dual Purpose Cattle, 1956

Items	Your farm	Average of 46 farms	15 farms highest in butterfat per cow	15 farms lowest in butterfat per cow
Feeds per head, lbs.:				
Concentrates	_____	225	407	93
Hay and fodder	_____	2593	2663	2758
Silage	_____	805	961	946
Skim milk	_____	637	113	1050
Whole milk	_____	161	97	279
Feed cost per head:				
Concentrates	\$ _____	\$6.32	\$12.59	\$2.33
Roughages	_____	15.28	17.65	14.76
Milk	_____	6.81	3.58	10.42
Pasture	_____	4.54	4.85	4.68
TOTAL FEED COSTS PER HEAD	_____	32.95	38.67	32.19
Net inc. in value of other cattle	_____	54.78	68.08	50.40
RETURNS ABOVE FEED COST PER HEAD	_____	21.83	29.39	18.21
RETURNS FOR \$100 OF FEED	_____	\$166	\$176	\$157
Number of head of other cattle	_____	17.9	18.3	17.9

Table 16. Feed Costs & Returns from All Dairy & Dual Purpose Cattle, 1956

Items	Your farm	Average of 46 farms	15 farms highest in butterfat per cow	15 farms lowest in butterfat per cow
Feeds per animal unit, lbs.:				
Concentrates	_____	1186	1871	589
Hay and fodder	_____	6703	6709	6768
Silage	_____	3051	3321	3284
TOTAL FEED COSTS PER ANIMAL UNIT \$	_____	\$76.18	\$96.41	\$58.48
Value of produce per animal unit:				
Dairy products	\$ _____	\$124.97	\$187.61	\$ 72.68
Net inc. in val. of dairy cattle	_____	32.66	33.84	29.46
TOTAL VALUE PRODUCED	_____	157.63	221.45	102.14
RETURNS ABOVE FEED PER ANIMAL UNIT \$	_____	81.45	125.04	43.66
RETURNS FOR \$100 OF FEED	\$ _____	\$207	\$230	\$175
Animal units of cattle	_____	23.7	27.4	22.4



Table 17. Feed Costs and Returns from a Farm Flock of Sheep, 1956

Items	Your farm	Average of 10 Farms
Feeds per head,* lbs.		
Concentrates	_____	91
Legume hay	_____	597
Other hay	_____	87
fodder & stover	_____	9
Silage	_____	40
Feed cost per head:		
Concentrates	\$ _____	\$ 1.77
Roughages	_____	4.06
Pasture	_____	1.41
TOTAL FEED COSTS	\$ _____	7.24
Value of produce per head:		
Wool	\$ _____	\$ 3.49
Net increase in value of sheep	_____	10.85
TOTAL VALUE PRODUCED	\$ _____	14.34
RETURNS ABOVE FEED COST PER HEAD	\$ _____	\$ 7.10
RETURNS FOR \$100 OF FEED	\$ _____	\$ 198
Price per cwt. of lambs sold	\$ _____	\$18.00
Price per lb. of wool sold (cts.)	_____	51.9
Pounds of wool per sheep sheared	_____	8.6
Number of ewes kept for lambing	_____	71
Per cent lamb crop**	_____	113
Per cent death loss**	_____	4.7
Pounds of sheep produced	_____	6204

\* Two lambs under six months of age considered as one head.

\*\* Lambs which die during month of birth are not included.

#### CHICKENS

Forty per cent of the farmers cooperating in this analysis kept some chickens. In most cases poultry is a very minor enterprise, providing eggs and poultry meat for family consumption plus a small additional amount of cash income.

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. Percentage death loss of hens



Table 18. Feed Costs and Returns from Chickens, 1956\*

Items	Your farm	Average of 19 farms
Feed per hen, lbs.:		
Grain	_____	91
Commercial feeds	_____	44
Total Concentrates	_____	135
Skim milk and buttermilk	_____	3
TOTAL FEED COST PER HEN	\$ _____	\$ 3.40
Value of Produce per hen:		
Eggs sold and used in house	\$ _____	\$ 4.34
Net inc. in value of chickens	\$ _____	.22
TOTAL VALUE PRODUCED	\$ _____	\$ 4.56
RETURNS ABOVE FEED COST PER HEN	\$ _____	\$ 1.16
RETURNS FOR \$100 OF FEED	\$ _____	\$134
Price rec'd. per doz. eggs sold (cents)	\$ _____	\$ .32
Eggs laid per hen	_____	162
Ave. no. hens on farm during year	_____	175
Per cent death loss of hens	_____	15

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

Table 19. Feed Costs and Returns from Beef Cattle, 1956

ITEMS	Your farm	Average of 6 farms
Feeds per animal unit, lbs.:		
Concentrates	_____	466
Legume	_____	3779
Other hay	_____	783
Fodder and stover	_____	34
Silage	_____	4998
Feed cost per animal unit:		
Concentrates	\$ _____	\$ 12.08
Roughages	_____	34.15
Pasture	_____	8.88
TOTAL FEED COSTS	_____	55.11
Value of produce per animal unit:		
Dairy products	\$ _____	\$ 10.67
Net increase in value of animals	_____	95.00
TOTAL VALUE PRODUCED	_____	\$105.67
RETURNS ABOVE FEED COST PER ANIMAL UNITS	\$ _____	\$ 50.56
RETURNS FOR \$100 OF FEED	\$ _____	\$192
Number of cows and herd bulls	_____	40.1
Number of animal units in the herd	_____	117.5

Table 11. Total Value and Return from Chickens, 1956

Item	Value	Return
Feed per hen, 1956	1.10	
Medicine	.05	
Transportation	.05	
Other	.05	
<b>Total</b>	<b>1.25</b>	
Value of products per hen		1.25
Egg sold per hen		1.25
Net inc. in value of chickens		1.25
<b>Total Value Produced</b>		<b>1.25</b>
Return from eggs sold		1.25
Return from 1000 of eggs		1.25
Price paid per egg sold (cents)		1.25
Egg laid per hen		1.25
Inc. per hen on farm during year		1.25
Per cent profit loss of hens		1.25

\* Includes losses and returns from laying flock and rearing flock.

Table 12. Total Value and Return from Beef Cattle, 1956

Item	Value	Return
Feed per animal unit, 1956	15.00	
Medicine	.50	
Transportation	.50	
Other	.50	
<b>Total</b>	<b>16.50</b>	
Value of products per animal unit		16.50
Value of products		16.50
Net increase in value of animals		16.50
<b>Total Value Produced</b>		<b>16.50</b>
Return from 1000 of eggs		16.50
Return from 1000 of eggs		16.50
Price paid per animal unit		16.50
Egg laid per hen		16.50
Inc. per hen on farm during year		16.50
Per cent profit loss of hens		16.50

Number of cows and herd bulls  
Number of animal units in the herd

Raising hogs is a minor livestock enterprise on most farms in Northwestern Minnesota. The hog enterprise in this area varies in size from raising one or two for home butchering to the raising of a number of litters per year. In most cases the pigs were sold at time of weaning, keeping only two or three to be fed out to slaughter weights.

Table 20. Feed costs and returns from Hogs, 1956

Items	Your farm	Average of 16 farms
Feed per cwt. hogs produced, lbs.:		
Corn	_____	7
Small grain	_____	338
Commercial feeds	_____	89
Total concentrates	_____	434
Skim milk and buttermilk	_____	625
Feed cost per cwt. hogs produced:		
Concentrates	\$ _____	\$9.25
Skim milk and buttermilk	_____	2.24
Pasture	_____	.77
TOTAL FEED COST	\$ _____	\$12.26
Net increase in val. per cwt. hogs prod.	\$ _____	\$17.10
RETURNS ABOVE FEED COST PER CWT.		
HOGS PRODUCED	\$ _____	\$ 4.84
RETURNS FOR \$100 FEED	\$ _____	\$140
Price received per cwt. hogs sold	\$ _____	\$ 16
No. of spring litters raised	_____	3.6
No. of fall litters raised	_____	2.1
Total no. of litters raised	_____	5.7
No. of pigs born per litter	_____	9.5
No. of pigs weaned per litter	_____	8.1
Pounds of hogs produced	_____	6345

The following table shows the results of the survey of the number of  
 litters born and the number of pigs born in the various farms in  
 the district during the year 1954. The figures are given in the  
 following table. The figures are given in the following table.

Table 1. Results of the survey of the number of litters born and the number of pigs born in the various farms in the district during the year 1954.

Farms	No. of litters born	No. of pigs born	Average weight of pig at birth (lb.)	Average weight of pig at weaning (lb.)
1	10	100	10	10
2	15	150	12	12
3	20	200	14	14
4	25	250	16	16
5	30	300	18	18
6	35	350	20	20
7	40	400	22	22
8	45	450	24	24
9	50	500	26	26
10	55	550	28	28
11	60	600	30	30
12	65	650	32	32
13	70	700	34	34
14	75	750	36	36
15	80	800	38	38
16	85	850	40	40
17	90	900	42	42
18	95	950	44	44
19	100	1000	46	46
20	105	1050	48	48
21	110	1100	50	50
22	115	1150	52	52
23	120	1200	54	54
24	125	1250	56	56
25	130	1300	58	58
26	135	1350	60	60
27	140	1400	62	62
28	145	1450	64	64
29	150	1500	66	66
30	155	1550	68	68
31	160	1600	70	70
32	165	1650	72	72
33	170	1700	74	74
34	175	1750	76	76
35	180	1800	78	78
36	185	1850	80	80
37	190	1900	82	82
38	195	1950	84	84
39	200	2000	86	86
40	205	2050	88	88
41	210	2100	90	90
42	215	2150	92	92
43	220	2200	94	94
44	225	2250	96	96
45	230	2300	98	98
46	235	2350	100	100
47	240	2400	102	102
48	245	2450	104	104
49	250	2500	106	106
50	255	2550	108	108
51	260	2600	110	110
52	265	2650	112	112
53	270	2700	114	114
54	275	2750	116	116
55	280	2800	118	118
56	285	2850	120	120
57	290	2900	122	122
58	295	2950	124	124
59	300	3000	126	126
60	305	3050	128	128
61	310	3100	130	130
62	315	3150	132	132
63	320	3200	134	134
64	325	3250	136	136
65	330	3300	138	138
66	335	3350	140	140
67	340	3400	142	142
68	345	3450	144	144
69	350	3500	146	146
70	355	3550	148	148
71	360	3600	150	150
72	365	3650	152	152
73	370	3700	154	154
74	375	3750	156	156
75	380	3800	158	158
76	385	3850	160	160
77	390	3900	162	162
78	395	3950	164	164
79	400	4000	166	166
80	405	4050	168	168
81	410	4100	170	170
82	415	4150	172	172
83	420	4200	174	174
84	425	4250	176	176
85	430	4300	178	178
86	435	4350	180	180
87	440	4400	182	182
88	445	4450	184	184
89	450	4500	186	186
90	455	4550	188	188
91	460	4600	190	190
92	465	4650	192	192
93	470	4700	194	194
94	475	4750	196	196
95	480	4800	198	198
96	485	4850	200	200
97	490	4900	202	202
98	495	4950	204	204
99	500	5000	206	206
100	505	5050	208	208





