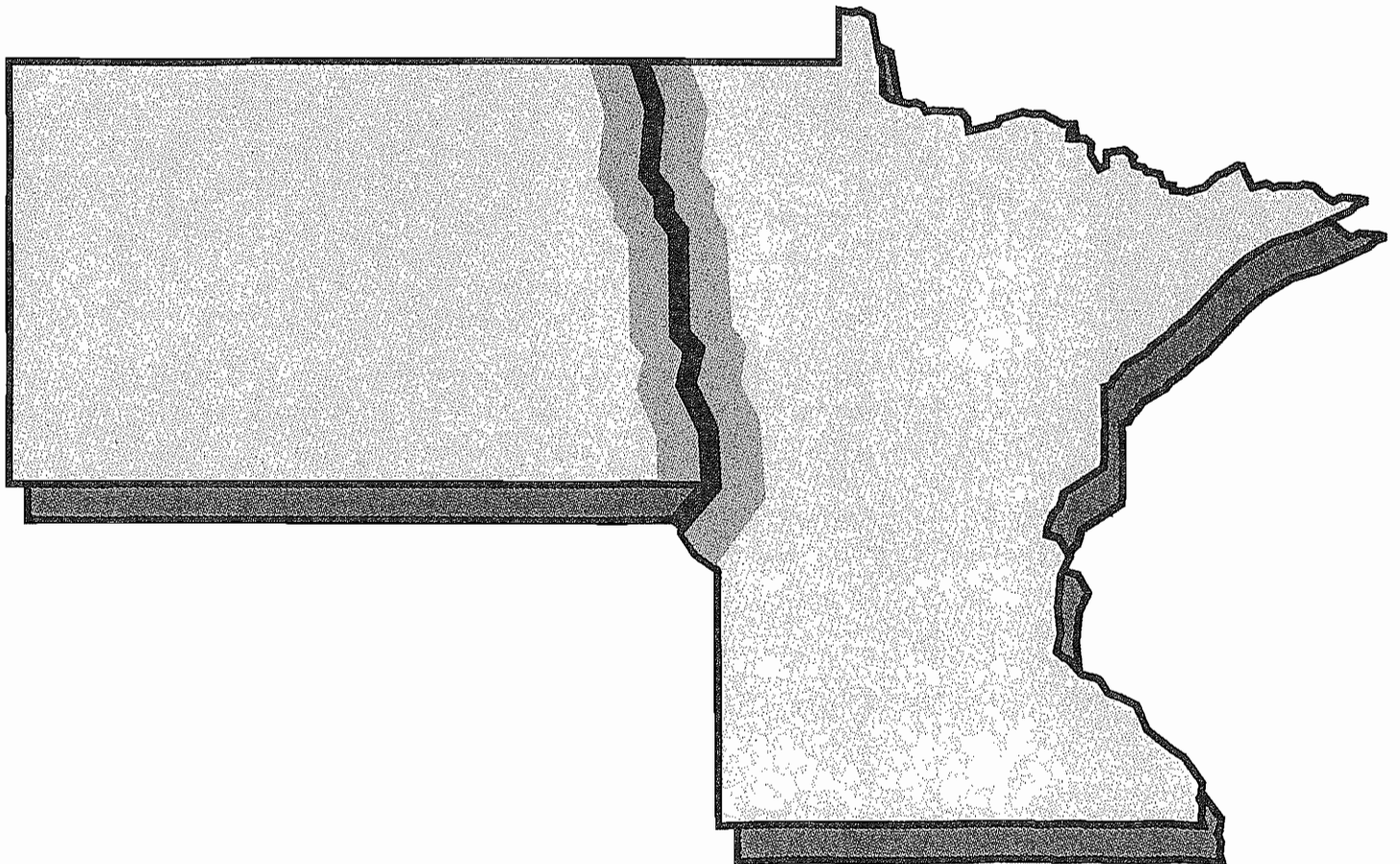


North Dakota  
Farm and Ranch  
Business Management  
Education



Minnesota  
Farm Business  
Management  
Education

# 1996 Red River Valley Report





Minnesota Farm Business Management Education  
and  
North Dakota Farm Business Management Education

RED RIVER VALLEY AVERAGES  
1996 ANNUAL REPORT

ACKNOWLEDGMENTS

The Red River Valley farm business analyses were submitted by the following cooperating instructors and farm management programs:

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Grafton (NVAVTC) . . . . .	Duane Maatz
Kindred High School . . . . .	Ron Smithberg
Wahpeton (NDSCS) . . . . .	Keith Torgerson
 <u>Minnesota</u>	
NCTC-Barnesville . . . . .	Ron Salber
NCTC-East Grand Forks . . . . .	Ron Dvergsten
NCTC-Fergus Falls . . . . .	Rudy Hasbargen
NCTC-Fertile . . . . .	Carol Kleppe
NCTC-Karlstad . . . . .	Mike Hagen
NCTC-Mahnomen/Ulen . . . . .	Mike Lockhart
NCTC-Moorhead . . . . .	Rick Morgan
	Greg Tullis
NCTC-Red Lake Falls . . . . .	Greg Kalinoski
NCTC-Thief River Falls . . . . .	Bob Bollesen
	Danie Packard

This report was made possible by the farm families who cooperated with their farm management instructors in getting the farm records for 1996 closed out on a timely basis. The farm management instructors cited above generated Finpack year-end farm analyses for 1996. Andrew Swenson, NDSU Extension Service, databased the Finpack analyses of farms geographically located within the Red River Valley and generated the comparative tables for this report.

A special acknowledgment is due Tom Risdal, Dean of Management Education, Northland Community and Technical College, Thief River Falls, Minnesota, and the North Dakota State Board for Vocational and Technical Education for cooperation in the development of the second annual Red River Valley Report.

1996 Red River Valley Report  
Minnesota and North Dakota Farm Business Management Education

TABLE OF CONTENTS

Introduction	1
Explanatory Notes for the Farm Operators' Reports	2
Table 1 - Farm Income Statement	7
Table 2 - Inventory Changes	9
Table 3 - Depreciation and Other Capital Adjustments	10
Table 4 - Profitability and Liquidity Analysis	11
Table 5 - Balance Sheet (Cost)	12
Table 6 - Statement of Cash Flows	13
Table 7 - Financial Guidelines Measures	14
Table 8 - Crop Production and Marketing Summary	15
Table 9 - Household and Personal Expenses	16
Table 10 - Operator Information, Nonfarm Income	17
Explanatory Notes for Crop Tables	18
Table 11 - 1 - Spring Wheat on Owned Land	19
Table 11 - 2 - Spring Wheat on Cash Rented Land	20
Table 11 - 3 - Spring Wheat on Share Rented Land	21
Table 11 - 4 - Barley on Owned Land	22
Table 11 - 5 - Barley on Cash Rented Land	23
Table 11 - 6 - Barley on Share Rented Land	24
Table 11 - 7 - Navy Beans on Cash Rented Land	25
Table 11 - 8 - Pinto Beans on Owned Land	26
Table 11 - 9 - Pinto Beans on Cash Rented Land	27
Table 11 - 10 - Corn on Owned Land	28
Table 11 - 11 - Corn on Cash Rented Land	29
Table 11 - 12 - Corn on Share Rented Land	30
Table 11 - 13 - Corn Silage on Cash Rented Land	31
Table 11 - 14 - Potatoes on Cash Rented Land	32
Table 11 - 15 - Soybeans on Owned Land	33
Table 11 - 16 - Soybeans on Cash Rented Land	34
Table 11 - 17 - Soybeans on Share Rented Land	35
Table 11 - 18 - Sugar Beets on Owned Land	36
Table 11 - 19 - Sugar Beets on Cash Rented Land	37
Table 11 - 20 - Sugar Beets on Share Rented Land	38
Table 11 - 21 - Sunflowers on Owned Land	39
Table 11 - 22 - Sunflowers on Cash Rented Land	40
Table 11 - 23 - Sunflowers on Share Rented Land	41
Table 11 - 24 - Confectionary Sunflowers on Cash Rented Land	42
Table 11 - 25 - Alfalfa Hay on Owned Land	43
Table 11 - 26 - Alfalfa Hay on Cash Rented Land	44
Table 12 - 1 - Size Of Farm Report	45
Table 12 - 2 - Type Of Farm Report	46
Table 12 - 3 - Age Of Operator Report	47

## ***INTRODUCTION***

This report summarizes the individual farm records of farms in the Red River Valley that are enrolled in Farm Management Education programs. The current financial status of farm operators and net returns from each crop enterprise is reported. In addition to the average of all farms, the averages for the high and low net income groups are also presented. To insure anonymity, only averages of five or more farms are reported. Regional averages reports can be used by producers for comparison purposes to identify and study the areas that may need management improvement. A review of the comparative information may reveal how certain aspects of the business or enterprises excel and help answer why they are profitable. The data contained in this report should also be useful to instructors, extension agents, bankers and agricultural consultants.

The Red River Valley averages reports are divided into three major categories. Explanatory notes precede each section which includes the farm operators' reports, crop reports and livestock reports. Tables 1 through 10 present farm operator information. The table 11 series provide performance information on crop enterprises. Lastly, tables 12-1, 12-2 and 12-3 compares the analysis of farms sorted by total cash farm income, type of farm based on major crop and livestock enterprises, and by age of farm operator, respectively.

The 1996 Red River Valley Report is based upon data generated by the Finan individual farm analysis completed by farm/ranch families enrolled in the Farm and Ranch Business Management Education programs in Minnesota and North Dakota. Instructors pooled the individual business analysis and submitted the combined school data of farms located in the Red River Valley to the FINPACK Center located at North Dakota State University, where the comparison tables were generated.

This report and regional reports for north central, south central and western North Dakota can be ordered for \$5 per copy from Farm Business Management, PO Box 6022, Bismarck, ND 58506-6022. A state average book which includes all North Dakota farms excluding the Red River Valley is also available. You may also contact Tom Risdal, Northland Technical College, Highway 1 East, Thief River Falls, MN 56701, to order a copy of this report.

## ***EXPLANATORY NOTES FOR THE FARM OPERATORS' REPORTS***

Tables 1 through 4 and 6 include the same number of farms, which were all of the farms whose records were judged to be of sufficient quality to be included in the overall report. Table 5, the Comparative Financial Statement, includes only sole proprietors. Partnerships and corporations are excluded because some debt is held outside of the business causing potential misinterpretations of the financial statement. The number of farms included in each of the crop tables varies because all farms do not have the same enterprises. Also, some farmers' records were complete enough to be included in the whole-farm tables, but at times, these same farmers' crop records were not complete enough to include in the crop tables.

Rounding of individual items for the report may have caused minor discrepancies with the printed totals which are calculated before rounding.

### **Table 1. Detailed Farm Income Statement**

This statement is a summary of income, expenses, or resultant profit or loss from farming operations during the calendar year.

The first section of Table 1 lists cash farm income from all sources. There are three possible sources of cash income from crops. The first is income from cash sales. The second is income from crop enterprises labeled as "CCC or Reserve" or "Sealed," which refers to crops stored under government programs with the crop value treated as income for the year in which the crop was stored. If the crop value has not been entered as income when it was stored, then its entire value would be treated as income in the year it was sold. The third is "Net Government Sales," which refers to the difference between income credited in the year a crop was stored and the actual income received at the time it was sold. There are two categories of cash income from livestock sales. "Raised" steer, hogs, and lambs refer to animals raised from birth to market weight on the farm. "Finished" animals refers to those purchased as feeders and fed to market weight. "Other Government Payments" refers to all farm government payments other than deficiency and CRP payments.

The second section of Table 1 lists cash expenses. "Labor" includes only labor hired. "Interest" includes only interest actually paid. No opportunity charges on farm equity capital or unpaid labor are included.

The difference between "Gross Cash Farm Income" and "Total Cash Expenses" is the "Net Cash Farm Income." This is net farm income on a cash basis.

The third and fourth sections of Table 1 deal with the non-cash changes in the farm business. The "Inventory Changes" and "Depreciation and Other Capital Adjustments" sections are used to convert the cash income statement (Net Cash Farm Income) derived from the first two sections into an accrual income statement. The "bottom line," labeled "Net farm Income," represents the return to the operator's and family's unpaid labor, management, and equity capital (net worth). In other words, it represents the return to all of the resources which are owned by the farm family and hence, not purchased or paid a wage. However, it does not include any debt forgiveness or asset repossessions.

### **Table 2. Inventory Changes**

This is the detailed statement of inventory changes which is summarized in Table 1. It includes beginning and ending inventories and the calculated changes.

### Table 3. Depreciation and Other Capital Adjustments

This is the detailed statement of depreciation and other capital adjustments which is summarized in Table 1. It includes beginning and ending inventories, sales, purchases, and depreciation.

### Table 4. Profitability and Liquidity Analysis

Various measures of performance are calculated for the farms in this report. These include measures of profitability and liquidity. (Solvency measures are in Table 5.) In Tables 1-3, no opportunity costs are used. In Table 4, opportunity costs for labor, capital, management are used. The measures and their components are described below.

#### Profitability

"Labor and management earnings" equals "Net farm income" from Table 1 minus an opportunity interest cost of 6% an average farm net worth.

"Rate of return on assets" is the "Return on farm assets" divided by "Average farm assets."

"Rate of return on equity" is the "Return of farm equity" divided by "Average farm equity."

"Operating profit margin" is the "Return on farm assets" divided by "Value of farm production."

"Asset turnover rate" is the "Value of farm production" divided by "Average farm assets."

"Interest on farm net worth" is the "Average farm equity" multiplied by a 6% opportunity interest cost charge.

"Farm interest expense" is the accrual interest cost, usually it will be different from the cash interest expense shown on Table 1.

"Value of operator's labor and management" is an opportunity cost for unpaid operator's labor and management that is used in the calculation of several financial performance measures. A value of \$20,000 per full time operator was normally used.

"Return of farm assets" is calculated by adding "Farm interest expense" to "Net farm income" and then subtracting the "Value of operator's labor and management."

"Average farm assets" is the average of beginning and ending total farm assets.

"Return on farm equity" is calculated by subtracting the "Value of operator's labor and management" from "Net farm income."

"Average farm equity" is the average of beginning and ending farm net worth.

"Value of farm production" is gross cash farm income minus purchased feed and feeder livestock and adjusted for inventory changes in crops, market livestock, accounts receivable and breeding livestock.

#### Liquidity: Cash Basis

"Family living and taxes" is calculated cash family living plus income and social security taxes.

"Cash available for intermediate debt" on the cash basis is the sum of "Net cash farm income" and "Net nonfarm income" minus "Family living and taxes" and "Real estate principal payments."

"Average intermediate debt" is the average of beginning and ending intermediate farm liabilities.

"Years to turn over debt" is "Average intermediate debt" divided by "Cash available for intermediate debt." If the cash-based or accrual-based "Cash available for intermediate debt" is a negative number, debt repayment is not possible because of negative cash flow on a cash or accrual basis, respectively, and "Years to turn over intermediate debt" cannot be calculated.

Cash "Expense as a percent of income" is "Total cash expense" divided by "Gross cash farm income."

"Interest as a percent of income" is "Interest paid" divided by "Gross cash farm income"

#### Liquidity: Accrual Basis

"Available for intermediate debt" on the accrual basis is "Net accrual operating income" plus "Net nonfarm income" minus "Family living and taxes" and "Real estate principal payments."

Accrual "Expense as a percent of income" is "Total cash expense" adjusted by inventory changes in accounts payable, accrued expense items, prepaid expenses and growing crops divided by "Gross farm income." "Gross farm revenue" is "Gross cash farm income" adjusted by changes in inventories of crops and feed, feeder livestock and accounts receivable.

"Interest as a percent of income" is "Interest paid" adjusted by changes in accrued interest for the year, divided by "Gross farm revenue."

#### Table 5. Balance Sheet

The beginning and ending net worth statements and solvency measures are presented for sole proprietors only in Table 5. Current assets are valued at market price at the time of the inventory which is January 1, and December 31, for the beginning and ending inventories respectively. Intermediate and long-term assets that are depreciable are valued at cost remaining (amount remaining to be depreciated, plus salvage value). Raised breeding livestock is valued at conservative market replacement costs. Land is valued at cost or conservative market value.

#### Table 6. Statement of Cash Flows

This statement organizes cash inflows and outflows by the following three categories: Operating activities, investing activities, and financing activities.

#### Table 7. Financial Guidelines Measures

This table contains the 16 measures of financial performance recommended by the Farm Financial Standards Task Force (FFSTF). The Finpack financial management program used by the North Dakota Farm Business Education in most part, but not completely, complies with the FFSTF recommendations for calculating the financial guidelines measures. The measures are calculated on an accrual basis.



### Liquidity

"Current ratio" is "Total current farm assets" divided by "Total current farm liabilities."

"Working capital" is "Total current farm assets" less "Total current farm liabilities."

### Solvency

"Farm debt to asset ratio" is "Total farm liabilities" divided by "Total farm assets."

"Farm equity to asset ratio" is "Total farm assets" minus "Total farm liabilities", divided by "Total farm assets."

"Farm debt to equity ratio" is "Total farm liabilities," divided by the result of "Total farm assets" minus "Total farm liabilities."

### Profitability

"Rate of return on farm assets" is "Net farm income" plus "interest expense" minus "Value of operator's labor and management," divided by the average of beginning and ending "Total farm assets."

"Rate of return on farm equity" is "Net farm income" minus "Value of operator's labor and management," divided by the average of beginning and ending farm net worth.

"Operating profit margin" is "Net farm income" plus "interest expense" minus "Value of operator's labor and management," divided by "Value of farm production."

### Repayment Capacity

"Term debt coverage ratio" is "Net farm income" plus "depreciation and other capital adjustments" plus "Net nonfarm income" plus scheduled interest on term debt minus "Family living and taxes", divided by scheduled term debt principal and interest payments.

"Capital replacement margin" is "Net farm income" plus "Depreciation and other capital adjustments" plus "Net nonfarm income" minus "Family living and taxes" and scheduled term debt principal payments.

### Efficiency

"Asset turnover rate" is "Value of farm production" divided by divided by the average of beginning and ending "Total farm assets."

"Operating expense ratio" is total expense less "Farm interest expense" and "Depreciation and capital adjustment," divided by "Gross farm revenue."

"Depreciation expense ratio" is "Depreciation and capital adjustments" divided by "Gross farm revenue."

"Interest expense ratio" is "Farm interest expense" divided by "Gross farm revenue"

"Net farm income ratio" is "Net farm income" divided by "Gross farm revenue."

#### Table 8. Crop Production and Marketing Summary

This table contains three sections. The first section reports average acreage by land use. The next two sections show average price received and average yields for major crops. These tables are sorted on the basis of "Net farm income."

#### Table 9. Household and Personal Expenses

For those farms that keep records, the household and personal expenses are summarized in Table 9. The farms are grouped in the same ranking as in Table 1. Not all farms keep these records, therefore, the numbers may be different for each group. Averages are determined by the number of farms keeping these records. Table 6 presents calculated family living and includes all farms. Income tax paid is also shown on table 6 and includes all farms.

#### Table 10. Operator Information, Nonfarm Summary

Table 10 reports the average for the number of operators per farm, the operator's age, and the number of years farming. This table also reports the income from nonfarm income, but the figure reported is the average over all farms not just those reporting nonfarm income.

#### Table 12-1. Size of Farm Report

Table 12-1 sorts farms according to total cash farm income. Each column, representing a range of cash farm income, gives profitability, liquidity, and solvency analysis as well as family living expense and farm acreage information. A study of each column reveals the number of farms and the various financial characteristics of each group.

#### Table 12-2. Type of Farm Report

Table 12-2 sorts farms according to type of farm. Each column represents a type of crop or livestock farm or combination of crop and livestock enterprises. Farms with 70% or more of total farm sales from the same enterprise are grouped together. A study of this table reveals the comparative profitability of each farm type.

#### Table 12-3. Age of Operator Report

Table 12-3 sorts farms according to age of operator. Each column, representing a range of age, gives profitability, liquidity, and solvency analysis as well as family living expense and farm acreage information. A study of each column reveals the number of farms and the various financial characteristics of each group.

TABLE 1  
FARM INCOME STATEMENT, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of Farms	229	46	46
CASH FARM INCOME			
Barley	14080	10721	25943
Malting Barley	98	-	489
Black Turtle Beans	217	845	-
Dark Red Kidney Beans	1002	450	3936
Light Red Kidney Beans	378	-	-
Navy Beans	3804	1625	8010
Pinto Beans	6426	2284	5895
Small Red Beans	71	-	-
Canola	791	278	-
Corn	25419	11614	42394
Crambe	47	-	-
Alfalfa Hay	1009	393	3549
Millet	64	23	-
Oats	36	24	-
Potatoes	9829	18982	11928
Seed Potatoes	1430	6570	-
Soybeans	44553	29942	56976
Straw	280	792	424
Sugar Beets	107155	17406	309746
Sunflowers	6681	5451	9262
Confectionary Sunflowers	2029	2131	2085
Durum Wheat	872	-	3400
Spring Wheat	99553	67449	171459
Winter Wheat	313	-	-
Other crops	455	-	-
Miscellaneous crop income	53	101	-
Beef Calves	993	1916	-
Background Beef	971	1230	-
Finish Beef Calves	1734	780	184
Finish Yrlg Steers	179	67	-
Milk	820	2459	-
Dairy Steers	469	1431	-
Wool	86	427	-
Raised Hogs	2500	338	5760
Finish Feeder Pigs	390	-	-
Lamb Finishing	353	-	-
Finish Cull Cows	74	213	-
Weaning to Finish	966	-	4811
Cull breeding livestock	231	83	118
Misc. livestock income	195	117	103
Deficiency payments	17127	12405	25529
CRP payments	354	218	149
Other government payments	1601	1910	1797
Custom work income	4643	5180	5963
Patronage dividends, cash	2339	909	5217
Insurance income	5222	2291	9030
Cash from hedging accts	2209	329	3887
Other farm income	9888	9122	12006
Gross Cash Farm Income	379990	218509	730051

TABLE 1  
FARM INCOME STATEMENT, 1996 (Continued)  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of Farms	229	46	46
<b>CASH FARM EXPENSE</b>			
Seed	21773	13712	40908
Fertilizer	42194	21272	83196
Crop chemicals	39227	21562	75238
Crop insurance	10698	5811	18913
Drying fuel	794	468	849
Irrigation energy	34	70	99
Crop marketing	2137	3189	1740
Crop miscellaneous	4491	3234	10384
Feeder livestock purchase	2130	1944	8
Purchased feed	3088	2623	5583
Breeding fees	10	2	3
Veterinary	221	365	181
Livestock supplies	505	777	633
Livestock leases	1	-	-
Grazing fees	71	131	-
Livestock marketing	35	67	53
Interest	28578	19768	44458
Fuel & oil	14576	9895	24275
Repairs	24356	14189	42586
Custom hire	7865	4280	15239
Hired labor	18035	7508	44481
Land rent	67129	41291	135123
Machinery & bldg leases	5695	3152	10810
Real estate taxes	4119	2390	8449
Farm insurance	4198	2836	7951
Utilities	3890	3105	6277
Dues & professional fees	2124	1423	3538
Hedging account deposits	1003	520	1508
Miscellaneous	8266	4607	15306
Total cash expense	317243	190189	597791
Net cash farm income	62747	28320	132261
<b>INVENTORY CHANGES</b>			
Crops and feed	31666	-8822	97032
Market livestock	779	1751	-238
Accounts receivable	691	-3466	1304
Prepaid expenses and supplies	7756	315	17795
Accounts payable	4528	957	9350
Total inventory change	45421	-9266	125244
Net operating profit	108167	19054	257505
<b>DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS</b>			
Breeding livestock	49	-765	1826
Machinery and equipment	-15659	-10202	-28044
Buildings and improvements	-665	-688	-1399
Other farm capital	5462	195	20056
Total depr. and other capital adj	-10813	-11460	-7561
Net farm income	97354	7593	249944

TABLE 2  
INVENTORY CHANGES, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of Farms	229	46	46
Net cash farm income	62747	28320	132261
CROPS AND FEED			
Ending inventory	178708	82404	381010
Beginning inventory	147042	91226	283979
Inventory change	31666	-8822	97032
MARKET LIVESTOCK			
Ending inventory	5323	7284	2246
Beginning inventory	4544	5533	2483
Inventory change	779	1751	-238
ACCTS RECEIVABLE & OTHER CURRENT ASSETS			
Ending inventory	19619	10117	41103
Beginning inventory	18928	13583	39799
Inventory change	691	-3466	1304
PREPAID EXPENSES AND SUPPLIES			
Ending inventory	24126	6672	53816
Beginning inventory	16370	6358	36020
Inventory change	7756	315	17795
ACCOUNTS PAYABLE			
Beginning inventory	23406	16407	33680
Ending inventory	18878	15451	24329
Inventory change	4528	957	9350
Total inventory change	45421	-9266	125244
Net operating profit	108167	19054	257505

TABLE 3  
DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of Farms	229	46	46
Net operating profit	108167	19054	257505
BREEDING LIVESTOCK			
Ending inventory	4622	7649	3850
Capital sales	249	564	192
Beginning inventory	4641	8615	2056
Capital purchases	180	362	160
Depreciation, capital adj.	49	-765	1826
MACHINERY AND EQUIPMENT			
Ending inventory	174598	123434	286497
Capital sales	4735	805	9785
Beginning inventory	160992	111606	259393
Capital purchases	33999	22834	64933
Depreciation, capital adj.	-15659	-10202	-28044
BUILDINGS AND IMPROVEMENTS			
Ending inventory	31463	23763	59657
Capital sales	43	-	-
Beginning inventory	28191	23306	50021
Capital purchases	3979	1146	11035
Depreciation, capital adj.	-665	-688	-1399
OTHER CAPITAL ASSETS			
Ending inventory	112940	33365	271675
Capital sales	4823	1930	11947
Beginning inventory	95383	29156	234004
Capital purchases	16918	5944	29561
Depreciation, capital adj.	5462	195	20056
Total depreciation, capital adj.	-10813	-11460	-7561
Net farm income	97354	7593	249944

TABLE 4  
 PROFITABILITY AND LIQUIDITY ANALYSIS, 1996  
 Minnesota and North Dakota Farm Business Mgmt Education  
 Red River Valley  
 (Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of Farms	229	46	46
PROFITABILITY (Cost)			
Net farm income	97354	7593	249944
Labor and management earnings	75776	-4207	206484
Rate of return on assets	14.3 %	2.0 %	20.1 %
Rate of return on equity	21.5 %	-6.3 %	31.0 %
Operating profit margin	25.6 %	4.5 %	32.4 %
Asset turnover rate	56.0 %	46.0 %	62.2 %
Interest on farm net worth	21578	11801	43460
Farm interest expense	28876	20555	44973
Value of operator lbr and mgmt.	21824	19130	28009
Return on farm assets	104406	9018	266909
Average farm assets	728569	440099	1325828
Return on farm equity	75530	-11537	221935
Average farm equity	351814	183181	715829
Value of farm production	407957	202639	824384
Number of Farms	229	46	46
LIQUIDITY (Cash)			
Net cash farm income	62747	28320	132261
Net nonfarm income	12199	16547	9903
Family living and taxes	46584	28552	79962
Real estate principal payments	9564	4906	20316
Cash available for interm. debt	18798	11409	41886
Average intermediate debt	114223	73560	176513
Years to turnover interm. debt	6.1	6.4	4.2
Expense as a % of income	83 %	87 %	82 %
Interest as a % of income	8 %	9 %	6 %
LIQUIDITY (Accrual)			
Total accrual farm income	413126	207972	828150
Total accrual farm expense	304959	188918	570645
Net accrual operating income	108167	19054	257505
Net nonfarm income	12199	16547	9903
Family living and taxes	46584	28552	79962
Real estate principal payments	9564	4906	20316
Available for intermediate debt	64219	2142	167130
Average intermediate debt	114223	73560	176513
Years to turnover interm. debt	1.8	34.3	1.1
Expense as a % of income	74 %	91 %	69 %
Interest as a % of income	7 %	10 %	5 %

TABLE 5  
BALANCE SHEET AT COST VALUES, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms		Average Of Low 20 %		Average Of High 20 %	
	198		42		25	
	Beginning	Ending	Beginning	Ending	Beginning	Ending
<b>ASSETS</b>						
Current Farm Assets						
Cash and checking balance	8590	7436	4517	5738	11651	3763
Prepaid expenses & supplies	14570	21066	6392	7029	33840	50146
Growing crops	137	27	13	-	-	-
Accounts receivable	10458	13291	7533	5353	19468	25963
Hedging accounts	980	586	77	66	2435	1940
Crops held for sale or feed	119612	138145	80659	72894	214108	267503
Crops under government loan	8576	10174	11275	8061	20116	24532
Market livestock held for sale	4961	5812	6060	7977	2713	1425
Other current assets	2747	2942	6416	5604	5179	6536
Total current farm assets	170632	199478	122943	112721	309511	381808
Intermediate Farm Assets						
Breeding livestock	4905	4877	9436	8377	1073	4223
Machinery and equipment	145752	156723	109272	121524	231862	252520
Other intermediate assets	62507	77318	24206	30039	157023	189847
Total intermediate farm assets	213164	238918	142913	159940	389958	446589
Long-Term Farm Assets						
Farm land	198174	208792	137432	148370	356331	378138
Buildings and improvements	25894	29489	23952	24462	48880	66357
Other long-term assets	19106	20240	7183	5932	55346	65667
Total long-term farm assets	243174	258521	168567	178763	460557	510163
Total Farm Assets	626970	696917	434424	451424	1160026	1338560
Total Nonfarm Assets	93178	103087	56545	62356	169229	184790
Total Assets	720148	800004	490969	513780	1329254	1523350
<b>LIABILITIES</b>						
Current Farm Liabilities						
Accrued interest	8292	8510	7187	8563	12249	12103
Accounts payable	13587	9376	9829	8074	19038	9485
Current notes	94163	95287	59444	60730	188076	160771
Government crop loans	2759	2658	3809	826	7345	9768
Principal due on term debt	25466	25463	12987	14308	49729	42452
Total current farm liabilities	144271	141364	93264	92510	276457	234579
Intermediate Farm Liabilities	85440	91006	58019	66790	144250	139838
Long-term Farm Liabilities	117296	132413	102889	107665	201708	253122
Total Farm Liabilities	347006	364783	254171	266964	622415	627539
Total Nonfarm Liabilities	17966	17897	14256	15343	20679	20143
Total Liabilities	364972	382681	268427	282307	643094	647682
Net Worth (farm and nonfarm)	355176	417323	222542	231473	686160	875668
Net Worth Change		62147		8932		189508
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	85 %	71 %	76 %	82 %	89 %	61 %
Curr. & Interm Farm Liab / Assets	60 %	53 %	57 %	58 %	60 %	45 %
Long Term Farm Liab. / Assets	48 %	51 %	61 %	60 %	44 %	50 %
Total Liabilities / Assets	51 %	48 %	55 %	55 %	48 %	43 %



TABLE 6  
STATEMENT OF CASH FLOWS, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted by Net Farm Income)

		Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of Farms		229	46	46
(a) Beginning cash balance (farm & nonfarm)		12060	5158	20978
CASH FROM OPERATING ACTIVITIES				
Gross cash farm income		379990	218509	730051
Net nonfarm income	(+)	12199	16547	9903
Total cash farm expense	(-)	317243	190189	597791
Apparent family living expense	(-)	37373	24723	61362
Income and social security tax	(-)	8764	3776	16429
(b) Cash from operations	(=)	28809	16368	64373
CASH FROM INVESTING ACTIVITIES				
Sale of breeding livestock		249	564	192
Sale of machinery & equipment	(+)	4735	805	9785
Sale of farm land	(+)	606	1391	257
Sale of farm buildings	(+)	43	-	-
Sale of other farm assets	(+)	4823	1930	11947
Sale of nonfarm assets	(+)	2893	527	698
Purchase of breeding livestock	(-)	180	362	160
Purchase of machinery & equip.	(-)	33999	22834	64933
Purchase of farm land	(-)	9663	10665	9396
Purchase of farm buildings	(-)	3979	1146	11035
Purchase of other farm assets	(-)	16918	5944	29561
Purchase of nonfarm assets	(-)	8498	4789	7274
(c) Cash from investing activities	(=)	-59890	-40524	-99480
CASH FROM FINANCING ACTIVITIES				
Money borrowed		238162	145858	406175
Cash gifts and inheritances	(+)	4376	10506	1199
Principal payments	(-)	209098	130446	363388
Dividends paid	(-)	447	53	2171
Gifts given	(-)	209	388	-
(d) Cash from financing activities	(=)	32784	25476	41815
(e) Net change in cash balance (b+c+d)		1703	1320	6708
Ending cash balance (farm & nonfarm)		13764	6479	27686

**TABLE 7**  
**FINANCIAL GUIDELINES MEASURES, 1996**  
 Minnesota and North Dakota Farm Business Mgmt Education  
 Red River Valley  
 (Farms sorted by Net Farm Income)

	Average For All Farms		Average For Low 20 %		Average For High 20 %	
Number of Farms	229		46		46	
<b>LIQUIDITY</b>	<b>Beginning</b>	<b>Ending</b>	<b>Beginning</b>	<b>Ending</b>	<b>Beginning</b>	<b>Ending</b>
Current ratio	1.25	1.53	1.33	1.21	1.35	1.91
Working capital	39481	82274	29853	19571	97050	235587
<b>SOLVENCY (Cost)</b>	<b>Beginning</b>	<b>Ending</b>	<b>Beginning</b>	<b>Ending</b>	<b>Beginning</b>	<b>Ending</b>
Farm debt to asset ratio	53 %	50 %	58 %	59 %	49 %	44 %
Farm equity to asset ratio	47 %	50 %	42 %	41 %	51 %	56 %
Farm debt to equity ratio	114 %	101 %	137 %	143 %	95 %	78 %
<b>PROFITABILITY (Cost)</b>						
Rate of return on farm assets	14.3 %		2.0 %		20.1 %	
Rate of return on farm equity	21.5 %		-6.3 %		31.0 %	
Operating profit margin	25.6 %		4.5 %		32.4 %	
Net farm income	97354		7593		249944	
<b>REPAYMENT CAPACITY</b>	<b>Cash</b>	<b>Accrual</b>	<b>Cash</b>	<b>Accrual</b>	<b>Cash</b>	<b>Accrual</b>
Term debt coverage ratio	98 %	194 %	107 %	73 %	115 %	276 %
Capital replacement margin	-845	44576	1970	-7296	11818	137062
<b>EFFICIENCY</b>						
Asset turnover rate (cost)	56.0 %		46.0 %		62.2 %	
Operating expense ratio	66.8 %		81.0 %		63.5 %	
Depreciation expense ratio	2.6 %		5.5 %		0.9 %	
Interest expense ratio	7.0 %		9.9 %		5.4 %	
Net farm income ratio	23.6 %		3.7 %		30.2 %	

TABLE 8  
CROP PRODUCTION AND MARKETING SUMMARY, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of Farms	229	46	46
ACREAGE SUMMARY			
Total Acres Owned	315	240	411
Total Crop Acres	1351	907	2172
Crop Acres Owned	253	184	346
Crop Acres Cash Rented	980	682	1713
Crop Acres Share Rented	119	40	113
Total Pasture Acres	2	5	-
AVERAGE PRICE RECEIVED (Cash Sales Only)			
Wheat, Spring per bu.	4.54	4.39	4.52
Corn per bu.	2.99	2.92	-
Soybeans per bu.	6.43	6.75	5.93
Barley per bu.	2.76	2.48	2.92
Potatoes per cwt.	4.51	-	-
Sugar Beets per ton	38.88	-	41.22
Sunflowers per cwt.	11.66	11.19	-
Beans, Pinto per cwt.	19.51	-	-
Beans, Navy per cwt.	18.37	-	-
Sunflowers, Confectionary per cwt.	15.13	-	-
AVERAGE YIELD PER ACRE			
Wheat, Spring (bu.)	48.95	43.89	52.48
Soybeans (bu.)	30.39	25.65	32.63
Sugar Beets (ton)	18.20	15.61	18.93
Corn (bu.)	107.27	90.74	119.89
Barley (bu.)	69.66	70.75	74.39
Beans, Pinto (cwt.)	13.30	-	-
Sunflowers (cwt.)	16.55	11.64	-
Beans, Navy (cwt.)	16.67	-	19.32

TABLE 9  
HOUSEHOLD AND PERSONAL EXPENSES, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted by Net Farm Income)

	Average
Number of Sole Proprietors	32
Average family size	4.3
<b>FAMILY LIVING EXPENSES</b>	
Food and meals expense	5948
Medical care and health insurance	4398
Cash donations	1493
Household supplies	3321
Clothing	2360
Personal care	3491
Child / Dependent care	799
Gifts	1223
Education	1320
Recreation	2388
Utilities (household share)	1110
Nonfarm vehicle operating expense	1541
Household real estate taxes	295
Dwelling rent	79
Household repairs	1103
Nonfarm interest	1676
Life insurance payments	1733
Total cash family living expense	34280
Family living from the farm	72
Total family living	34353
<b>OTHER NONFARM EXPENDITURES</b>	
Income taxes	8797
Furnishing & appliance purchases	673
Nonfarm vehicle purchases	2021
Nonfarm real estate purchases	2583
Other nonfarm capital purchases	6
Nonfarm savings & investments	1377
Total other nonfarm expenditures	15458
Total cash family living, investment & nonfarm capital purch	49738

TABLE 10  
 OPERATOR INFORMATION & NONFARM SUMMARY, 1996  
 Minnesota and North Dakota Farm Business Mgmt Education  
 Red River Valley  
 (Farms sorted by Net Farm Income)

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of Farms	229	46	46
OPERATOR INFORMATION			
Average number of operators	1.1	1.0	1.5
Average age of operators	41.3	39.6	42.7
Average number of years farming	17.9	15.2	21.1
NONFARM INCOME			
Nonfarm wages & salary	8400	13076	5482
Nonfarm business income	1021	626	863
Nonfarm rental income	125	30	256
Nonfarm interest income	355	218	583
Nonfarm cash dividends	98	86	228
Tax refunds	233	293	476
Gifts and inheritances	4376	10506	1199
Other nonfarm income	1967	2217	2016
Total nonfarm income	16575	27053	11102

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## ***EXPLANATORY NOTES FOR CROPS TABLES***

The "Crop Enterprise Analysis" tables show the average physical production, gross return, direct costs, overhead costs, and net returns per acre. All costs are actual costs; no opportunity costs are included. The "Net Return per Acre" is the "Gross Return per Acre" minus the direct and overhead costs. "Net Return" represents the return to the operator's and family's unpaid labor, management, and equity. It represents the return to all of the resources which are owned by the farm family and hence, not purchased or paid a wage. The last section of each crop table contains economic efficiency measures which provide useful standards or goals for the individual managers and net return per acre including government payments.

There are potentially three tables for each crop depending on the farmer's tenure on the land. The crop tables may be for (1) owned land, (2) cash rented land, and (3) share rented land. Individual farms may have data in all three tables if all three land tenure categories are represented in that farm business. When there are less than five farms with a particular crop and tenure, that table is not included in the report. Farms are classified into low 20% or high 20% on the basis of returns to overhead per acre. The classification is done separately for each table, i.e., an individual farm may be in the low 20% for one crop, the high 20% for a second, and the middle 60% for a third. When there are less than 25 total farms with any particular crop and farmer's tenure, only overall averages are presented.

Several cost items, such as "utilities," "hired labor," and "interest paid," are listed under both "direct" and "overhead" costs because some of these costs are specific to that crop whereas others are general overhead costs of the farm. For example, "Direct Lease Payments" refers to non-land inputs or resources leased and used only in that crop enterprise and not listed elsewhere under direct costs; the most common example is the lease of equipment that is crop specific. However, cost of leasing machinery that is used for the entire farm operation is listed as an overhead cost. Interest payments are likewise divided into those incurred directly for a specific crop and those that are not. "Land Rent" is listed as a separate category and is assigned as a direct cost for each crop enterprise because it is identifiable with the specific crop. In the case of double cropping, one-half of the rent is charged to each crop.

The "unit" referred to the "Value per unit" and the efficiency measure at the bottom is the unit of measurement for the principal product from this enterprise. It is "bushel" for corn, soybeans, wheat and oats. It is "ton" for corn silage and hay.

"Total direct costs per unit" and "Total listed costs per unit" are calculated by dividing "Total direct costs per acre" and "Total listed costs per acre," respectively, by "Yield per acre." "Breakeven yield per acre" is "Total listed costs per acre" minus "Miscellaneous income per acre," divided by "Value per unit."

Rounding of individual items for the report may have caused minor discrepancies with the calculated totals.

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TABLE 11 - 1  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted according to Return to Overhead per Acre)

SPRING WHEAT ON OWNED LAND

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of fields	168	28	40
Number of farms	110	22	22
Acres	141.37	132.52	168.33
Yield per acre (bushel)	49.04	40.28	59.06
Operators share of yield %	100.00	100.00	100.00
Value per bushel	4.26	4.04	4.49
Total product return per acre	209.02	162.80	265.46
Miscellaneous income per acre	0.91	1.09	1.81
Gross return per acre	209.93	163.89	267.28
Direct expenses per acre			
Seed	13.64	12.96	12.90
Fertilizer	29.62	29.98	26.44
Crop chemicals	18.40	21.45	19.70
Crop insurance	6.93	9.14	5.78
Drying fuel	0.23	0.43	0.11
Fuel & oil	6.27	7.73	5.29
Repairs	11.03	10.66	11.44
Custom hire	2.61	3.45	1.79
Hired labor	0.26	0.44	0.05
Machinery & bldg leases	0.03	0.00	0.08
Utilities	0.02	0.00	0.02
Marketing	0.05	0.00	0.03
Operating interest	4.09	6.14	2.87
Miscellaneous	0.19	0.15	0.24
Total direct expenses per acre	93.36	102.54	86.76
Return over direct expenses per acre	116.57	61.35	180.52
Overhead expenses per acre			
Repairs	0.22	0.00	0.00
Custom hire	0.78	3.16	0.00
Hired labor	4.66	2.78	4.20
Machinery & bldg leases	2.02	2.55	3.22
RE & pers. property taxes	12.73	10.84	14.44
Farm insurance	2.96	3.02	3.87
Utilities	1.78	1.99	1.69
Dues & professional fees	0.85	1.30	0.29
Interest	32.60	26.96	29.05
Mach & bldg depreciation	7.98	6.82	10.09
Miscellaneous	2.63	2.45	2.75
Total overhead expenses per acre	69.20	61.88	69.59
Total listed expenses per acre	162.56	164.42	156.35
Net return per acre	47.37	-0.52	110.92
Total direct expense per bushel	1.90	2.55	1.47
Total listed expense per bushel	3.31	4.08	2.65
Net return per bushel	0.97	-0.01	1.88
Breakeven yield per acre	37.93	40.40	34.38

TABLE 11 - 2  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted according to Return to Overhead per Acre)

SPRING WHEAT ON CASH RENTED LAND

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of fields	318	69	62
Number of farms	176	35	35
Acres	269.56	326.22	245.41
Yield per acre (bushel)	48.83	41.32	55.93
Operators share of yield %	100.00	100.00	100.00
Value per bushel	4.27	4.02	4.54
Total product return per acre	208.74	166.18	253.82
Miscellaneous income per acre	0.97	0.42	1.89
Gross return per acre	209.71	166.60	255.71
Direct expenses per acre			
Seed	13.64	13.45	14.04
Fertilizer	30.46	31.00	28.11
Crop chemicals	16.81	19.27	12.97
Crop insurance	6.96	7.35	4.91
Drying fuel	0.30	0.36	0.45
Fuel & oil	6.08	6.92	5.84
Repairs	10.38	10.11	10.28
Custom hire	3.41	3.14	3.11
Hired labor	0.47	0.42	0.46
Land rent	60.10	59.48	56.63
Machinery & bldg leases	0.19	0.00	0.00
Utilities	0.05	0.00	0.00
Marketing	0.03	0.00	0.06
Operating interest	4.96	7.05	3.41
Miscellaneous	0.32	0.20	0.83
Total direct expenses per acre	154.16	158.76	141.08
Return over direct expenses per acre	55.55	7.84	114.63
Overhead expenses per acre			
Repairs	0.02	0.00	0.00
Custom hire	0.29	0.82	0.04
Hired labor	5.47	5.53	6.39
Machinery & bldg leases	2.37	1.25	4.17
Farm insurance	2.69	3.66	2.30
Utilities	1.74	1.93	2.33
Dues & professional fees	1.11	1.04	0.96
Interest	3.62	4.75	3.13
Mach & bldg depreciation	7.02	6.81	8.24
Miscellaneous	3.30	2.85	3.80
Total overhead expenses per acre	27.64	28.64	31.37
Total listed expenses per acre	181.80	187.39	172.45
Net return per acre	27.92	-20.80	83.26
Total direct expense per bushel	3.16	3.84	2.52
Total listed expense per bushel	3.72	4.54	3.08
Net return per bushel	0.57	-0.50	1.49
Breakeven yield per acre	42.30	46.49	37.58

TABLE 11 - 3  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted according to Return to Overhead per Acre)

SPRING WHEAT ON SHARE RENTED LAND

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of fields	73	13	14
Number of farms	38	8	8
Acres	150.25	119.52	150.85
Yield per acre (bushel)	51.41	40.48	60.17
Operators share of yield %	63.52	61.69	68.45
Value per bushel	4.28	4.25	4.53
Other product return per acre	0.42	0.00	0.00
Total product return per acre	140.41	105.27	187.05
Miscellaneous income per acre	1.87	0.54	4.78
Gross return per acre	142.28	105.81	191.83
Direct expenses per acre			
Seed	9.32	6.05	12.52
Fertilizer	28.08	30.92	31.62
Crop chemicals	9.09	16.29	8.04
Crop insurance	4.06	6.55	4.25
Drying fuel	0.22	0.52	0.04
Fuel & oil	6.54	9.38	5.62
Repairs	10.93	11.80	12.39
Custom hire	1.79	0.71	2.94
Hired labor	0.15	1.00	0.00
Machinery & bldg leases	0.08	0.00	0.00
Marketing	0.23	0.00	0.00
Operating interest	3.91	5.89	3.57
Miscellaneous	0.38	0.28	0.64
Total direct expenses per acre	74.79	89.39	81.62
Return over direct expenses per acre	67.49	16.42	110.21
Overhead expenses per acre			
Hired labor	4.46	3.54	5.68
Machinery & bldg leases	2.34	7.51	2.91
Farm insurance	2.05	2.58	2.85
Utilities	1.84	2.08	1.25
Dues & professional fees	0.58	1.14	1.06
Interest	3.05	6.69	2.15
Mach & bldg depreciation	8.21	5.87	9.04
Miscellaneous	2.83	1.90	2.87
Total overhead expenses per acre	25.35	31.31	27.80
Total listed expenses per acre	100.14	120.70	109.42
Net return per acre	42.14	-14.89	82.41
Total direct expense per bushel	2.29	3.58	1.98
Total listed expense per bushel	3.07	4.83	2.66
Net return per bushel	1.29	-0.60	2.00
Breakeven yield per acre	36.02	45.85	33.72

TABLE 11 - 4  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted according to Return to Overhead per Acre)

BARLEY ON OWNED LAND

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of fields	29	5	7
Number of farms	25	5	5
Acres	87.77	63.12	68.40
Yield per acre (bushel)	67.79	59.85	78.55
Operators share of yield %	100.00	100.00	100.00
Value per bushel	2.45	2.16	2.63
Total product return per acre	165.90	129.33	206.82
Miscellaneous income per acre	0.00	0.00	0.00
Gross return per acre	165.90	129.33	206.82
Direct expenses per acre			
Seed	9.44	10.08	12.07
Fertilizer	25.87	22.34	24.03
Crop chemicals	12.48	11.37	11.92
Crop insurance	5.52	8.04	6.50
Drying fuel	0.14	0.34	0.00
Fuel & oil	5.96	7.15	4.82
Repairs	8.28	13.39	6.80
Custom hire	2.21	5.62	0.00
Hired labor	0.52	0.00	0.00
Marketing	0.02	0.00	0.13
Operating interest	3.74	1.18	5.15
Miscellaneous	0.11	0.61	0.00
Total direct expenses per acre	74.29	80.12	71.41
Return over direct expenses per acre	91.61	49.21	135.41
Overhead expenses per acre			
Repairs	1.81	0.00	0.00
Custom hire	0.18	0.01	1.02
Hired labor	4.21	5.16	2.90
Machinery & bldg leases	1.07	1.41	2.19
RE & pers. property taxes	11.34	8.36	13.15
Farm insurance	2.15	3.45	2.77
Utilities	1.72	2.12	1.98
Dues & professional fees	1.19	0.27	1.56
Interest	26.73	8.71	44.80
Mach & bldg depreciation	8.99	8.41	8.95
Miscellaneous	1.77	2.40	1.93
Total overhead expenses per acre	61.17	40.30	81.25
Total listed expenses per acre	135.46	120.42	152.66
Net return per acre	30.44	8.91	54.15
Total direct expense per bushel	1.10	1.34	0.91
Total listed expense per bushel	2.00	2.01	1.94
Net return per bushel	0.45	0.15	0.69
Breakeven yield per acre	55.36	55.73	57.98

TABLE 11 - 5  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted according to Return to Overhead per Acre)

BARLEY ON CASH RENTED LAND

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of fields	85	17	18
Number of farms	76	15	15
Acres	148.23	128.08	115.46
Yield per acre (bushel)	70.56	63.13	86.18
Operators share of yield %	100.00	100.00	100.00
Value per bushel	2.49	2.20	2.79
Total product return per acre	175.84	139.20	240.72
Miscellaneous income per acre	0.86	0.00	1.28
Gross return per acre	176.70	139.20	242.00
Direct expenses per acre			
Seed	10.42	9.81	11.45
Fertilizer	28.54	29.86	25.60
Crop chemicals	14.49	21.13	13.29
Crop insurance	6.51	8.56	4.89
Drying fuel	0.11	0.00	0.00
Fuel & oil	5.95	6.48	5.77
Repairs	8.70	9.40	10.09
Repair, machinery	0.11	0.00	0.00
Custom hire	2.48	4.59	2.04
Hired labor	0.53	2.22	0.61
Land rent	59.23	64.03	60.57
Utilities	0.02	0.00	0.00
Marketing	0.04	0.00	0.10
Operating interest	4.50	7.51	2.73
Miscellaneous	0.29	0.15	0.31
Total direct expenses per acre	141.91	163.74	137.45
Return over direct expenses per acre	34.79	-24.53	104.55
Overhead expenses per acre			
Repairs	0.13	0.00	0.00
Custom hire	0.52	0.94	0.15
Hired labor	4.58	5.60	4.98
Machinery & bldg leases	2.17	1.63	4.08
Farm insurance	2.48	3.11	3.16
Utilities	1.56	1.64	2.52
Dues & professional fees	0.79	0.96	0.93
Interest	3.27	2.71	2.37
Mach & bldg depreciation	7.07	5.83	7.19
Miscellaneous	3.30	2.32	3.68
Total overhead expenses per acre	25.84	24.73	29.05
Total listed expenses per acre	167.76	188.47	166.50
Net return per acre	8.94	-49.27	75.50
Total direct expense per bushel	2.01	2.59	1.59
Total listed expense per bushel	2.38	2.99	1.93
Net return per bushel	0.13	-0.78	0.88
Breakeven yield per acre	66.97	85.48	59.15

TABLE 11 - 6  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Average of all farms reporting)

BARLEY ON SHARE RENTED LAND

	Average For All Farms
Number of fields	9
Number of farms	9
Acres	80.61
Yield per acre (bushel)	61.78
Operators share of yield %	63.50
Value per bushel	2.74
Total product return per acre	107.22
Miscellaneous income per acre	0.00
Gross return per acre	107.22
Direct expenses per acre	
Seed	7.85
Fertilizer	28.30
Crop chemicals	6.54
Crop insurance	4.10
Fuel & oil	6.43
Repairs	10.49
Custom hire	1.25
Machinery & bldg leases	0.51
Operating interest	2.39
Miscellaneous	0.54
Total direct expenses per acre	68.39
Return over direct expenses per acre	38.83
Overhead expenses per acre	
Hired labor	3.94
Machinery & bldg leases	0.95
Farm insurance	1.90
Utilities	1.88
Dues & professional fees	0.53
Interest	3.75
Mach & bldg depreciation	7.12
Miscellaneous	1.66
Total overhead expenses per acre	21.73
Total listed expenses per acre	90.12
Net return per acre	17.10
Total direct expense per bushel	1.74
Total listed expense per bushel	2.30
Net return per bushel	0.44
Breakeven yield per acre	51.79

TABLE 11 - 7  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted according to Return to Overhead per Acre)

NAVY BEANS ON CASH RENTED LAND

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of fields	27	5	5
Number of farms	25	5	5
Acres	117.16	182.52	89.66
Yield per acre (cwt)	17.18	12.09	21.42
Operators share of yield %	100.00	100.00	100.00
Value per cwt	19.64	18.09	21.03
Total product return per acre	337.30	218.70	450.45
Miscellaneous income per acre	2.90	8.60	2.40
Gross return per acre	340.20	227.29	452.85
Direct expenses per acre			
Seed	29.66	31.44	30.43
Fertilizer	23.64	27.97	14.21
Crop chemicals	28.64	32.61	30.90
Crop insurance	18.53	17.26	12.84
Fuel & oil	8.78	8.96	8.62
Repairs	14.78	17.99	11.45
Custom hire	4.80	2.47	8.53
Hired labor	1.35	2.20	0.00
Land rent	65.30	65.68	66.92
Machinery & bldg leases	0.13	0.00	0.00
Utilities	0.11	0.38	0.00
Marketing	0.05	0.00	0.00
Operating interest	6.93	3.48	6.48
Miscellaneous	0.54	0.00	0.00
Total direct expenses per acre	203.24	210.45	190.38
Return over direct expenses per acre	136.96	16.84	262.46
Overhead expenses per acre			
Repairs	0.54	0.00	0.00
Custom hire	0.31	0.00	0.00
Hired labor	7.92	10.43	4.56
Machinery & bldg leases	1.85	1.22	0.89
Farm insurance	2.96	2.56	3.48
Utilities	2.20	1.60	4.29
Dues & professional fees	1.51	1.23	1.38
Interest	4.24	4.98	4.45
Mach & bldg depreciation	11.41	13.68	13.90
Miscellaneous	5.14	1.62	5.99
Total overhead expenses per acre	38.07	37.32	38.94
Total listed expenses per acre	241.31	247.76	229.33
Net return per acre	98.88	-20.47	223.52
Total direct expense per cwt	11.83	17.41	8.89
Total listed expense per cwt	14.05	20.50	10.71
Net return per cwt	5.76	-1.69	10.44
Breakeven yield per acre	12.14	13.22	10.79

TABLE 11 - 8  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Average of all farms reporting)

PINTO BEANS ON OWNED LAND

	Average For All Farms
Number of fields	5
Number of farms	5
Acres	70.08
Yield per acre (cwt)	12.78
Operators share of yield %	100.00
Value per cwt	20.81
Total product return per acre	265.96
Miscellaneous income per acre	0.00
Gross return per acre	265.96
Direct expenses per acre	
Seed	22.55
Fertilizer	3.80
Crop chemicals	30.24
Crop insurance	18.41
Fuel & oil	10.24
Repairs	18.63
Custom hire	2.05
Operating interest	5.57
Total direct expenses per acre	111.50
Return over direct expenses per acre	154.46
Overhead expenses per acre	
Custom hire	1.15
Hired labor	5.74
Machinery & bldg leases	0.48
RE & pers. property taxes	13.23
Farm insurance	1.72
Utilities	2.74
Dues & professional fees	0.75
Interest	45.69
Mach & bldg depreciation	14.83
Miscellaneous	4.41
Total overhead expenses per acre	90.75
Total listed expenses per acre	202.25
Net return per acre	63.71
Total direct expense per cwt	8.72
Total listed expense per cwt	15.82
Net return per cwt	4.98
Breakeven yield per acre	9.72



TABLE 11 - 9  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Average of all farms reporting)

PINTO BEANS ON CASH RENTED LAND

	Average For All Farms
Number of fields	25
Number of farms	18
Acres	120.10
Yield per acre (cwt)	13.30
Operator's share of yield %	100.00
Value per cwt	21.61
Total product return per acre	287.25
Miscellaneous income per acre	0.28
Gross return per acre	287.54
Direct expenses per acre	
Seed	24.22
Fertilizer	15.08
Crop chemicals	26.61
Crop insurance	18.86
Fuel & oil	8.75
Repairs	15.20
Custom hire	2.28
Hired labor	0.30
Land rent	59.74
Utilities	0.17
Operating interest	8.20
Miscellaneous	1.20
Total direct expenses per acre	180.59
Return over direct expenses per acre	106.94
Overhead expenses per acre	
Custom hire	0.50
Hired labor	8.87
Machinery & bldg leases	3.34
Farm insurance	2.66
Utilities	2.04
Dues & professional fees	0.60
Interest	2.10
Mach & bldg depreciation	12.07
Miscellaneous	6.11
Total overhead expenses per acre	38.31
Total listed expenses per acre	218.90
Net return per acre	68.64
Total direct expense per cwt	13.58
Total listed expense per cwt	16.46
Net return per cwt	5.16
Breakeven yield per acre	10.12

TABLE 11 - 10  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted according to Return to Overhead per Acre)

CORN ON OWNED LAND

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of fields	54	13	10
Number of farms	39	8	8
Acres	90.57	75.70	112.65
Yield per acre (bushel)	100.04	78.36	109.82
Operators share of yield %	100.00	100.00	100.00
Value per bushel	2.58	2.47	2.73
Total product return per acre	258.58	193.71	299.78
Miscellaneous income per acre	0.28	0.00	0.77
Gross return per acre	258.87	193.71	300.55
Direct expenses per acre			
Seed	21.31	23.63	17.46
Fertilizer	36.46	38.94	35.64
Crop chemicals	19.45	23.06	16.72
Crop insurance	4.71	4.31	6.47
Drying fuel	5.62	4.58	6.97
Fuel & oil	10.93	15.36	8.54
Repairs	20.03	26.91	18.50
Custom hire	3.31	3.87	1.53
Hired labor	0.04	0.00	0.12
Machinery & bldg leases	0.15	0.00	0.00
Marketing	0.04	0.00	0.00
Operating interest	10.94	9.91	11.53
Miscellaneous	0.23	0.00	0.11
Total direct expenses per acre	133.22	150.56	123.58
Return over direct expenses per acre	125.65	43.15	176.97
Overhead expenses per acre			
Repairs	0.94	0.00	3.14
Custom hire	0.11	0.00	0.00
Hired labor	9.61	8.65	10.15
Machinery & bldg leases	4.63	2.46	7.86
RE & pers. property taxes	10.76	10.45	9.39
Farm insurance	3.27	1.93	3.67
Utilities	3.34	3.90	3.88
Dues & professional fees	1.94	1.30	1.70
Interest	43.96	31.73	34.87
Mach & bldg depreciation	12.55	11.15	13.69
Miscellaneous	3.94	3.74	2.42
Total overhead expenses per acre	95.05	75.30	90.77
Total listed expenses per acre	228.27	225.86	214.35
Net return per acre	30.60	-32.14	86.20
Total direct expense per bushel	1.33	1.92	1.13
Total listed expense per bushel	2.28	2.88	1.95
Net return per bushel	0.31	-0.41	0.78
Breakeven yield per acre	88.20	91.36	78.24

TABLE 11 - 11  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted according to Return to Overhead per Acre)

CORN ON CASH RENTED LAND

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of fields	110	18	34
Number of farms	72	14	14
Acres	121.25	110.24	134.83
Yield per acre (bushel)	104.10	98.53	117.61
Operators share of yield %	100.00	100.00	100.00
Value per bushel	2.56	2.45	2.76
Total product return per acre	266.13	241.38	325.05
Miscellaneous income per acre	1.30	0.42	1.80
Gross return per acre	267.43	241.80	326.85
Direct expenses per acre			
Seed	24.70	27.47	21.46
Fertilizer	40.01	38.08	36.84
Crop chemicals	23.04	25.51	22.79
Crop insurance	4.97	2.12	7.56
Drying fuel	6.43	9.19	6.84
Fuel & oil	11.28	14.96	8.68
Repairs	16.22	17.58	13.79
Custom hire	5.49	13.40	2.11
Hired labor	0.08	0.00	0.00
Land rent	58.33	66.07	59.37
Machinery & bldg leases	0.44	1.35	0.00
Marketing	0.06	0.00	0.01
Operating interest	13.61	28.53	9.32
Miscellaneous	0.34	0.00	0.21
Total direct expenses per acre	205.00	244.25	188.97
Return over direct expenses per acre	62.43	-2.45	137.88
Overhead expenses per acre			
Custom hire	0.12	0.00	0.00
Hired labor	7.65	11.25	4.96
Machinery & bldg leases	4.49	4.08	7.27
Farm insurance	2.84	3.55	2.79
Utilities	3.13	3.81	4.27
Dues & professional fees	1.85	3.66	2.30
Interest	5.87	4.92	6.47
Mach & bldg depreciation	6.21	-7.02	9.67
Miscellaneous	6.37	13.46	4.55
Total overhead expenses per acre	38.53	37.71	42.29
Total listed expenses per acre	243.53	281.96	231.26
Net return per acre	23.90	-40.16	95.59
Total direct expense per bushel	1.97	2.48	1.61
Total listed expense per bushel	2.34	2.86	1.97
Net return per bushel	0.23	-0.41	0.81
Breakeven yield per acre	94.75	114.92	83.02

TABLE 11 - 12  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Average of all farms reporting)

CORN ON SHARE RENTED LAND

	Average For All Farms
Number of fields	17
Number of farms	15
Acres	148.58
Yield per acre (bushel)	101.55
Operators share of yield %	64.54
Value per bushel	2.66
Other product return per acre	0.12
Total product return per acre	173.19
Miscellaneous income per acre	0.35
Gross return per acre	173.54
Direct expenses per acre	
Seed	21.25
Fertilizer	28.30
Crop chemicals	17.64
Crop insurance	3.84
Drying fuel	2.49
Fuel & oil	12.18
Repairs	16.93
Custom hire	2.30
Hired labor	0.12
Machinery & bldg leases	0.12
Marketing	1.21
Operating interest	8.84
Miscellaneous	0.31
Total direct expenses per acre	115.55
Return over direct expenses per acre	57.99
Overhead expenses per acre	
Hired labor	9.74
Machinery & bldg leases	3.59
Farm insurance	3.01
Utilities	3.54
Dues & professional fees	0.76
Interest	4.81
Mach & bldg depreciation	10.64
Miscellaneous	5.73
Total overhead expenses per acre	41.82
Total listed expenses per acre	157.37
Net return per acre	16.17
Total direct expense per bushel	1.76
Total listed expense per bushel	2.40
Net return per bushel	0.25
Breakeven yield per acre	91.48

TABLE 11 - 13  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Average of all farms reporting)

CORN SILAGE ON CASH RENTED LAND

	Average For All Farms
Number of fields	7
Number of farms	7
Acres	27.77
Yield per acre (ton)	8.60
Operators share of yield %	100.00
Value per ton	21.29
Total product return per acre	183.06
Miscellaneous income per acre	0.36
Gross return per acre	183.42
Direct expenses per acre	
Seed	21.41
Fertilizer	38.58
Crop chemicals	21.35
Crop insurance	3.30
Fuel & oil	13.14
Repairs	16.86
Custom hire	1.60
Land rent	32.59
Operating interest	5.53
Miscellaneous	0.30
Total direct expenses per acre	154.67
Return over direct expenses per acre	28.75
Overhead expenses per acre	
Hired labor	10.88
Machinery & bldg leases	3.92
Farm insurance	2.23
Utilities	2.48
Dues & professional fees	0.39
Interest	9.84
Mach & bldg depreciation	12.40
Miscellaneous	1.54
Total overhead expenses per acre	43.68
Total listed expenses per acre	198.35
Net return per acre	-14.94
Total direct expense per ton	17.99
Total listed expense per ton	23.07
Net return per ton	-1.74
Breakeven yield per acre	9.30

TABLE 11 - 14  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Average of all farms reporting)

POTATOES ON CASH RENTED LAND

	Average For All Farms
Number of fields	11
Number of farms	7
Acres	174.74
Yield per acre (cwt)	193.36
Operators share of yield %	100.00
Value per cwt	4.59
Total product return per acre	888.12
Miscellaneous income per acre	0.00
Gross return per acre	888.12
Direct expenses per acre	
Seed	131.05
Fertilizer	43.07
Crop chemicals	105.79
Crop insurance	21.96
Fuel & oil	54.29
Repairs	59.28
Custom hire	9.67
Hired labor	4.89
Land rent	63.60
Operating interest	31.67
Miscellaneous	13.79
Total direct expenses per acre	539.06
Return over direct expenses per acre	349.06
Overhead expenses per acre	
Custom hire	5.08
Hired labor	91.51
Machinery & bldg leases	16.44
Farm insurance	9.02
Utilities	11.44
Dues & professional fees	4.81
Interest	12.50
Mach & bldg depreciation	49.66
Miscellaneous	26.75
Total overhead expenses per acre	227.22
Total listed expenses per acre	766.28
Net return per acre	121.84
Total direct expense per cwt	2.79
Total listed expense per cwt	3.96
Net return per cwt	0.63
Breakeven yield per acre	166.83

TABLE 11 - 15  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted according to Return to Overhead per Acre)

SOYBEANS ON OWNED LAND

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of fields	90	24	14
Number of farms	64	13	13
Acres	108.16	99.99	106.06
Yield per acre (bushel)	31.49	22.55	38.00
Operators share of yield %	100.00	100.00	100.00
Value per bushel	6.84	6.77	6.83
Total product return per acre	215.47	152.62	259.46
Miscellaneous income per acre	0.16	0.82	0.00
Gross return per acre	215.63	153.44	259.46
Direct expenses per acre			
Seed	14.90	12.37	14.64
Fertilizer	2.75	5.04	1.81
Crop chemicals	23.62	19.59	18.99
Crop insurance	8.13	11.61	9.45
Fuel & oil	8.01	9.58	5.10
Repairs	15.62	18.84	12.98
Custom hire	2.60	2.64	2.19
Hired labor	0.44	0.00	0.81
Marketing	0.10	0.00	0.00
Operating interest	6.69	10.54	2.44
Miscellaneous	0.24	0.03	0.32
Total direct expenses per acre	83.11	90.23	68.74
Return over direct expenses per acre	132.52	63.22	190.72
Overhead expenses per acre			
Repairs	0.49	0.00	1.86
Custom hire	0.03	0.14	0.00
Hired labor	5.71	2.39	5.97
Machinery & bldg leases	1.98	3.99	0.96
RE & pers. property taxes	9.90	10.04	9.96
Farm insurance	3.23	3.95	2.90
Utilities	2.44	2.40	1.96
Dues & professional fees	1.36	1.50	1.42
Interest	36.17	41.67	27.32
Mach & bldg depreciation	8.94	6.83	7.87
Miscellaneous	4.40	3.07	4.21
Total overhead expenses per acre	74.65	75.99	64.44
Total listed expenses per acre	157.76	166.22	133.18
Net return per acre	57.87	-12.77	126.28
Total direct expense per bushel	2.64	4.00	1.81
Total listed expense per bushel	5.01	7.37	3.50
Net return per bushel	1.84	-0.57	3.32
Breakeven yield per acre	23.03	24.43	19.51

TABLE 11 - 16  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted according to Return to Overhead per Acre)

SOYBEANS ON CASH RENTED LAND

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of fields	228	42	38
Number of farms	132	26	26
Acres	154.32	156.31	143.41
Yield per acre (bushel)	30.38	24.24	35.77
Operators share of yield %	100.00	100.00	100.00
Value per bushel	6.80	6.71	6.80
Total product return per acre	206.47	162.74	243.42
Miscellaneous income per acre	1.89	2.71	3.50
Gross return per acre	208.36	165.45	246.92
Direct expenses per acre			
Seed	15.44	15.74	14.98
Fertilizer	3.92	9.27	2.30
Crop chemicals	25.18	25.35	20.20
Crop insurance	8.01	8.62	9.26
Drying fuel	0.00	0.00	0.00
Fuel & oil	8.14	9.05	6.73
Repairs	13.64	15.74	13.00
Custom hire	4.13	3.76	2.25
Hired labor	0.36	1.78	0.15
Land rent	59.64	63.22	53.94
Machinery & bldg leases	0.40	0.00	0.00
Utilities	0.01	0.08	0.00
Marketing	0.02	0.03	0.00
Operating interest	7.67	8.66	3.31
Miscellaneous	0.28	0.04	0.33
Total direct expenses per acre	146.85	161.34	126.45
Return over direct expenses per acre	61.51	4.11	120.47
Overhead expenses per acre			
Repairs	0.04	0.00	0.21
Custom hire	0.01	0.00	0.00
Hired labor	5.81	5.11	6.35
Machinery & bldg leases	3.27	2.97	1.25
Farm insurance	2.56	3.03	2.24
Utilities	2.12	2.49	1.89
Dues & professional fees	1.41	2.01	0.72
Interest	4.91	5.89	3.59
Mach & bldg depreciation	7.85	9.60	9.41
Miscellaneous	4.89	3.32	4.29
Total overhead expenses per acre	32.86	34.42	29.94
Total listed expenses per acre	179.71	195.76	156.39
Net return per acre	28.65	-30.31	90.53
Total direct expense per bushel	4.83	6.66	3.53
Total listed expense per bushel	5.92	8.08	4.37
Net return per bushel	0.94	-1.25	2.53
Breakeven yield per acre	26.16	28.75	22.47



TABLE 11 - 17  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted according to Return to Overhead per Acre)

SOYBEANS ON SHARE RENTED LAND

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of fields	63	14	7
Number of farms	32	6	6
Acres	125.58	98.14	106.73
Yield per acre (bushel)	29.14	26.07	33.26
Operators share of yield %	62.55	55.33	67.74
Value per bushel	6.99	6.72	7.19
Other product return per acre	0.52	0.00	0.00
Total product return per acre	127.98	97.48	162.02
Miscellaneous income per acre	5.16	6.50	22.09
Gross return per acre	133.14	103.98	184.10
Direct expenses per acre			
Seed	11.98	10.51	19.77
Fertilizer	1.34	8.68	0.56
Crop chemicals	22.43	27.41	19.26
Crop insurance	5.93	6.04	9.63
Drying fuel	0.01	0.00	0.03
Fuel & oil	9.12	12.19	9.62
Repairs	16.46	16.06	16.63
Custom hire	1.60	0.00	5.23
Hired labor	0.07	0.07	0.35
Machinery & bldg leases	0.10	0.00	0.00
Marketing	0.11	0.00	0.00
Operating interest	5.38	8.12	5.34
Miscellaneous	0.56	1.41	1.07
Total direct expenses per acre	75.08	90.49	87.49
Return over direct expenses per acre	58.05	13.49	96.61
Overhead expenses per acre			
Hired labor	6.23	8.66	9.64
Machinery & bldg leases	3.17	16.60	3.74
Farm insurance	2.28	2.97	2.64
Utilities	2.65	2.61	2.09
Dues & professional fees	0.96	1.89	1.94
Interest	4.01	10.47	2.54
Mach & bldg depreciation	12.57	10.51	15.07
Miscellaneous	3.68	2.29	2.81
Total overhead expenses per acre	35.56	56.00	40.47
Total listed expenses per acre	110.64	146.49	127.96
Net return per acre	22.50	-42.51	56.14
Total direct expense per bushel	4.12	6.27	3.88
Total listed expense per bushel	6.07	10.15	5.68
Net return per bushel	1.23	-2.95	2.49
Breakeven yield per acre	24.00	37.64	21.74

TABLE 11 - 18  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted according to Return to Overhead per Acre)

SUGAR BEETS ON OWNED LAND

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of fields	54	10	9
Number of farms	47	9	9
Acres	97.37	77.69	95.91
Yield per acre (ton)	18.15	15.83	20.88
Operators share of yield %	100.00	100.00	100.00
Value per ton	43.32	41.51	43.83
Total product return per acre	786.35	656.93	915.27
Miscellaneous income per acre	5.67	8.92	7.46
Gross return per acre	792.02	665.85	922.74
Direct expenses per acre			
Seed	38.05	38.18	35.38
Fertilizer	29.91	30.88	26.44
Crop chemicals	84.58	70.02	81.60
Crop insurance	15.51	13.21	9.76
Fuel & oil	27.14	26.86	29.51
Repairs	51.08	54.34	50.46
Custom hire	18.95	24.50	2.05
Hired labor	25.04	28.84	26.59
Machinery & bldg leases	0.30	0.00	0.00
Sugar beet stock	67.03	126.58	49.06
Operating interest	17.32	18.78	8.82
Miscellaneous	3.23	6.68	3.89
Total direct expenses per acre	378.16	438.87	323.55
Return over direct expenses per acre	413.86	226.98	599.19
Overhead expenses per acre			
Repairs	2.34	0.00	12.81
Custom hire	0.53	2.77	0.00
Hired labor	28.16	21.40	26.19
Machinery & bldg leases	11.26	7.63	13.87
RE & pers. property taxes	16.97	12.48	14.47
Farm insurance	5.21	2.61	5.18
Utilities	6.38	6.15	8.24
Dues & professional fees	3.43	1.90	3.67
Interest	62.52	43.22	35.94
Mach & bldg depreciation	44.06	33.99	57.10
Miscellaneous	12.20	14.27	10.15
Total overhead expenses per acre	193.05	146.40	187.62
Total listed expenses per acre	571.21	585.27	511.17
Net return per acre	220.81	80.58	411.57
Total direct expense per ton	20.83	27.73	15.49
Total listed expense per ton	31.47	36.98	24.48
Net return per ton	12.16	5.09	19.71
Breakeven yield per acre	13.06	13.88	11.49

TABLE 11 - 19  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted according to Return to Overhead per Acre)

SUGAR BEETS ON CASH RENTED LAND

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of fields	145	29	34
Number of farms	97	19	19
Acres	172.78	115.46	174.40
Yield per acre (ton)	18.23	15.59	20.02
Operators share of yield %	100.00	100.00	100.00
Value per ton	43.81	42.69	45.34
Total product return per acre	798.65	665.49	907.95
Miscellaneous income per acre	6.27	8.79	7.31
Gross return per acre	804.93	674.28	915.26
Direct expenses per acre			
Seed	38.73	38.41	38.17
Fertilizer	34.76	38.08	30.75
Crop chemicals	84.06	73.60	83.24
Crop insurance	13.73	15.97	10.04
Fuel & oil	28.44	31.53	28.46
Repairs	50.98	64.06	47.47
Custom hire	20.00	20.35	12.57
Hired labor	27.35	29.26	26.66
Land rent	76.57	73.40	70.02
Machinery & bldg leases	0.20	0.00	0.00
Utilities	0.02	0.00	0.10
Sugar beet stock	64.34	82.20	37.64
Operating interest	21.87	32.73	15.28
Miscellaneous	7.79	13.28	3.93
Total direct expenses per acre	468.85	512.87	404.33
Return over direct expenses per acre	336.08	161.41	510.93
Overhead expenses per acre			
Custom hire	0.83	-0.27	0.00
Hired labor	25.92	30.01	22.12
Machinery & bldg leases	11.39	5.46	20.74
Farm insurance	5.33	4.71	3.32
Utilities	5.55	7.21	4.58
Dues & professional fees	3.39	4.54	3.59
Interest	19.37	19.27	17.24
Mach & bldg depreciation	38.73	37.03	37.24
Miscellaneous	16.30	16.75	11.44
Total overhead expenses per acre	126.81	124.71	120.27
Total listed expenses per acre	595.65	637.58	524.59
Net return per acre	209.28	36.70	390.67
Total direct expense per ton	25.72	32.90	20.19
Total listed expense per ton	32.68	40.90	26.20
Net return per ton	11.48	2.35	19.51
Breakeven yield per acre	13.45	14.73	11.41

TABLE 11 - 20  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Average of all farms reporting)

SUGAR BEETS ON SHARE RENTED LAND

	Average For All Farms
Number of fields	7
Number of farms	7
Acres	84.23
Yield per acre (ton)	18.87
Operators share of yield %	65.66
Value per ton	43.26
Total product return per acre	538.57
Miscellaneous income per acre	1.81
Gross return per acre	540.38
Direct expenses per acre	
Seed	40.26
Fertilizer	32.41
Crop chemicals	102.53
Crop insurance	14.48
Fuel & oil	29.94
Repairs	51.37
Custom hire	25.19
Hired labor	15.24
Sugar beet stock	13.78
Operating interest	6.20
Miscellaneous	3.29
Total direct expenses per acre	334.71
Return over direct expenses per acre	205.67
Overhead expenses per acre	
Hired labor	29.15
Machinery & bldg leases	7.99
Farm insurance	4.86
Utilities	5.08
Dues & professional fees	1.70
Interest	11.32
Mach & bldg depreciation	23.00
Miscellaneous	15.17
Total overhead expenses per acre	98.27
Total listed expenses per acre	432.98
Net return per acre	107.40
Total direct expense per ton	27.01
Total listed expense per ton	34.94
Net return per ton	8.67
Breakeven yield per acre	15.18

TABLE 11 - 21  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Average of all farms reporting)

SUNFLOWERS ON OWNED LAND

	Average For All Farms
Number of fields	5
Number of farms	5
Acres	80.00
Yield per acre (cwt)	17.40
Operators share of yield %	100.00
Value per cwt	10.81
Total product return per acre	188.08
Miscellaneous income per acre	0.00
Gross return per acre	188.08
Direct expenses per acre	
Seed	15.70
Fertilizer	18.50
Crop chemicals	11.31
Crop insurance	4.60
Drying fuel	1.29
Fuel & oil	10.41
Repairs	17.12
Custom hire	4.95
Hired labor	0.68
Operating interest	3.71
Miscellaneous	0.94
Total direct expenses per acre	89.22
Return over direct expenses per acre	98.86
Overhead expenses per acre	
Hired labor	6.77
Machinery & bldg leases	0.21
RE & pers. property taxes	8.46
Farm insurance	3.63
Utilities	2.47
Dues & professional fees	0.36
Interest	38.81
Mach & bldg depreciation	9.16
Miscellaneous	2.50
Total overhead expenses per acre	72.37
Total listed expenses per acre	161.59
Net return per acre	26.49
Total direct expense per cwt	5.13
Total listed expense per cwt	9.29
Net return per cwt	1.52
Breakeven yield per acre	14.95

TABLE 11 - 22  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms sorted according to Return to Overhead per Acre)

SUNFLOWERS ON CASH RENTED LAND

	Average Of All Farms	Average Of Low 20%	Average Of High 20%
Number of fields	27	5	5
Number of farms	25	5	5
Acres	130.91	145.34	211.20
Yield per acre (cwt)	13.43	2.58	18.19
Operators share of yield %	100.00	100.00	100.00
Value per cwt	11.40	10.68	12.34
Total product return per acre	153.09	27.58	224.44
Miscellaneous income per acre	4.23	10.83	4.86
Gross return per acre	157.33	38.41	229.30
Direct expenses per acre			
Seed	11.30	7.08	12.72
Fertilizer	18.92	9.41	27.85
Crop chemicals	11.47	5.88	9.04
Crop insurance	7.65	6.26	11.91
Drying fuel	0.08	0.00	0.00
Fuel & oil	9.14	8.40	9.15
Repairs	13.60	13.37	12.73
Custom hire	3.79	0.86	4.65
Land rent	45.99	24.26	56.85
Marketing	0.02	0.00	0.00
Operating interest	4.76	8.88	1.71
Miscellaneous	0.22	0.00	0.53
Total direct expenses per acre	126.93	84.40	147.14
Return over direct expenses per acre	30.40	-45.99	82.16
Overhead expenses per acre			
Custom hire	0.27	1.23	0.00
Hired labor	7.80	9.64	5.05
Machinery & bldg leases	2.48	0.82	0.61
Farm insurance	2.48	3.96	0.91
Utilities	2.02	2.35	1.42
Dues & professional fees	1.69	2.19	0.88
Interest	4.48	4.52	3.95
Mach & bldg depreciation	8.13	5.18	9.41
Miscellaneous	3.77	1.38	6.64
Total overhead expenses per acre	33.13	31.26	28.88
Total listed expenses per acre	160.06	115.65	176.03
Net return per acre	-2.73	-77.24	53.27
Total direct expense per cwt	9.45	32.67	8.09
Total listed expense per cwt	11.92	44.78	9.68
Net return per cwt	-0.20	-29.91	2.93
Breakeven yield per acre	13.67	9.82	13.87

TABLE 11 - 23  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Average of all farms reporting)

SUNFLOWERS ON SHARE RENTED LAND

	Average For All Farms
Number of fields	7
Number of farms	5
Acres	112.47
Yield per acre (cwt)	12.62
Operators share of yield %	64.29
Value per cwt	13.58
Total product return per acre	109.19
Miscellaneous income per acre	14.78
Gross return per acre	123.97
Direct expenses per acre	
Seed	10.42
Fertilizer	12.57
Crop chemicals	7.08
Crop insurance	5.74
Drying fuel	1.38
Fuel & oil	11.94
Repairs	16.86
Custom hire	0.94
Machinery & bldg leases	0.38
Operating interest	7.46
Miscellaneous	0.76
Total direct expenses per acre	75.52
Return over direct expenses per acre	48.45
Overhead expenses per acre	
Hired labor	6.44
Machinery & bldg leases	6.69
Farm insurance	3.14
Utilities	2.57
Dues & professional fees	1.67
Interest	6.04
Mach & bldg depreciation	6.73
Miscellaneous	3.02
Total overhead expenses per acre	36.32
Total listed expenses per acre	111.84
Net return per acre	12.13
Total direct expense per cwt	9.31
Total listed expense per cwt	13.78
Net return per cwt	1.49
Breakeven yield per acre	11.12

TABLE 11 - 24  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Average of all farms reporting)

CONFECTIONARY SUNFLOWERS ON CASH RENTED LAND

	Average For All Farms
Number of fields	11
Number of farms	8
Acres	160.55
Yield per acre (cwt)	12.49
Operators share of yield %	100.00
Value per cwt	15.85
Total product return per acre	197.95
Miscellaneous income per acre	15.05
Gross return per acre	213.00
Direct expenses per acre	
Seed	19.37
Fertilizer	17.72
Crop chemicals	15.64
Crop insurance	4.57
Drying fuel	0.33
Fuel & oil	7.12
Repairs	13.17
Custom hire	3.94
Land rent	55.84
Operating interest	6.36
Total direct expenses per acre	144.06
Return over direct expenses per acre	68.94
Overhead expenses per acre	
Custom hire	2.45
Hired labor	5.50
Machinery & bldg leases	0.27
Farm insurance	2.01
Utilities	3.13
Dues & professional fees	1.76
Interest	6.88
Mach & bldg depreciation	12.85
Miscellaneous	5.13
Total overhead expenses per acre	39.96
Total listed expenses per acre	184.02
Net return per acre	28.98
Total direct expense per cwt	11.54
Total listed expense per cwt	14.74
Net return per cwt	2.32
Breakeven yield per acre	10.66



TABLE 11 - 25  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Average of all farms reporting)

ALFALFA HAY ON OWNED LAND

	Average For All Farms
Number of fields	9
Number of farms	9
Acres	29.67
Yield per acre (ton)	2.57
Operators share of yield %	100.00
Value per ton	72.16
Total product return per acre	185.14
Miscellaneous income per acre	0.00
Gross return per acre	185.14
Direct expenses per acre	
Seed	2.22
Fertilizer	11.24
Fuel & oil	7.67
Repairs	14.45
Custom hire	8.73
Operating interest	5.89
Total direct expenses per acre	50.20
Return over direct expenses per acre	134.93
Overhead expenses per acre	
Hired labor	7.72
Machinery & bldg leases	1.50
RE & pers. property taxes	8.19
Farm insurance	3.00
Utilities	1.51
Dues & professional fees	0.69
Interest	44.05
Mach & bldg depreciation	7.27
Miscellaneous	2.03
Total overhead expenses per acre	75.94
Total listed expenses per acre	126.15
Net return per acre	58.99
Total direct expense per ton	19.57
Total listed expense per ton	49.17
Net return per ton	22.99
Breakeven yield per acre	1.75

TABLE 11 - 26  
Crop Enterprise Analysis, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Average of all farms reporting)

ALFALFA HAY ON CASH RENTED LAND

	Average For All Farms
Number of fields	22
Number of farms	21
Acres	63.53
Yield per acre (ton)	2.70
Operators share of yield %	100.00
Value per ton	76.97
Total product return per acre	207.51
Miscellaneous income per acre	1.26
Gross return per acre	208.77
Direct expenses per acre	
Seed	2.13
Fertilizer	9.99
Crop chemicals	0.78
Fuel & oil	9.88
Repairs	10.36
Custom hire	7.18
Land rent	56.12
Operating interest	6.18
Total direct expenses per acre	102.62
Return over direct expenses per acre	106.15
Overhead expenses per acre	
Repairs	0.05
Hired labor	5.75
Machinery & bldg leases	3.14
Farm insurance	1.76
Utilities	1.32
Dues & professional fees	0.47
Interest	11.44
Mach & bldg depreciation	9.84
Miscellaneous	7.03
Total overhead expenses per acre	40.79
Total listed expenses per acre	143.41
Net return per acre	65.36
Total direct expense per ton	38.06
Total listed expense per ton	53.19
Net return per ton	24.24
Breakeven yield per acre	1.85

TABLE 12 - 1  
Size Of Farm Report, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley  
(Farms Sorted By Gross Cash Farm Income)

	Average For All Farms	40,001 - 100,000	100,001 - 200,000	200,001 - 500,000	500,001 +
Number of farms	229	10	50	112	55
<b>Income Statement</b>					
Gross cash farm income	379990	71259	158559	319271	774233
Total cash farm expense	317243	61269	134190	262290	653023
Net cash farm income	62747	9990	24369	56981	121210
Inventory change	45421	13447	21231	35357	95252
Depreciation and capital adjustment	-10813	-4568	-8205	-8488	-19507
Net farm income	97354	18869	37395	83849	196955
<b>Profitability (cost)</b>					
Labor and management earnings	75776	13448	28212	63547	157820
Rate of return on assets	14 %	7 %	9 %	13 %	17 %
Rate of return on equity	21 %	4 %	12 %	19 %	26 %
Operating profit margin	26 %	16 %	19 %	26 %	27 %
Asset turnover rate	56 %	43 %	51 %	52 %	62 %
<b>Liquidity</b>					
Term debt coverage ratio	194 %	205 %	142 %	188 %	213 %
Expense as a percent of income	74 %	72 %	74 %	73 %	74 %
Interest as a percent of income	7 %	12 %	8 %	7 %	7 %
<b>Solvency (cost)</b>					
Number of sole proprietors	198	9	48	104	35
Ending farm assets	696917	202602	370348	690566	1326437
Ending farm liabilities	364783	109275	209478	341416	730665
Ending total assets	800004	263964	441095	802032	1465400
Ending total liabilities	382681	128259	230569	357875	749199
Ending net worth	417323	135705	210527	444157	716201
Net worth change	62147	23527	28908	61762	121756
Ending farm debt to asset ratio	52 %	54 %	57 %	49 %	55 %
Beg total debt to asset ratio	51 %	52 %	53 %	47 %	56 %
End total debt to asset ratio	48 %	49 %	52 %	45 %	51 %
<b>Nonfarm Information</b>					
Farms reporting living expenses	39	3	13	18	5
Total family living expense	32969	-	32159	30878	47144
Total living, invest, & capital purch	48185	-	49402	41948	77634
Net nonfarm income	12199	22342	14070	12154	8887
<b>Crop Acres</b>					
Total acres owned	315	134	201	326	444
Total crop acres	1351	378	784	1212	2376
Total crop acres owned	253	62	173	253	369
Total crop acres cash rented	980	176	541	831	1862
Total crop acres share rented	119	141	70	128	145

Table 12 - 2  
Type Of Farm Report, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley

	Average For All Farms	Crop	Crop and Hog	Crop and Beef	Other
Number of farms	229	202	6	5	11
Income Statement					
Gross cash farm income	379990	389713	550162	223498	245504
Total cash farm expense	317243	324753	484043	209308	184986
Net cash farm income	62747	64960	66118	14190	60519
Inventory change	45421	48405	72519	27699	-7115
Depreciation and capital adjustment	-10813	-11925	18435	-10160	-6998
Net farm income	97354	101440	157073	31729	46406
Profitability (cost)					
Labor and management earnings	75776	79368	119610	24821	31228
Rate of return on assets	14 %	15 %	14 %	8 %	10 %
Rate of return on equity	21 %	22 %	20 %	10 %	11 %
Operating profit margin	26 %	26 %	35 %	17 %	21 %
Asset turnover rate	56 %	58 %	40 %	45 %	46 %
Liquidity					
Term debt coverage ratio	194 %	203 %	158 %	100 %	129 %
Expense as a percent of income	74 %	73 %	78 %	84 %	78 %
Interest as a percent of income	7 %	7 %	11 %	10 %	9 %
Solvency (cost)					
Number of sole proprietors	198	173	5	5	10
Ending farm assets	696917	701115	1339275	520470	504923
Ending farm liabilities	364783	361426	766203	400509	249151
Ending total assets	800004	809326	1385492	551934	612937
Ending total liabilities	382681	378281	784024	417517	290999
Ending net worth	417323	431044	601468	134417	321938
Net worth change	62147	63199	164503	10998	40394
Ending farm debt to asset ratio	52 %	52 %	57 %	77 %	49 %
Beg total debt to asset ratio	51 %	50 %	61 %	75 %	48 %
End total debt to asset ratio	48 %	47 %	57 %	76 %	47 %
Nonfarm Information					
Farms reporting living expenses	39	32	3	-	3
Total family living expense	32969	33564	-	-	-
Total living, invest, & capital purch	48185	48435	-	-	-
Net nonfarm income	12199	12067	1393	7273	24704
Crop Acres					
Total acres owned	315	311	596	247	261
Total crop acres	1351	1396	1744	895	842
Total crop acres owned	253	253	600	126	93
Total crop acres cash rented	980	1020	1095	612	651
Total crop acres share rented	119	124	48	157	99

Table 12 - 3  
Age Of Operator Report, 1996  
Minnesota and North Dakota Farm Business Mgmt Education  
Red River Valley

	Average For All Farms	Under 31	31 - 40	41 - 50	51 - 60
Number of farms	227	20	91	86	27
<b>Income Statement</b>					
Gross cash farm income	377081	243264	395652	357301	400150
Total cash farm expense	315185	205987	329113	289819	354222
Net cash farm income	61896	37277	66539	67482	45928
Inventory change	44960	27307	55246	28681	53441
Depreciation and capital adjustment	-10665	-7094	-10245	-11548	-2228
Net farm income	96190	57490	111540	84616	97141
<b>Profitability (cost)</b>					
Labor and management earnings	74905	45606	92921	61364	67807
Rate of return on assets	14 %	13 %	18 %	12 %	11 %
Rate of return on equity	21 %	20 %	29 %	17 %	15 %
Operating profit margin	26 %	22 %	27 %	25 %	26 %
Asset turnover rate	56 %	61 %	66 %	50 %	43 %
<b>Liquidity</b>					
Term debt coverage ratio	194 %	178 %	227 %	172 %	153 %
Expense as a percent of income	74 %	77 %	72 %	74 %	77 %
Interest as a percent of income	7 %	7 %	6 %	8 %	9 %
<b>Solvency (cost)</b>					
Number of sole proprietors	198	18	79	77	22
Ending farm assets	696917	374831	648079	756112	934092
Ending farm liabilities	364783	201206	353212	380517	512295
Ending total assets	800004	403998	743674	875031	1028582
Ending total liabilities	382681	214385	374141	398615	524090
Ending net worth	417323	189613	369533	476416	504492
Net worth change	62147	24068	73220	55513	73438
Ending farm debt to asset ratio	52 %	54 %	55 %	50 %	55 %
Beg total debt to asset ratio	51 %	49 %	55 %	48 %	52 %
End total debt to asset ratio	48 %	53 %	50 %	46 %	51 %
<b>Nonfarm Information</b>					
Farms reporting living expenses	39	-	25	12	2
Total family living expense	32969	-	32236	35644	-
Total living, invest, & capital purch	48185	-	43821	57785	-
Net nonfarm income	12306	6482	10873	13063	18816
<b>Crop Acres</b>					
Total acres owned	316	147	242	340	616
Total crop acres	1345	732	1406	1325	1464
Total crop acres owned	253	51	191	275	537
Total crop acres cash rented	973	677	1063	923	863
Total crop acres share rented	120	5	152	127	64

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