

# 2009 ORGANIC FARM PERFORMANCE IN MINNESOTA



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*This project has also been endorsed by the Independent Community Bankers Association of Minnesota, USDA Farm Service Agency - Minnesota, and the National Association of State Organic Programs.*

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2009  
ORGANIC FARM  
PERFORMANCE  
IN MINNESOTA

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In accordance with the Americans with Disabilities Act, an alternative form of communication is available upon request. TTY: 800-627-3529. Support for this project was provided by the United States Department of Agriculture (USDA) Risk Management Agency through partnership agreement number 05IE08310209 with the MDA. Opinions, findings, conclusions, or recommendations expressed in this publication do not necessarily reflect the view of the USDA.

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## ABOUT THIS REPORT

While there is lots of anecdotal information about farm performance and profitability, real world information about production, financial performance, and profitability on **organic** farms is scarce. This report provides detailed data about many aspects of the 2009 performance of actual Minnesota organic farms. It also offers summary data from previous years for trend comparison purposes. More detailed information is available in reports at [www.mda.state.mn.us/fbm](http://www.mda.state.mn.us/fbm), at [www.mgt.org](http://www.mgt.org), or in a searchable database at [www.finbin.umn.edu](http://www.finbin.umn.edu).

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## HOW DOES THE ORGANIC FBM PROJECT WORK?

The Minnesota Department of Agriculture (MDA) administers the project, with critical support from the partners listed inside the front cover. Participating farmers receive scholarships to defray the cost of tuition in local Farm Business Management (FBM) education programs offered throughout Minnesota by eight colleges within the Minnesota State Colleges and Universities system and one Farm Business Management Association. The farmers work one-on-one with a local FBM instructor to keep and use quality records in their farm business decisions. Their farm data is then stripped of all its identifying characteristics (so the producers remain absolutely anonymous) and incorporated into FINBIN, a database managed by the University of Minnesota Center for Farm Financial Management [www.finbin.umn.edu](http://www.finbin.umn.edu).

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## DOES IT MAKE A DIFFERENCE?

In 2008, an outside contractor evaluated this project for the MDA. Among her findings: more than 80% of respondents indicated above average or excellent experience with the program. According to participants, the best things about the program were the farm-specific analysis report they received, assistance with recordkeeping/financial statements/taxes, and outside advice. Participants said the FBM program made it easier for them to provide required information to lenders and to the USDA Farm Service Agency, and that information they gained from the project (particularly cash flow, cost of production, and profitability information) informed their own annual plans and investment decisions.



*FBM instructors work with all kinds of producers -- organic and conventional, crop, specialty crop, and livestock. To learn more about FBM opportunities in your area, contact the MnSCU campus in your region. A list of programs is available at [www.mgt.org](http://www.mgt.org), or call Dick Joerger at 651-297-1484. Southwest Minnesota also has a Farm Business Management Association: please contact Jim Kurtz at 507-372-3904.*

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## EXPLANATION OF DATA PROCESSING AND REPORT FORMAT

The tables in this report were created using FINPACK and RankEm Central, software programs copyrighted by the Center for Farm Financial Management (CFFM) at the University of Minnesota. The data are provided to CFFM by farm business management instructors in the Minnesota State Colleges and Universities system, and by Minnesota Farm Management Association field staff.

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## TABLE OF CONTENTS

## PAGE

### **2009 Organic Farm Performance in Minnesota – Whole Farm Results and Trends . . . . .5**

#### **Financial Summaries**

*Figure A. Selected Factors – Sorted by Year* . . . . .9

Table 1. Financial Summary – Sorted by Year . . . . .10

Table 2. All Participating Non-Organic (Conventional) Farms, Sorted by Year . . . . .11

*Figure B. Selected Factors – Sorted by Net Farm Income* . . . . .12

Table 3. Financial Summary – Sorted by Net Farm Income . . . . .13

*Figure C. Selected Factors – Sorted by Farm Type* . . . . .14

Table 4. Financial Summary – Sorted by Farm Type . . . . .15

*Figure D. Selected Factors – Sorted by Gross Farm Income (Farm Size)* . . . . .16

Table 5. Financial Summary – Sorted by Gross Farm Income . . . . .17

*Figure E. Organic Crop, Forage, and Livestock Trends* . . . . .18

#### **Crop Reports . . . . .20**

Table 6. Crop Production and Marketing Summary, Completely and Partially Organic Farms . . . . .21

#### **Organic Crop Enterprise Analysis Tables**

Table 7. Barley – Owned Land . . . . .22

Table 8. Barley – Cash Rent . . . . .23

Table 9. Corn – Owned Land . . . . .24

Table 10. Corn – Cash Rent . . . . .25

Table 11. Corn Silage – Owned Land . . . . .26

Table 12. Corn Silage – Cash Rent . . . . .27

Table 13. Oats – Owned Land . . . . .28

Table 14. Oats – Cash Rent . . . . .29

Table 15. Soybeans – Owned Land . . . . .30

Table 16. Soybeans – Cash Rent . . . . .31

Table 17. Wheat, Spring – Owned Land . . . . .32

Table 18. Wheat, Spring – Cash Rent . . . . .33

Table 19. Hay, Alfalfa – Owned Land . . . . .34

Table 20. Hay, Alfalfa – Cash Rent . . . . .35

Table 21. Pasture – Owned Land . . . . .36

Table 22. Pasture – Cash Rent . . . . .37

#### **Dairy Reports . . . . .38**

#### **Livestock Enterprise Analysis Tables**

Table 23. Organic Dairy – Average per Cow (Sorted by Year) . . . . .39

Table 24. Organic Dairy – Average per Cow (Sorted by Net Return per Unit) . . . . .40

Table 25. Organic Dairy Replacement Heifers – Average per Head . . . . .41

#### **Making Sense of Farm Financial Ratios and Guidelines . . . . .42**

Table 26. Financial Standards Measures . . . . .44

#### **Farm Financial Scorecard . . . . . Back Cover**



# 2009 ORGANIC FARM PERFORMANCE IN MINNESOTA

By Dale Nordquist, Ron Dvergsten, and Meg Moynihan

This report summarizes individual farm financial results for participants in the Minnesota Organic Farm Business Management Project for 2009 and provides comparisons to previous years. The report includes whole-farm information as well as costs and returns for individual enterprises. The year-end analysis of the individual farms was completed by Minnesota Farm Business Management instructors or by Minnesota Farm Management Associations. A total of 70 farmers reported data for 2009. Of those, 47 were “completely organic,” meaning that all of the agricultural products produced on the farm were produced under organic certification. *The Whole Farm Results* section summarizes only these completely organic farms, whereas the crop and dairy enterprise reports include data provided by both completely and partially organic farms.

## WHOLE FARM RESULTS

For conventional and organic farms alike, 2009 was not a very profitable year for the average farm participating in these farm business management programs. Table 1 summarizes the financial performance of participating organic farms over four years of this project. The median net farm income for participating organic farms dropped by 86% to \$8,595 in 2009. Net farm income is the farm’s contribution to covering family living expenditures, income taxes, retirement savings, and reinvestment in the business.

The dramatic falloff in profitability in 2009 compared to 2007 and 2008 seems to have been caused by a number of factors. The most significant factor was a sharp reduction in prices for organic spring wheat and corn. There were modest price declines for most other crops as well. Slightly reduced yields coupled with higher input costs contributed to the more than \$50,000 decrease in net farm income compared to 2008.

The average farm earned a rate of return on assets (ROA) of 0.9% (with assets valued at adjusted cost basis). At that rate, borrowed capital did not earn enough to pay interest costs, driving the average rate of return on equity (ROE) down to -2.9%.

While profitability was down for these farms, liquidity improved. Participating farms began the year with working capital (current assets minus current liabilities) equal to 22% of a year’s income. By the end of 2009, these farms had 29% of a year’s income at their disposal. The average current ratio improved from 1.66:1 to 1.78:1. This is counter-intuitive in a year with such

weak profitability. One possible explanation is that a number of producers “termed out” some of their current debt during the year, extending repayment over a longer period of time.

While liquidity improved, debt repayment capacity took a hit. The ability of these farms to repay debt, measured by the term debt coverage ratio, dropped from 1.84:1 in 2008 down to 0.62:1 in 2009. In other words, after all expenses, family expenditures, and taxes were paid, these farms came up \$.38 short in their ability to repay each \$1 of scheduled debt repayment. This does not mean they did not make their payments – they might have refinanced their debt, reduced inventory, or sold assets to make their payments.

Another counter-intuitive result was change in net worth. With profits down to these low levels, these farms did not generate enough to pay family living expenses from farm and nonfarm earnings. Yet estimated market value net worth increased by \$8,584 for the average farm. One possible explanation is that producers tried to mask their lack of earned net worth growth by increasing the valuation of farm assets. This same inconsistency was reported by conventional farms in 2009.

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<sup>1</sup> Associate Director, Center for Farm Financial Management, University of Minnesota

<sup>2</sup> Dean of Farm Management Education, Northland Community & Technical College

<sup>3</sup> Organic and Diversification Specialist, Minnesota Department of Agriculture

## COMPARISON TO CONVENTIONAL FARMS

Table 2 shows these same financial measures for the 2,331 Minnesota conventional farms that participated in farm management education programs. Conventional farms also reported sharply lower profits in 2009. The median conventional farm's net farm income dropped by 63% to \$33,996. Conventional farm profits were driven by type of farm in 2009. Crop farms, though not as profitable as the historical highs of 2007 and 2008, were still relatively profitable. But it was not a good year to have hogs, beef, or dairy animals on conventional operations. All major types of livestock farms saw their profits plummet.

The average conventional farm was somewhat larger than the organic farms, with average total assets of \$2.0 million compared to \$1.1 million for the organic farms. The conventional farms were also larger based on total sales, with gross income of \$635,337 compared to \$239,105 for the organic group.

Comparing businesses of different size based on net income can be deceiving. Rate of return on assets (ROA) does a better job of adjusting for different levels of resources employed in the business. The average organic farm earned an ROA of 0.9% compared to an average ROA of 3.1% for conventional farms (with assets valued at adjusted cost basis). This reversed the results for 2008, when the organic farms were slightly more profitable based on ROA.

In previous years, these organic farms have generated profit margins comparable to or greater than the conventional producers. With their smaller volume of sales, they need high margins to generate profits. This was not the case in 2009. Organic producers' operating profit margin fell to 2.8%, down from 22.6% in 2008. Conventional margins also fell, although not as much; they were down from 21.8% to 7.9%. Profit margins need to be close to or over 20% for conventional farms to be profitable. With lower sales volumes, organic producers should be shooting for 25-30%. Unfortunately, neither type of producer has total control over price, costs, and resulting margins.

The conventional farms used slightly more debt capital, with average debt-to-asset ratios of 44% compared to 40% for the organic farms. Liquidity levels were consistent between conventional and organic farms. Both had roughly 29% of a year's gross income in working capital (current assets *minus* current liabilities) at the

end of the year – a very comfortable level of liquidity. Conventional farms, however, had better debt repayment capacity, just barely generating enough income to cover scheduled debt payments with a term debt coverage ratio of 1.03:1 compared to 0.62:1 for organic farms.

When it is all put together, the conventional farms, on average, outperformed these organic farms in 2009, a result much different from 2007 and 2008 when organic farms competed well with conventional farms.

## PROFITABILITY COMPARISONS

As is always the case, the averages mask the variability of returns across the wide range of producers. Table 3 sorts the 2009 organic farms into thirds based on net farm income. The highest profit group had median net earnings of \$66,557 compared to a loss of \$-26,287 for the low profit group. Perhaps even more interesting is which farms fell into each group. The low profit group was larger than the other groups, based on both total assets and total crop acres. The middle group consisted of smaller farms, and the most profitable group was again larger farms. This size breakdown is fairly consistent but a little more pronounced than in previous years. It is difficult to explain why this pattern has emerged. In the 2009 results, it is likely that some of the larger crop farms fell into the low profit group, so these results may be more related to enterprise than business size.

Debt level may also have been a contributing factor in 2009, although that was not the case in previous years. The high profit farms had, on average, the lowest debt-to-asset ratio. It is not surprising that in a low profit year, debt level was a larger factor in farm profitability. What is surprising is that the low profit farms were in a stronger liquidity position at the end of the year than the other groups when measured by working capital to gross revenue. This situation may be another indicator that this low income group is made up mostly of crop operations, which traditionally have more liquidity than dairy operations. It may also be an indication that many of these low profit farms were forced to restructure debt during 2009, moving some current debt into longer repayment terms.

The low profit group generated a term debt coverage ratio of -0.67:1, meaning that after owner withdrawals, they fell far short of earning enough to cover payments. The high profit farms, on the other hand, generated 1.83 times their scheduled debt payments. The high profit

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<sup>4</sup>Farms were categorized on the basis of having 70% or more of gross income from that category of income.



group's net worth increased, on average, by almost \$54,000, while the low profit group saw their net worth decrease by over \$60,000.

## TYPE OF FARM

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Of the 47 completely organic farms, 12 were crop farms and 27 were dairy farms (Table 4). The other eight farms were either organic hog or beef farms—for which there were not enough farms to summarize—or were diversified farms that fell into the “Other” category. In 2007 and 2008, the organic crop farms were very profitable as a group. In 2008, the median net farm income for organic crop farms was over \$98,000. Those kinds of returns came to a screeching halt in 2009, when the median crop farm earned only \$8,595 from the farm and a -1.1% ROA. Crop farms still had high liquidity (62% working capital to gross revenue and over 2:1 current ratio), but their debt repayment capacity was very weak (0.51:1 term debt coverage). The average organic crop farm's net worth decreased by \$1,243 during the year.

The 27 organic dairy farms were more profitable than the crop farms but less profitable than they were in any of the previous three years of this project. Their median net farm income in 2009 was \$21,725 compared to \$46,376 in 2008. Their 2009 rate of return on assets was 3.0%. While prices for conventional dairy producers collapsed in 2009, the price received for organic milk was slightly higher than in 2008, at \$25.77 per hundredweight. Consistent with their conventional dairy counterparts, their liquidity position was much lower than that of the crop farms, indicating much less ability to sustain a long period of reduced earnings. While they were more profitable than crop farms, their repayment capacity based on 2009 results was less than 1:1. Still, the average organic dairy farm increased its net worth by almost \$18,000 in 2009.

## SIZE OF FARM

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This report sorts organic farms into size groups based on gross farm income (Table 5). In past years, financial performance has generally increased with size for these organic farms. The results for 2009 reveal a bit of a mixed bag. While no size group was very profitable on average, the largest farms and the smallest farms were both more profitable than mid-sized farms. Yet the mid-sized farms were in a better liquidity position at the end of the year. The largest farms—those that grossed over \$500,000—fared better in terms of both net farm income (median \$107,536) and return on assets (3.8%). The smaller farms, which grossed between \$100,000 and

\$250,000, earned a median net farm income of \$21,725, while the median mid-sized farm lost \$2,742. Yet those mid-sized farms, on average, had 37.5% of a year's income in working capital at the end of the year. The smaller farms earned significantly more non-farm income than their larger counterparts. There were not enough farms that grossed under \$100,000 or over \$1,000,000 to summarize for 2009.

## SUMMARY

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One of the goals of this project is to document the financial performance of participating organic producers so that they and their peers have more accurate benchmarks on which to evaluate organic options. Another goal is to unmask the financial performance of a group of organic producers to provide agricultural lenders better information on which to base credit decisions and to give policy makers, researchers, and others real world insight into organic farm performance.

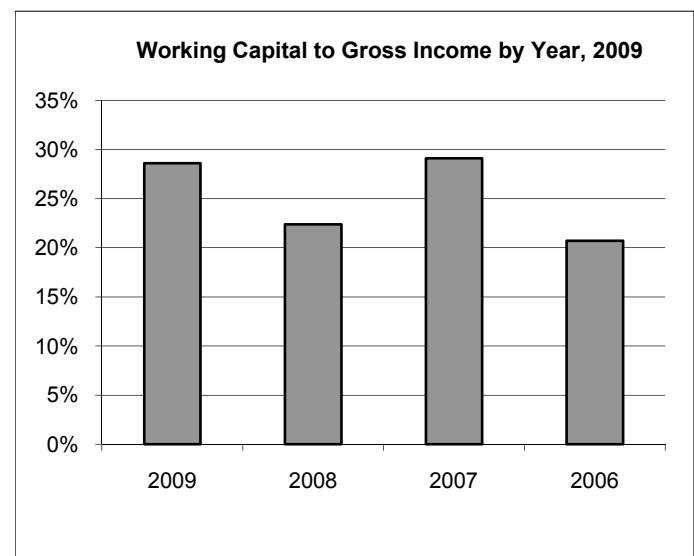
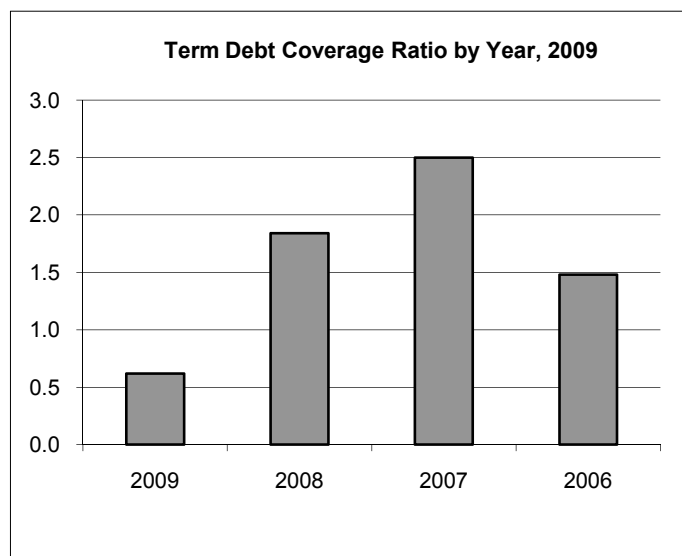
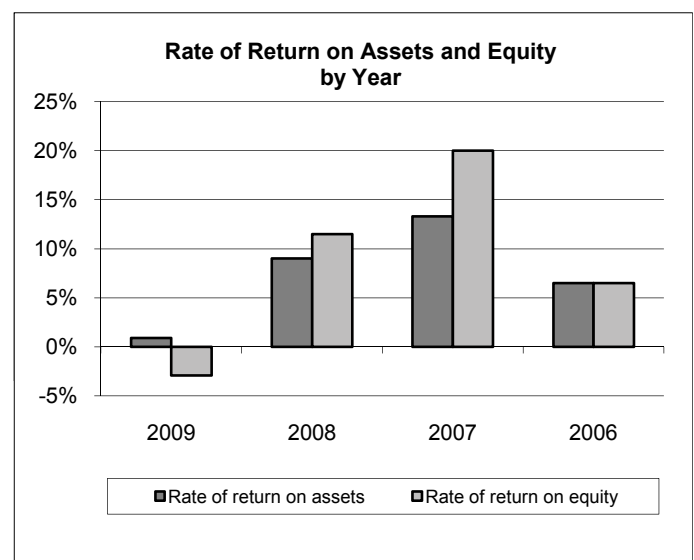
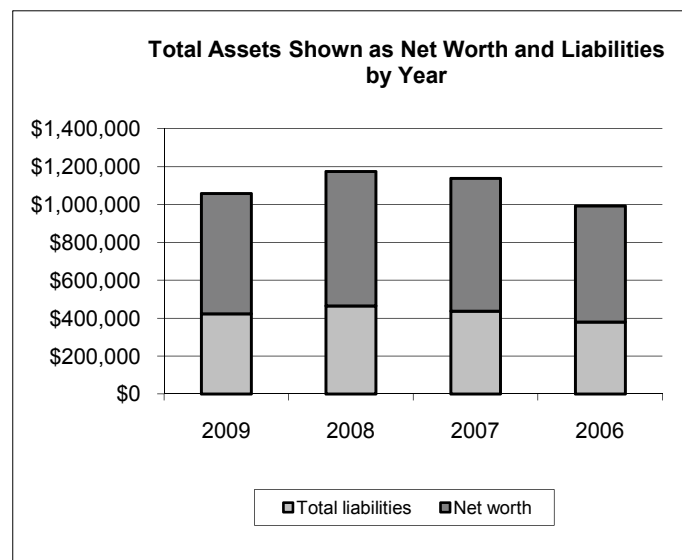
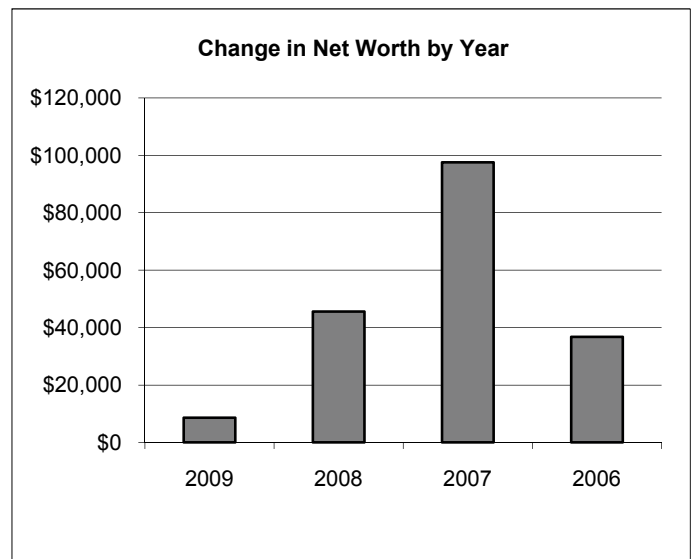
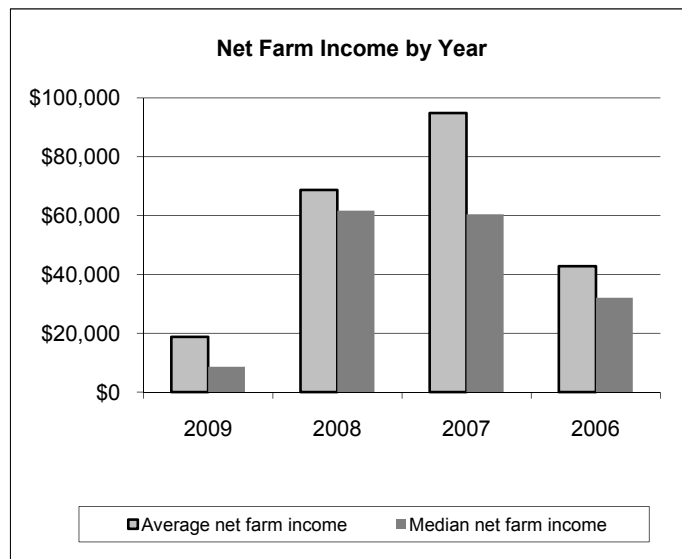
As with groups of conventional farms, there is tremendous variability in the production and financial performance of this group of organic producers. 2009 was not a very profitable year for the average producer in these farm management programs – conventional or organic. Some differences do surface from these results. While conventional dairy producers had a very difficult year in 2009, organic milk price premiums insulated organic producers to some extent. While conventional crop producers fared relatively well in 2009, organic crop producers had a very difficult year due to production problems, cost increases, and price reductions. These difficulties follow two very profitable years for organic crop producers.

The tables following this report summarize the financial performance of this group of 47 organic producers. The first several tables (Tables 1-6) include the information on which the previous discussion is based. The next set of tables provides information about crop enterprise (Tables 7-22) and dairy enterprise (Tables 23-25) performance. Finally, Table 26 shows the Farm Financial Standards Council's recommended ratios and measures. You can use the financial “scorecard” on the back cover to benchmark your own individual results.

If you would like to further dissect the results of these and the other farms that participated in Minnesota farm management educational program, you can run your own data reports using FINBIN at [www.finbin.umn.edu](http://www.finbin.umn.edu). The privacy and anonymity of all participants' data is strictly protected.



**Figure A. Selected Factors of Completely Organic Farms - Sorted by Year**



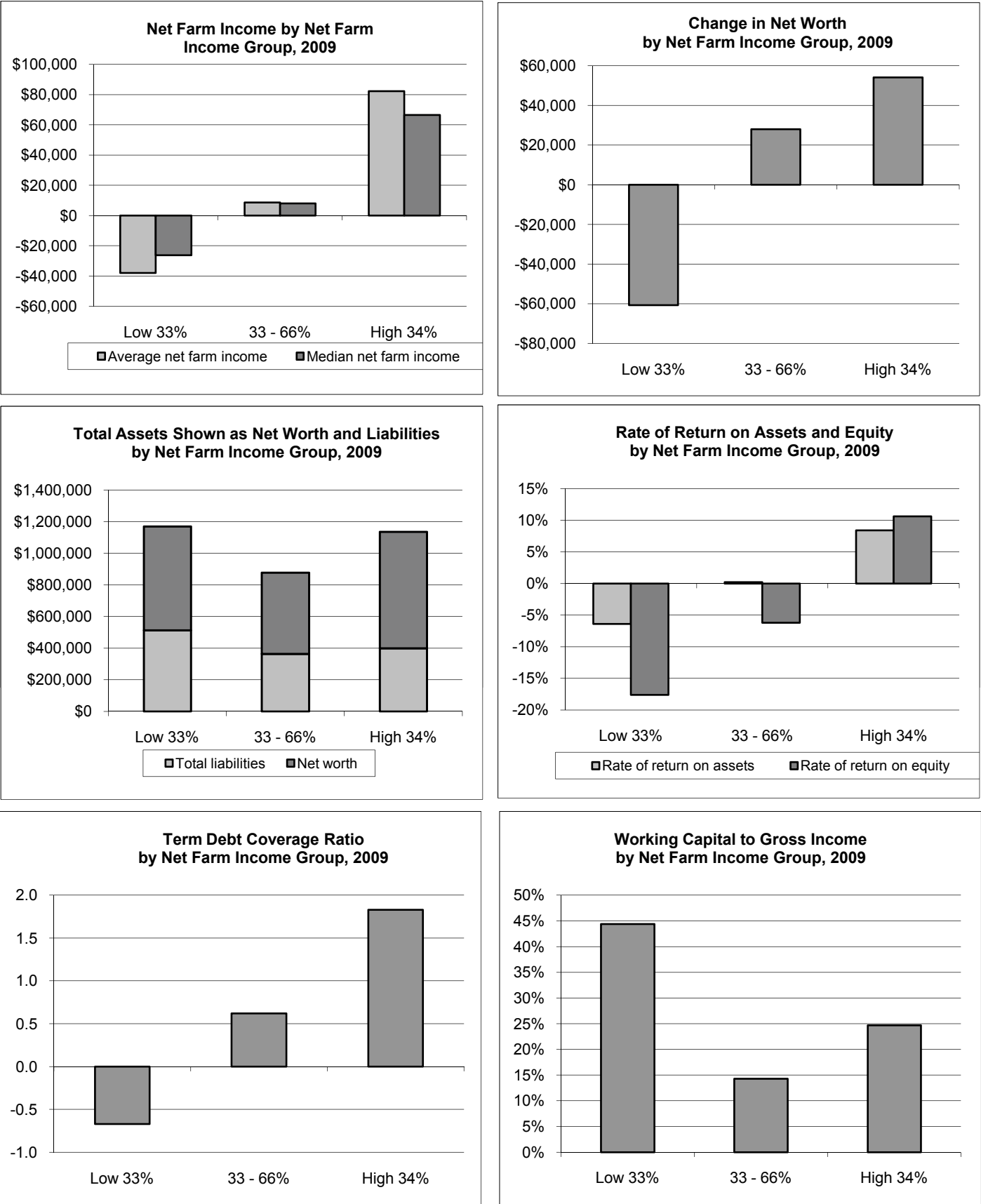
**Table 1. Financial Summary  
Completely Organic Farms  
(Sorted by Year)**

	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
<b>Number of farms</b>	47	47	44	45
<b>Income Statement</b>				
Gross cash farm income	239,105	260,620	248,581	197,144
Total cash farm expense	190,602	205,815	196,689	161,676
Net cash farm income	48,504	54,805	51,891	35,469
Inventory change	-12,582	32,537	60,017	21,437
Depreciation	-17,196	-18,730	-17,060	-14,053
Net farm income from operations	18,726	68,612	94,848	42,852
Gain or loss on capital sales	96	148	-	-
Average net farm income	18,821	68,759	94,848	42,852
Median net farm income	8,595	61,731	60,422	32,135
<b>Profitability (cost)</b>				
Rate of return on assets	0.90%	9.00%	13.30%	6.50%
Rate of return on equity	-2.90%	11.50%	20.00%	6.50%
Operating profit margin	2.80%	22.60%	31.70%	18.00%
Asset turnover rate	30.20%	39.70%	41.90%	36.10%
<b>Liquidity &amp; Repayment (end of year)</b>				
Current assets	147,753	167,204	175,510	122,405
Current liabilities	83,206	100,720	88,650	77,254
Current ratio	1.78	1.66	1.98	1.58
Working capital	64,547	66,484	86,860	45,150
Working capital to gross income	28.60%	22.40%	29.10%	20.70%
Term debt coverage ratio	0.62	1.84	2.5	1.48
Replacement coverage ratio	0.54	1.62	2.5	1.48
<b>Solvency (end of year at market)</b>				
Number of farms	47	47	44	45
Total farm assets	901,063	1,017,948	973,055	841,868
Total farm liabilities	384,418	424,606	389,920	334,683
Total assets	1,059,290	1,174,079	1,137,972	991,915
Total liabilities	423,704	465,383	438,422	380,630
Net worth	635,586	708,696	699,550	611,285
Net worth change	8,584	45,582	97,523	36,742
Farm debt to asset ratio	43%	42%	40%	40%
Total debt to asset ratio	40%	40%	39%	38%
<b>Nonfarm Information</b>				
Net nonfarm income	19,493	21,354	20,936	18,318
Farms reporting living expenses	7	9	7	6
Total family living expenses	49,976	48,620	43,632	38,833
Total living, investments, cap. purchases	45,122	49,895	53,647	44,853
<b>Crop Acres</b>				
Total acres owned	219	230	234	220
Total crop acres	354	384	406	357
Total crop acres owned	144	156	149	142
Total crop acres cash rented	193	212	242	210
Total crop acres share rented	17	16	14	5

**Table 2. Financial Summary**  
**All Participating Non-Organic (Conventional) Farms**  
**(Sorted by Year)**

	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
<b>Number of farms</b>	2,331	2,384	2,550	2,434
<b>Income Statement</b>				
Gross cash farm income	635,337	681,116	599,727	501,930
Total cash farm expense	529,123	560,143	502,653	426,718
Net cash farm income	106,214	120,973	97,074	75,212
Inventory change	-16,137	56,176	90,315	49,853
Depreciation	-36,264	-34,775	-30,152	-27,341
Net farm income from operations	53,812	142,374	157,237	97,724
Gain or loss on capital sales	723	1,088	-	-
Average net farm income	54,535	143,462	157,237	97,724
Median net farm income	33,996	92,220	107,071	61,538
<b>Profitability (cost)</b>				
Rate of return on assets	3.10%	10.50%	14.00%	9.40%
Rate of return on equity	1.40%	14.70%	20.90%	12.30%
Operating profit margin	7.90%	21.80%	27.10%	20.30%
Asset turnover rate	39.80%	48.30%	51.40%	46.20%
<b>Liquidity &amp; Repayment (end of year)</b>				
Current assets	442,037	464,309	406,987	331,841
Current liabilities	256,312	239,295	215,900	204,401
Current ratio	1.72	1.94	1.89	1.62
Working capital	185,725	225,014	191,087	127,439
Working capital to gross income	29.20%	31.40%	28.10%	23.00%
Term debt coverage ratio	1.03	2.41	2.77	1.91
Replacement coverage ratio	0.87	2.06	2.77	1.91
<b>Solvency (end of year at market)</b>				
Number of farms	2,331	2,384	2,550	2,434
Total farm assets	1,806,331	1,742,992	1,563,761	1,416,730
Total farm liabilities	838,755	812,401	731,011	672,230
Total assets	2,003,555	1,921,555	1,741,340	1,590,949
Total liabilities	887,836	857,451	774,742	712,835
Net worth	1,115,720	1,064,105	966,598	878,114
Net worth change	60,228	107,885	145,459	97,143
Farm debt to asset ratio	46%	47%	47%	47%
Total debt to asset ratio	44%	45%	44%	45%
<b>Nonfarm Information</b>				
Net nonfarm income	26,728	25,200	24,464	24,539
Farms reporting living expenses	657	778	767	743
Total family living expenses	52,766	50,959	48,017	45,281
Total living, investments, cap. purch	84,043	77,725	71,927	68,590
<b>Crop Acres</b>				
Total acres owned	269	266	269	276
Total crop acres	810	803	792	800
Total crop acres owned	227	222	213	222
Total crop acres cash rented	560	557	555	551
Total crop acres share rented	22	24	25	26

Figure B. Selected Factors of Completely Organic Farms, 2009 - Sorted by Net Farm Income

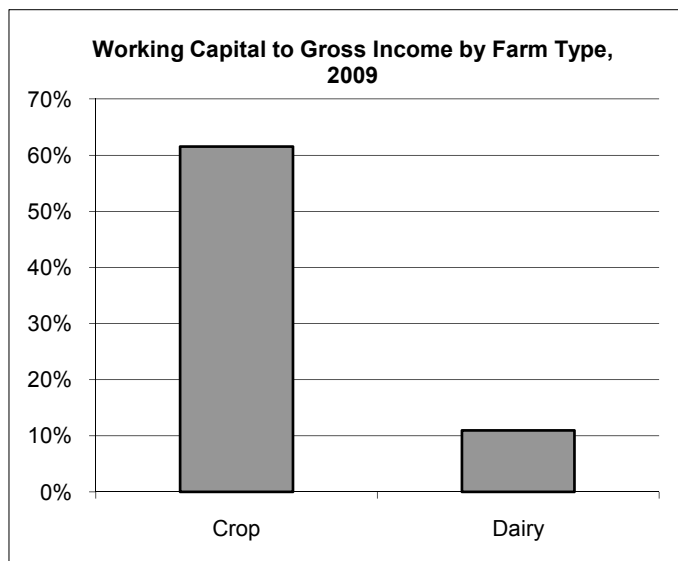
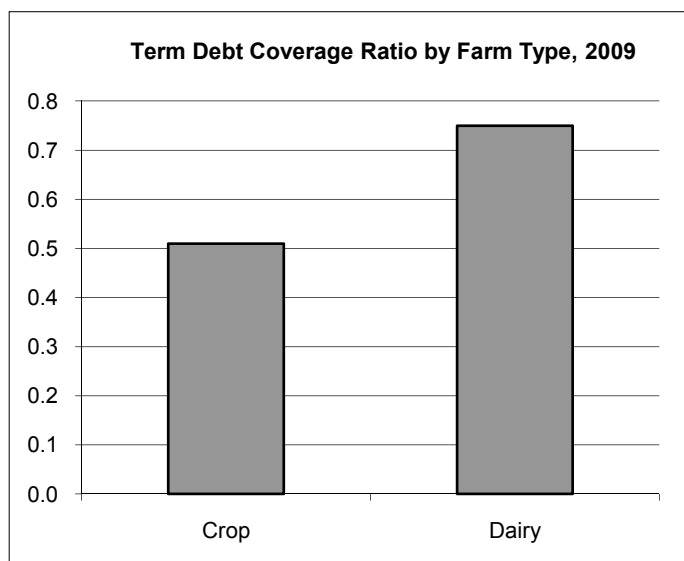
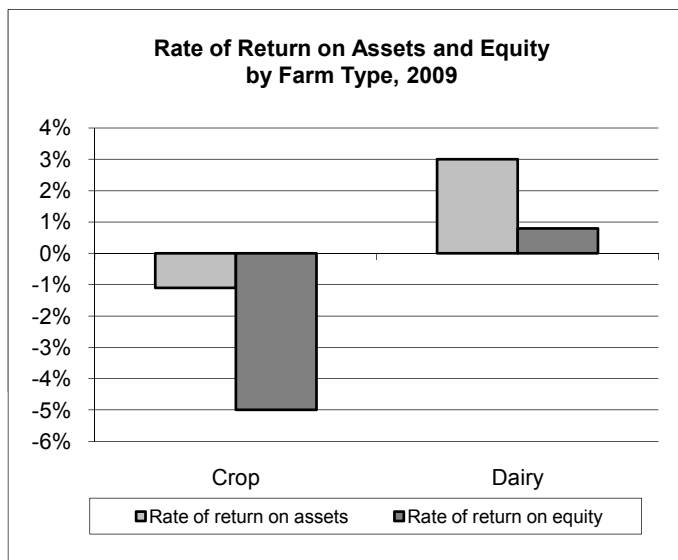
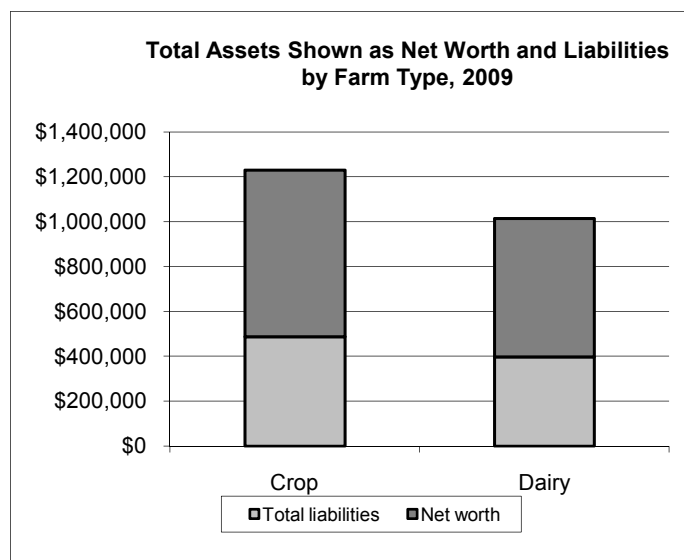
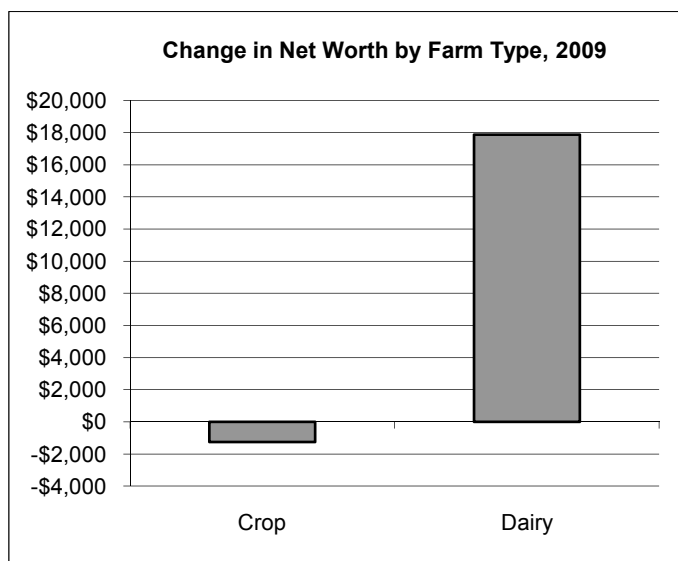
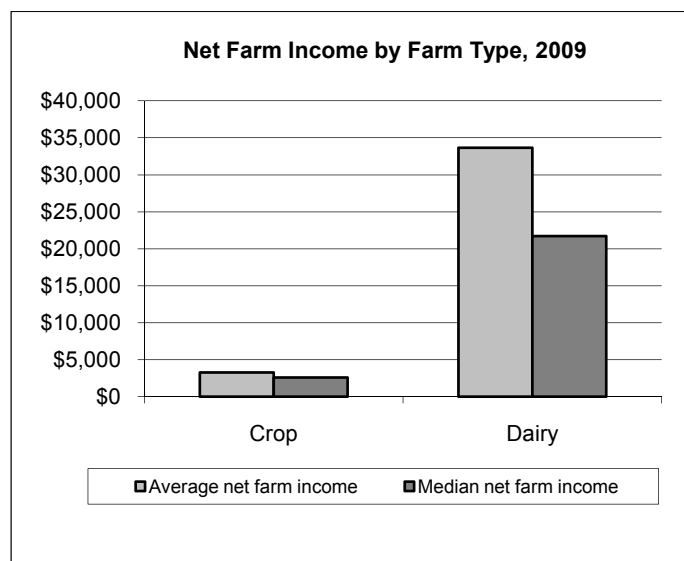




**Table 3. Financial Summary**  
**Completely Organic Farms - 2009**  
**(Sorted by Net Farm Income)**

	<u>Avg of All Farms</u>	<u>Low 33%</u>	<u>33 - 66%</u>	<u>High 34%</u>
<b>Number of farms</b>	47	15	16	16
<b>Income Statement</b>				
Gross cash farm income	239,105	264,497	148,654	305,752
Total cash farm expense	190,602	236,104	121,375	217,170
Net cash farm income	48,504	28,392	27,279	88,582
Inventory change	-12,582	-46,354	-9,450	15,947
Depreciation	-17,196	-20,031	-9,501	-22,234
Net farm income from operations	18,726	-37,992	8,329	82,295
Gain or loss on capital sales	96	-	281	-
Average net farm income	18,821	-37,992	8,610	82,295
Median net farm income	8,595	-26,287	8,022	66,557
<b>Profitability (cost)</b>				
Rate of return on assets	0.90%	-6.40%	0.20%	8.40%
Rate of return on equity	-2.90%	-17.60%	-6.20%	10.60%
Operating profit margin	2.80%	-26.20%	0.70%	21.90%
Asset turnover rate	30.20%	24.60%	25.80%	38.30%
<b>Liquidity &amp; Repayment (end of year)</b>				
Current assets	147,753	213,704	77,231	156,446
Current liabilities	83,206	117,035	57,605	77,091
Current ratio	1.78	1.83	1.34	2.03
Working capital	64,547	96,668	19,626	79,355
Working capital to gross inc	28.60%	44.40%	14.30%	24.70%
Term debt coverage ratio	0.62	-0.67	0.62	1.83
Replacement coverage ratio	0.54	-0.57	0.58	1.58
<b>Solvency (end of year at market)</b>				
Number of farms	47	15	16	16
Total farm assets	901,063	1,069,627	681,100	962,998
Total farm liabilities	384,418	498,247	311,879	350,241
Total assets	1,059,290	1,170,238	878,351	1,136,216
Total liabilities	423,704	512,874	363,741	400,070
Net worth	635,586	657,364	514,610	736,146
Net worth change	8,584	-60,772	28,037	54,153
Farm debt to asset ratio	43%	47%	46%	36%
Total debt to asset ratio	40%	44%	41%	35%
<b>Nonfarm Information</b>				
Net nonfarm income	19,493	17,302	26,930	14,109
Farms reporting living expenses	7	2	1	4
Total family living expenses	49,976	-	-	-
Total living, investments, cap. purch	45,122	-	-	-
<b>Crop Acres</b>				
Total acres owned	219	285	166	209
Total crop acres	354	534	201	338
Total crop acres owned	144	246	93	99
Total crop acres cash rented	193	288	108	190
Total crop acres share rented	17	-	-	49

**Figure C. Selected Factors of Completely Organic Farms, 2009 - Sorted by Farm Type**

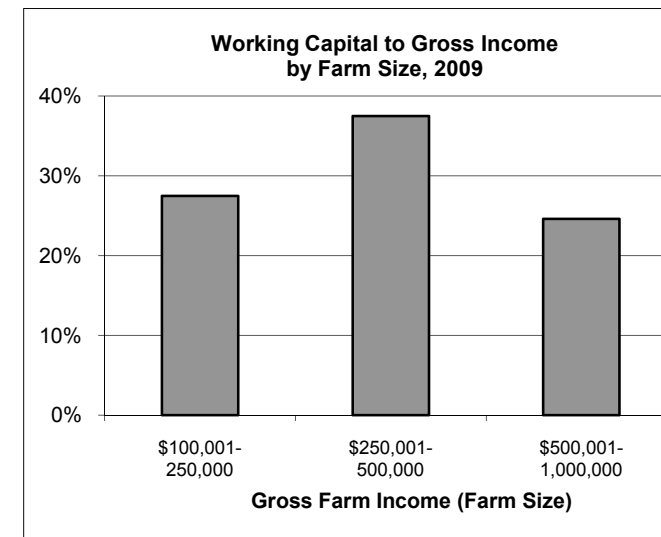
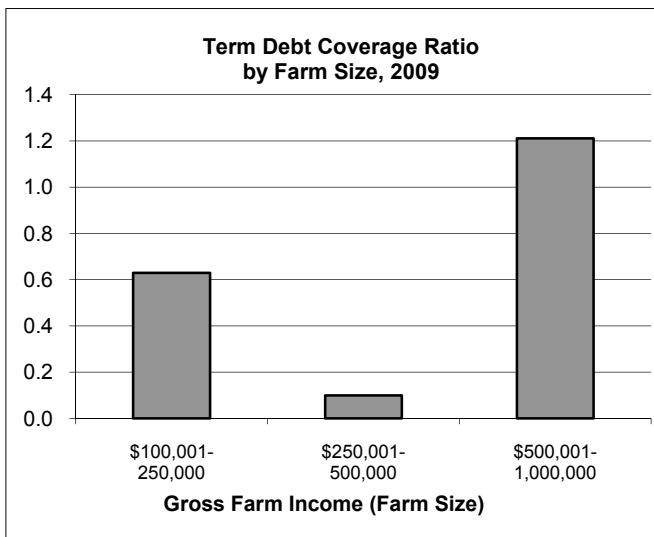
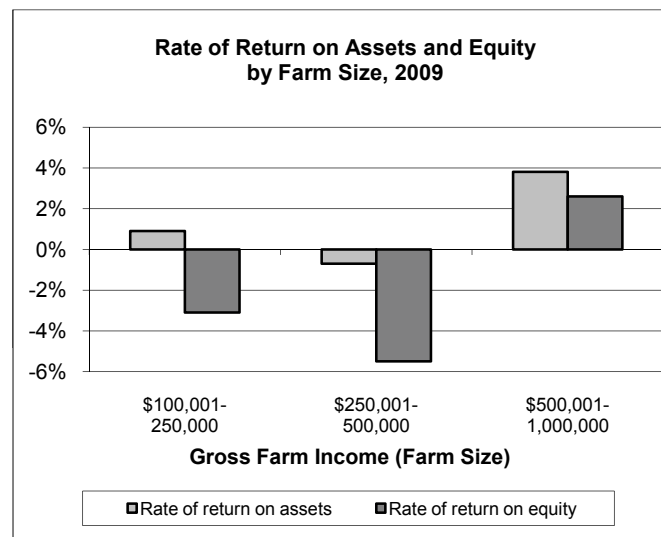
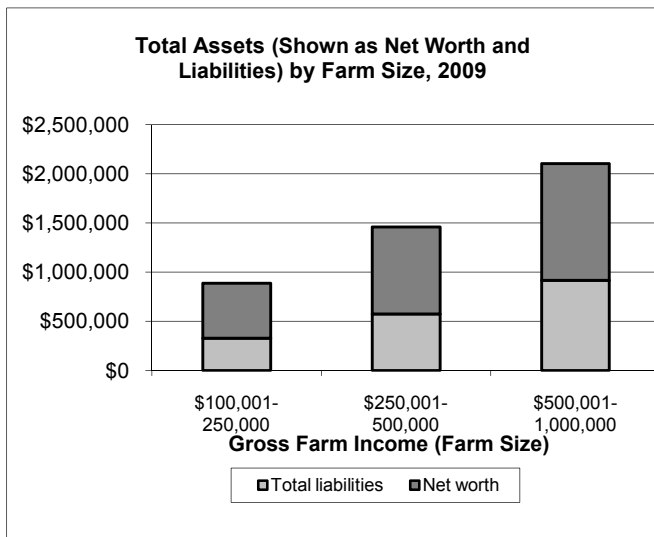
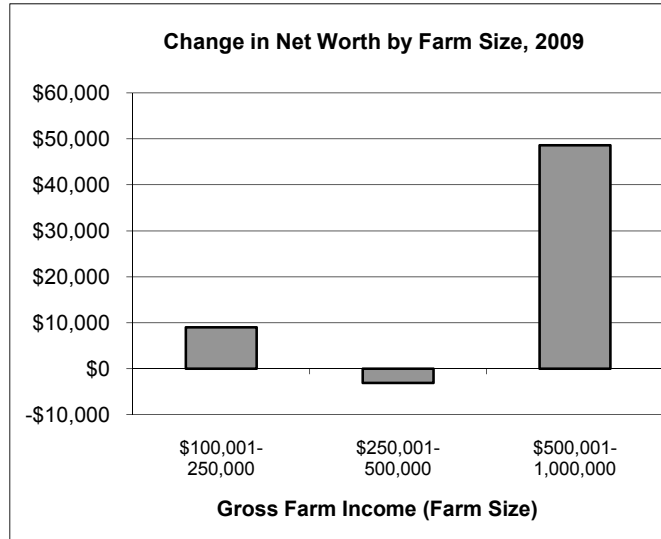
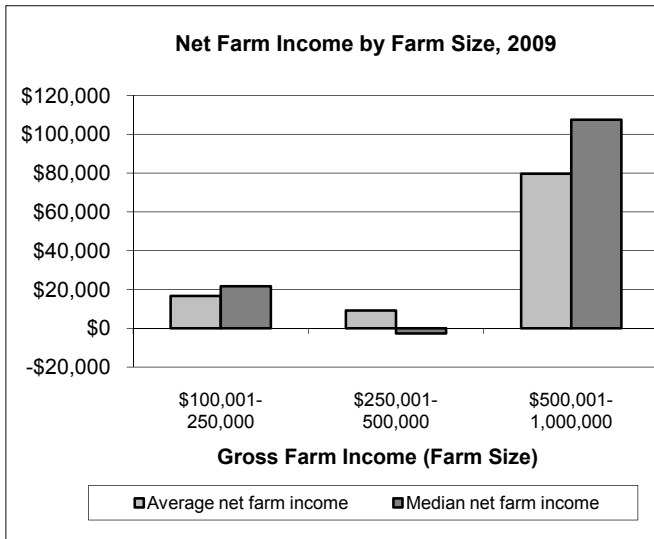


**Table 4. Financial Summary**  
**Completely Organic Farms, 2009**  
**(Sorted By Farm Type)**

	<u>Avg of All Farms</u>	<u>Crop</u>	<u>Dairy</u>	<u>Other</u>
<b>Number of farms</b>	47	12	27	5
<b>Income Statement</b>				
Gross cash farm income	239,105	250,717	250,766	79,297
Total cash farm expense	190,602	184,400	197,979	80,770
Net cash farm income	48,504	66,317	52,787	-1,472
Inventory change	-12,582	-36,747	-5,781	4,865
Depreciation	-17,196	-26,691	-13,330	-3,239
Net farm income from operations	18,726	2,879	33,676	154
Gain or loss on capital sales	96	375	-	-
Average net farm income	18,821	3,254	33,676	154
Median net farm income	8,595	2,585	21,725	7,448
<b>Profitability (cost)</b>				
Rate of return on assets	0.90%	-1.10%	3.00%	-2.20%
Rate of return on equity	-2.90%	-5.00%	0.80%	-13.30%
Operating profit margin	2.80%	-4.40%	7.90%	-9.20%
Asset turnover rate	30.20%	24.50%	37.20%	23.50%
<b>Liquidity &amp; Repayment (end of year)</b>				
Current assets	147,753	255,948	83,994	71,086
Current liabilities	83,206	125,704	57,116	44,523
Current ratio	1.78	2.04	1.47	1.6
Working capital	64,547	130,244	26,878	26,563
Working capital to gross income	28.60%	61.50%	11.00%	34.70%
Term debt coverage ratio	0.62	0.51	0.75	0.53
Replacement coverage ratio	0.54	0.39	0.68	0.52
<b>Solvency (end of year at market)</b>				
Number of farms	47	12	27	5
Total farm assets	901,063	1,024,461	854,361	313,523
Total farm liabilities	384,418	444,597	350,301	167,237
Total assets	1,059,290	1,229,514	1,015,199	382,112
Total liabilities	423,704	487,642	397,270	178,518
Net worth	635,586	741,872	617,929	203,595
Net worth change	8,584	-1,243	17,868	1,320
Farm debt to asset ratio	43%	43%	41%	53%
Total debt to asset ratio	40%	40%	39%	47%
<b>Nonfarm Information</b>				
Net nonfarm income	19,493	39,378	10,354	19,207
Farms reporting living expenses	7	2	4	-
Total family living expense	49,976	-	-	-
Total living, investments, cap purch	45,122	-	-	-
<b>Crop Acres</b>				
Total acres owned	219	265	187	108
Total crop acres	354	707	198	217
Total crop acres owned	144	288	71	101
Total crop acres cash rented	193	379	128	86
Total crop acres share rented	17	40	-	30

**Note: A few other participating farms fell into categories that are not reported here.**

**Figure D. Selected Factors of Completely Organic Farms, 2009 - Sorted by Gross Farm Income (Farm Size)**



**Table 5. Financial Summary  
Completely Organic Farms - 2009  
(Sorted by Gross Farm Income)**

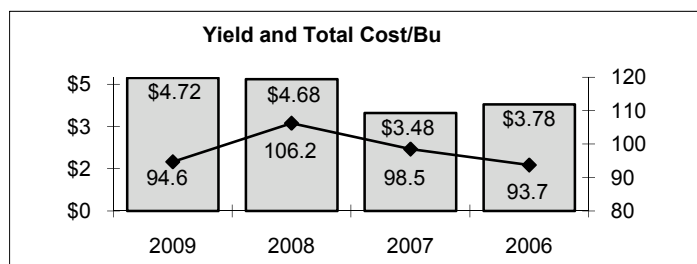
	<u>Avg of All Farms</u>	<u>\$100,001- 250,000</u>	<u>\$250,001- 500,000</u>	<u>\$500,001- 1,000,000</u>
<b>Number of farms</b>	47	25	10	5
<b>Income Statement</b>				
Gross cash farm income	239,105	159,981	340,984	696,137
Total cash farm expense	190,602	118,314	289,184	541,622
Net cash farm income	48,504	41,667	51,800	154,514
Inventory change	-12,582	-14,118	-21,642	-16,072
Depreciation	-17,196	-10,825	-21,002	-58,710
Net farm income from operations	18,726	16,724	9,157	79,732
Gain or loss on capital sales	96	-	-	-
Average net farm income	18,821	16,724	9,157	79,732
Median net farm income	8,595	21,725	-2,742	107,536
<b>Profitability (cost)</b>				
Rate of return on assets	0.90%	0.90%	-0.70%	3.80%
Rate of return on equity	-2.90%	-3.10%	-5.50%	2.60%
Operating profit margin	2.80%	3.20%	-2.30%	10.60%
Asset turnover rate	30.20%	26.80%	31.10%	35.70%
<b>Liquidity &amp; Repayment (end of year)</b>				
Current assets	147,753	88,602	218,388	446,856
Current liabilities	83,206	48,006	99,196	282,884
Current ratio	1.78	1.85	2.2	1.58
Working capital	64,547	40,595	119,193	163,972
Working capital to gross income	28.60%	27.50%	37.50%	24.60%
Term debt coverage ratio	0.62	0.63	0.1	1.21
Replacement coverage ratio	0.54	0.56	0.09	1.06
<b>Solvency (end of year at market)</b>				
Number of farms	47	25	10	5
Total farm assets	901,063	721,898	1,255,244	1,968,321
Total farm liabilities	384,418	290,137	503,177	906,184
Total assets	1,059,290	887,728	1,460,032	2,106,862
Total liabilities	423,704	326,308	573,903	915,564
Net worth	635,586	561,420	886,129	1,191,298
Net worth change	8,584	9,021	-3,066	48,582
Farm debt to asset ratio	43%	40%	40%	46%
Total debt to asset ratio	40%	37%	39%	43%
<b>Nonfarm Information</b>				
Net nonfarm income	19,493	22,125	13,024	14,861
Farms reporting living expenses	7	3	1	2
Total family living expenses	49,976	-	-	-
Total living, investments, cap purch	45,122	-	-	-
<b>Crop Acres</b>				
Total acres owned	219	184	310	371
Total crop acres	354	199	465	1,141
Total crop acres owned	144	92	193	391
Total crop acres cash rented	193	95	272	654
Total crop acres share rented	17	12	-	96

**Note: There were not enough farms that grossed under \$100,000 or over \$1,000,000 to summarize for 2009.**

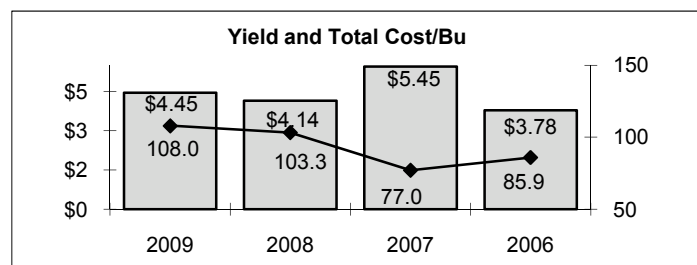
**Figure E. Organic Crop, Forage, and Livestock Trends<sup>1, 2</sup>**

Graphs Show Yield per acre (line) and  
Total Cost per bu (bar)

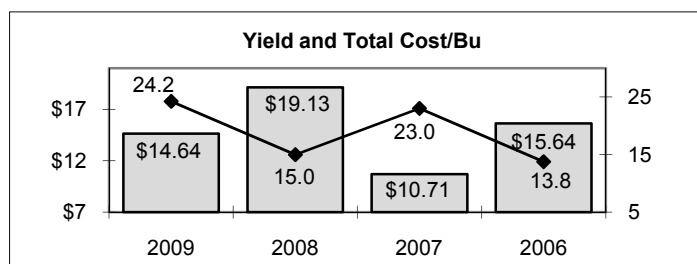
	2009	2008	2007	2006
<b>Corn - Owned Land</b>				
Yield per acre	94.64	106.21	98.50	93.68
Value per bushel	\$5.97	\$8.60	\$8.88	\$5.51
Direct Exp per acre	\$256.97	\$300.04	\$184.63	\$198.59
Total Exp per acre	\$446.37	\$497.06	\$342.92	\$354.53
Net Return per acre	\$132.08	\$455.36	\$585.63	\$202.70
Total Exp per bushel	\$4.72	\$4.68	\$3.48	\$3.78



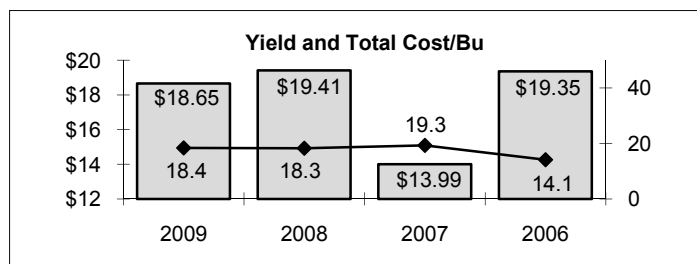
<b>Corn - Rented Land</b>				
Yield per acre	107.98	103.26	77.04	85.94
Value per bushel	\$6.62	\$9.43	\$8.09	\$5.29
Direct Exp per acre	\$383.66	\$347.70	\$319.46	\$240.06
Total Exp per acre	\$480.36	\$427.41	\$419.54	\$325.24
Net Return per acre	\$240.69	\$601.35	\$270.71	\$148.37
Total Exp per bushel	\$4.45	\$4.14	\$5.45	\$3.78



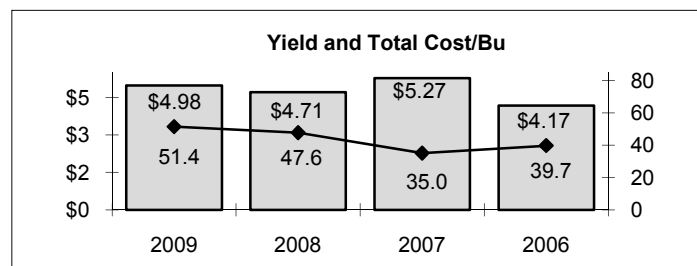
<b>Soybeans - Owned Land</b>				
Yield per acre	24.23	14.98	23.01	13.76
Value per bushel	\$17.65	\$19.39	\$19.63	\$14.37
Direct Exp per acre	\$187.11	\$147.86	\$111.79	\$126.55
Total Exp per acre	\$354.63	\$286.49	\$246.32	\$215.25
Net Return per acre	\$92.62	\$78.12	\$227.03	\$20.68
Total Exp per bushel	\$14.64	\$19.13	\$10.71	\$15.64



<b>Soybeans - Rented Land</b>				
Yield per acre	18.36	18.27	19.29	14.13
Value per bushel	\$20.62	\$22.84	\$19.06	\$14.63
Direct Exp per acre	\$255.94	\$288.89	\$208.27	\$218.19
Total Exp per acre	\$342.35	\$354.64	\$269.81	\$273.42
Net Return per acre	\$82.78	\$183.18	\$118.43	-\$10.99
Total Exp per bushel	\$18.65	\$19.41	\$13.99	\$19.35



<b>Barley - Owned Land</b>				
Yield per acre	51.44	47.64	35.04	39.71
Value per bushel	\$6.25	\$6.63	\$6.14	\$4.84
Direct Exp per acre	\$153.99	\$139.85	\$88.01	\$73.85
Total Exp per acre	\$256.33	\$224.55	\$184.84	\$165.44
Net Return per acre	\$77.68	\$97.89	\$68.76	\$37.74
Total Exp per bushel	\$4.98	\$4.71	\$5.27	\$4.17

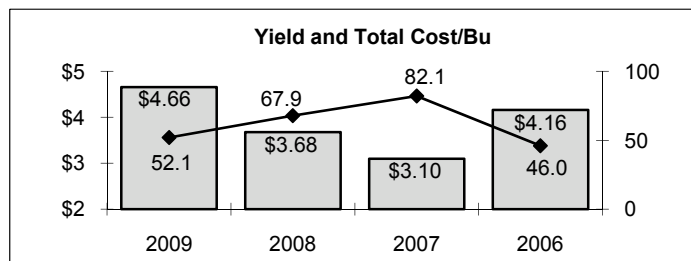


<sup>1</sup> Total expenses include direct and overhead costs.

<sup>2</sup> Net return does not include labor or management.

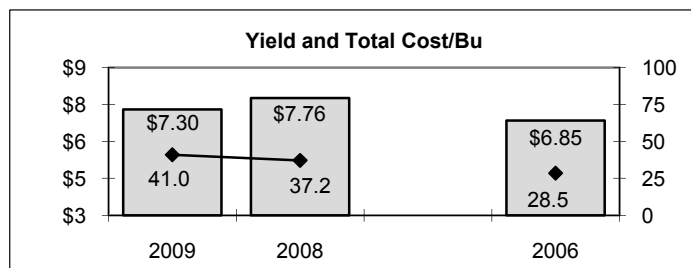


	2009	2008	2007	2006
<b><u>Oats - Owned Land</u></b>				
Yield per acre	52.06	67.94	82.11	46.04
Value per bushel	\$5.15	\$5.10	\$4.17	\$3.23
Direct Exp per acre	\$129.35	\$116.27	\$109.42	\$114.07
Total Exp per acre	\$242.79	\$250.28	\$254.71	\$191.60
Net Return per acre	\$38.12	\$146.60	\$125.15	-\$27.95
Total Exp per bushel	\$4.66	\$3.68	\$3.10	\$4.16



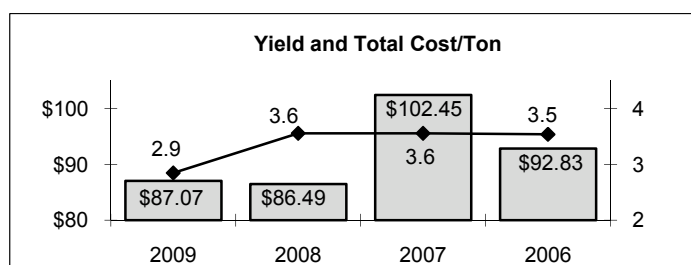
**Spring Wheat - Owned Land**

Yield per acre	40.96	37.17		28.48
Value per bushel	\$6.56	\$13.88		\$6.70
Direct Exp per acre	\$171.02	\$181.59		\$111.38
Total Exp per acre	\$299.02	\$288.63		\$194.96
Net Return per acre	\$5.46	\$227.45		\$14.82
Total Exp per bushel	\$7.30	\$7.76		\$6.85



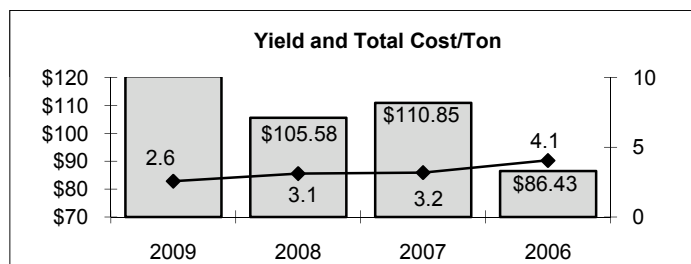
**Alfalfa Hay - Owned Land**

Yield per acre	2.85	3.56	3.56	3.54
Value per ton	\$122.78	\$138.16	\$148.96	\$122.17
Direct Exp per acre	\$132.47	\$175.24	\$198.98	\$219.08
Total Exp per acre	\$247.96	\$307.51	\$365.15	\$328.81
Net Return per acre	\$106.34	\$184.94	\$165.77	\$118.94
Total Exp per ton	\$87.07	\$86.49	\$102.45	\$92.83



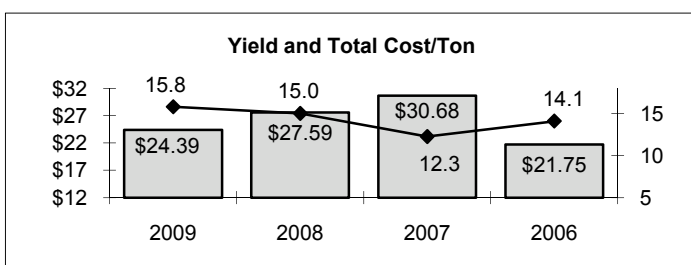
**Alfalfa Hay - Rented Land**

Yield per acre	2.55	3.11	3.18	4.05
Value per ton	\$127.21	\$142.21	\$139.15	\$115.69
Direct Exp per acre	\$215.57	\$245.82	\$230.85	\$284.60
Total Exp per acre	\$307.26	\$328.73	\$352.73	\$350.36
Net Return per acre	\$17.41	\$115.57	\$91.22	\$125.64
Total Exp per ton	\$120.39	\$105.58	\$110.85	\$86.43



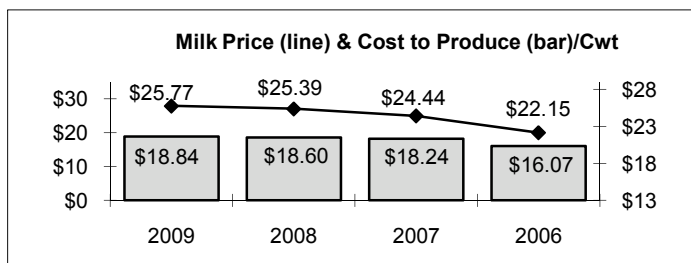
**Corn Silage - Owned Land**

Yield per acre	15.80	15.01	12.25	14.09
Value per ton	\$40.98	\$45.42	\$36.22	\$30.87
Direct Exp per acre	\$238.23	\$274.07	\$225.01	\$187.37
Total Exp per acre	\$385.37	\$414.19	\$375.77	\$306.51
Net Return per acre	\$262.10	\$281.28	\$118.21	\$140.63
Total Exp per ton	\$24.39	\$27.59	\$30.68	\$21.75



**Dairy**

Production lb/cow	12,129	12,629	13,372	12,323
Price rec'd/cwt	\$25.77	\$25.39	\$24.44	\$22.15
Total feed cost/cwt	\$10.33	\$10.31	\$10.47	\$7.64
Total exp/cwt	\$18.84	\$18.60	\$18.24	\$16.07
Net return/cwt	\$5.37	\$5.34	\$6.09	\$6.67
Net return/cow	\$651.63	\$674.65	\$814.91	\$821.54



# CROP REPORTS

There are years like 2009 that many crop farmers—both organic and conventional—will want to forget. Production challenges started early and continued throughout the entire growing season. A late cool spring and summer limited growing degree days until September. Excessive rain at times and not enough moisture in some areas of the state reduced yield and caused some crop quality problems. Some of the worst production problems were caused by weather; due to cool temperatures, crops were slow to mature, then a wet fall caused harvest delays. When the year was complete, and the numbers compiled, the bottom line for most Minnesota organic crop farms did not look very good. But that was true for the conventional farmers as well.

The Crop Enterprise Analysis tables that follow show the average production, gross return, direct expenses, overhead expenses, and net returns per acre for various organic cropping enterprises on completely and partially organic farms. Separate tables are included for owned and cash rented land. The reports include historical comparisons of enterprise returns for years 2006 through 2009. Only crops with sufficient instances to summarize are included. For similar reports that describe the performance of conventional crop farms in 2009, visit [www.finbin.umn.edu](http://www.finbin.umn.edu).

*Gross return per acre* includes the value of the crop produced plus any other income directly associated with production of the crop, including loan deficiency (LDP) payments, crop insurance proceeds and any disaster payments that might have been received. It does not include direct and counter-cyclical government payments (see *Net return with government payments*).

The *Value per unit* (ton or bushel) is assigned by the producer. For cash crops, the value is based on the actual sales price for production sold or contracted before year-end and the inventory value for crops still in inventory at year-end. The local harvest-time price is used for forages and other feed crops.

*Net return per acre* is the amount contributed toward operator labor, management, and equity capital. Land costs include land rent on the rented land pages but only actual interest paid and real estate taxes on owned land. **For this reason, net returns from owned and rented land should not be compared.**

*Net return with government payments* is the net return per acre after decoupled government payments such as direct and counter-cyclical government payments have been added. These payments are generally allocated evenly per acre across all crops except vegetables and pasture.

*Net return over labor and management* is the return, including government payments, after compensating the operator for unpaid labor and management. This is also known as the per acre return to equity capital.

*Cost of production* shows the average cost per unit produced in each cost category:

*Total direct and overhead expense per unit* is the break even price needed to cover cash costs and depreciation.

*Less government and other income* is the break even price when government payments and any miscellaneous income are used to offset some expenses.

*With labor and management* is the break even price to provide a labor and management return for the operator(s).

*Machinery cost per acre* includes fuel and oil, repairs, custom hire, machinery lease payments, machinery depreciation, and interest on intermediate debt.

**Table 6. Crop Production and Marketing Summary  
Completely and Partially Organic Farms**

	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
<b>Number of farms</b>	70	73	64	70
<b>Acreage Summary</b>				
Total acres owned	244	245	284	264
Total crop acres	411	451	552	514
Crop acres owned	165	176	197	174
Crop acres cash rented	233	263	337	316
Crop acres share rented	12	11	18	25
Total pasture acres	51	47	33	27
Percent crop acres owned	40%	39%	36%	34%
<b>Average Price Received (Cash Sales Only)</b>				
Soybeans, Organic per bushel	21.01	22.50	16.17	14.17
Soybeans per bushel	11.01	11.58	7.96	6.32
Corn per bushel	4.63	5.06	3.76	2.11
Corn, Organic per bushel	7.76	8.71	6.62	5.19
Hay, Alfalfa, Organic per ton	108.42	120.39	125.17	132.22
Wheat, Spring per bushel	-	6.80	4.70	4.11
Oats, Organic per bushel	4.82	-	4.94	-
Barley, Organic per bushel	7.88	-	5.54	-
Hay, Alfalfa per ton	-	-	-	78.85
<b>Average Yield Per Acre</b>				
Hay, Alfalfa, Organic (ton)	2.63	3.30	3.35	3.81
Corn, Organic (bushel)	110.34	110.94	78.74	90.03
Soybeans, Organic (bushel)	24.18	18.56	20.83	15.11
Soybeans (bushel)	33.25	31.13	33.98	31.53
Pasture, Organic (aum)	4.00	5.70	3.89	7.47
Corn Silage, Organic (ton)	14.05	12.62	11.64	14.70
Oats, Organic (bushel)	58.68	56.55	77.31	40.12
Barley, Organic (bushel)	55.45	51.55	31.85	31.81
Corn (bushel)	156.08	156.33	134.08	151.12
Hay, Grass, Organic (ton)	3.17	2.81	2.63	2.98
Wheat, Spring, Organic (bushel)	53.83	43.36	25.33	27.65
Wheat, Spring (bushel)	57.50	60.59	53.18	42.41
CRP (\$)	-	60.24	-	56.84
Hay, Mixed, Organic (ton)	1.99	2.53	-	-
Haylage, Alfalfa (ton)	7.93	-	-	-
Sunflowers, Organic (cwt)	-	-	12.59	-

**Table 7. Crop Enterprise Analysis**  
**Barley – Organic on Owned Land**

	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
<b>Number of fields</b>	14	10	8	8
<b>Number of farms</b>	10	8	7	8
Acres	18.99	71.79	49.21	55.73
Yield per acre (bu)	51.44	47.64	35.04	39.71
Operators share of yield %	100	100	100	100
Value per bu	6.25	6.63	6.14	4.84
Other product return per acre	2.79	-	-	-
Total product return per acre	324.42	315.72	215.25	192.38
Crop insurance per acre	-	1.69	-	-
Other crop income per acre	9.59	5.04	38.36	10.80
Gross return per acre	334.01	322.45	253.60	203.18
<b>Direct Expenses</b>				
Seed	29.78	26.31	22.38	11.03
Fertilizer	28.03	24.81	13.21	3.75
Crop insurance	7.91	7.10	5.54	4.14
Drying expense	14.41	-	-	-
Fuel & oil	15.73	31.82	14.13	20.19
Repairs	33.84	30.60	20.63	20.71
Custom hire	10.99	1.11	1.47	1.07
Hired labor	8.37	-	-	-
Hauling and trucking	-	1.52	0.73	-
Marketing	1.80	-	-	-
Organic certification	0.47	4.57	2.77	1.55
Operating interest	1.58	3.88	6.88	11.40
Miscellaneous	1.09	8.13	0.28	-
Total direct expenses per acre	153.99	139.85	88.01	73.85
Return over direct expenses per acre	180.02	182.60	165.59	129.33
<b>Overhead Expenses</b>				
Custom hire	-	0.43	8.57	2.17
Hired labor	5.53	9.74	7.39	8.42
Machinery leases	2.60	0.02	0.19	0.21
Real estate & pers property taxes	12.48	8.15	7.25	10.12
Farm insurance	5.20	5.43	4.05	5.02
Utilities	5.88	3.59	3.82	4.96
Dues & professional fees	2.93	2.94	3.06	2.77
Interest	39.66	24.09	22.75	26.44
Mach & bldg depreciation	23.73	29.79	36.59	20.29
Miscellaneous	4.33	0.53	3.15	11.18
Total overhead expenses per acre	102.35	84.71	96.83	91.59
Total dir & ovhd expenses per acre	256.33	224.55	184.84	165.44
Net return per acre	77.68	97.89	68.76	37.74
Government payments	8.55	14.60	12.36	18.19
Net return with govt pmts	86.23	112.49	81.12	55.94
Labor & management charge	36.77	42.35	39.25	31.06
Net return over lbr & mgt	49.46	70.14	41.87	24.87
<b>Cost of Production</b>				
Total direct expenses per bu	2.99	2.94	2.51	1.86
Total dir & ovhd expenses per bu	4.98	4.71	5.27	4.17
Less govt & other income	4.58	4.27	3.83	3.44
With labor & management	5.29	5.16	4.95	4.22
Net value per unit	6.25	6.63	6.14	4.84
Machinery cost per acre	92.15	94.52	82.57	67.26
Estimated labor hours per acre	3.95	2.86	3.74	3.93

**Table 8. Crop Enterprise Analysis**  
**Barley – Organic on Cash Rent**

	<u><b>2009</b></u>	<u><b>2008</b></u>	<u><b>2007</b></u>
<b>Number of fields</b>	11	11	9
<b>Number of farms</b>	10	11	8
Acres	66.83	56.06	78.93
Yield per acre (bu)	56.09	47.72	30.08
Operators share of yield %	100	100	100
Value per bu	5.37	8.36	6.81
Total product return per acre	301.44	399.09	204.88
Crop insurance per acre	1.11	16.22	-
LDP income per acre	-	0.89	-
Other crop income per acre	1.81	2.27	17.22
Gross return per acre	304.36	418.47	222.10
<b>Direct Expenses</b>			
Seed	19.45	20.14	20.18
Fertilizer	21.31	24.22	24.08
Crop insurance	5.03	5.60	6.62
Drying expense	9.69	-	-
Fuel & oil	13.99	16.23	20.80
Repairs	33.40	31.91	27.35
Custom hire	7.34	8.60	3.04
Hired labor	-	1.11	-
Land rent	62.71	49.94	60.66
Utilities	-	1.45	-
Hauling and trucking	-	1.81	4.63
Marketing	1.21	1.08	-
Organic certification	0.76	2.23	1.55
Operating interest	5.99	5.73	5.52
Miscellaneous	0.51	6.16	1.06
Total direct expenses per acre	181.39	176.20	175.48
Return over direct expenses per acre	122.97	242.27	46.62
<b>Overhead Expenses</b>			
Custom hire	0.83	1.48	3.35
Hired labor	12.67	7.05	7.31
Machinery leases	0.42	0.11	0.89
Building leases	0.01	-	-
Farm insurance	6.30	3.46	3.58
Utilities	6.10	2.96	3.57
Dues & professional fees	2.14	1.27	3.82
Interest	5.19	6.31	3.35
Mach & bldg depreciation	24.14	44.13	17.32
Miscellaneous	3.26	4.70	3.36
Total overhead expenses per acre	61.07	71.47	46.56
Total dir & ovhd expenses per acre	242.46	247.67	222.04
Net return per acre	61.90	170.80	0.05
Government payments	12.58	8.76	12.04
Net return with govt pmts	74.48	179.56	12.10
Labor & management charge	32.10	32.38	33.18
Net return over lbr & mgt	42.39	147.18	-21.08
<b>Cost of Production</b>			
Total direct expenses per bu	3.23	3.69	5.83
Total dir & ovhd expenses per bu	4.32	5.19	7.38
Less govt & other income	4.05	4.60	6.41
With labor & management	4.62	5.28	7.51
Net value per unit	5.37	8.38	6.81
Machinery cost per acre	81.93	104.98	74.93
Estimated labor hours per acre	2.99	2.70	2.99

**Table 9. Crop Enterprise Analysis  
Corn – Organic on Owned Land**

	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
<b>Number of fields</b>	22	33	20	17
<b>Number of farms</b>	19	21	16	15
Acres	28.42	25.96	40.1	41.82
Yield per acre (bu)	94.64	106.21	98.5	93.68
Operators share of yield %	100	100	100	100
Value per bu	5.97	8.60	8.88	5.51
Other product return per acre	3.56	-	6.35	7.11
Total product return per acre	568.77	913.62	880.66	523.48
Crop insurance per acre	5.81	35.83	-	-
Other crop income per acre	3.88	2.97	47.89	33.76
Gross return per acre	578.46	952.42	928.55	557.23
<b>Direct Expenses</b>				
Seed	61.24	58.24	38.96	39.69
Fertilizer	54.64	86.23	45.79	24.07
Non-chemical crop protect	0.96	4.29	1.26	14.44
Crop insurance	13.98	26.17	16.99	5.80
Drying expense	7.83	11.56	2.78	2.73
Irrigation energy	-	0.54	-	-
Fuel & oil	29.35	41.46	34.54	41.24
Repairs	60.21	47.34	30.20	45.15
Custom hire	12.13	8.68	3.70	0.04
Hired labor	1.24	0.32	-	6.61
Machinery leases	3.02	-	0.49	2.63
Hauling and trucking	3.26	0.12	0.30	1.35
Marketing	-	0.53	-	-
Organic certification	2.05	1.00	2.59	1.51
Operating interest	6.62	12.59	5.73	12.77
Miscellaneous	0.42	0.97	1.30	0.57
Total direct expenses per acre	256.97	300.04	184.63	198.59
Return over direct expenses per acre	321.49	652.38	743.91	358.64
<b>Overhead Expenses</b>				
Custom hire	-	0.21	8.43	7.46
Hired labor	29.68	34.46	14.67	12.67
Machinery leases	2.81	0.63	4.19	1.39
Building leases	0.00	5.85	-	0.73
Real estate & pers property taxes	11.74	13.19	13.70	11.58
Farm insurance	4.37	5.76	9.03	8.31
Utilities	8.53	4.97	5.62	6.10
Dues & professional fees	5.36	6.47	7.11	3.65
Interest	74.39	76.92	60.57	55.73
Mach & bldg depreciation	42.91	39.64	29.33	42.51
Miscellaneous	9.62	8.92	5.63	5.80
Total overhead expenses per acre	189.41	197.02	158.28	155.94
Total dir & ovhd expenses per acre	446.37	497.06	342.92	354.53
Net return per acre	132.08	455.36	585.63	202.70
Government payments	11.87	20.64	22.31	29.12
Net return with govt pmts	143.95	476.00	607.94	231.82
Labor & management charge	51.53	52.58	42.71	52.72
Net return over lbr & mgt	92.42	423.42	565.22	179.10
<b>Cost of Production</b>				
Total direct expenses per bu	2.72	2.82	1.87	2.12
Total dir & ovhd expenses per bu	4.72	4.68	3.48	3.78
Less govt & other income	4.45	4.12	2.70	3.04
With labor & management	5.00	4.62	3.14	3.60
Net value per unit	5.97	8.60	8.88	5.51
Machinery cost per acre	155.04	143.12	115.25	144.02
Estimated labor hours per acre	7.37	7.24	5.39	4.82



**Table 10. Crop Enterprise Analysis  
Corn – Organic on Cash Rent**

	<u><b>2009</b></u>	<u><b>2008</b></u>	<u><b>2007</b></u>	<u><b>2006</b></u>
<b>Number of fields</b>	22	23	25	18
<b>Number of farms</b>	18	22	20	15
Acres	57.47	44.77	73.35	43.93
Yield per acre (bu)	107.98	103.26	77.04	85.94
Operators share of yield %	100	100	100	100
Value per bu	6.62	9.43	8.09	5.29
Other product return per acre	2.67	-	3.83	1.14
Total product return per acre	717.58	973.48	627	455.72
Crop insurance per acre	3.47	41.7	-	-
Other crop income per acre	-	13.58	63.25	17.89
Gross return per acre	721.05	1,028.77	690.25	473.61
<b>Direct Expenses</b>				
Seed	74.83	52.84	48.34	38.46
Fertilizer	57.42	54.45	48.52	42.73
Crop chemicals	-	6.38	-	-
Non-chemical crop protect	4.21	6.98	4.3	2.14
Crop insurance	13.58	17.38	14.94	7.84
Drying expense	24.36	5.16	1.37	1.97
Fuel & oil	24.02	32.3	27.45	25.86
Repairs	39.35	35.41	33.38	41.74
Custom hire	14.22	22.71	25.08	3.48
Hired labor	1.61	10.16	-	-
Land rent	113.3	89.02	96.31	64.43
Machinery leases	0.12	-	0.09	0.59
Utilities	0.53	1.83	-	-
Hauling and trucking	2.56	-	3.17	-
Marketing	0.16	1.04	0.02	0.24
Organic certification	1.12	1.17	2.94	2.33
Operating interest	7.56	9.26	12.16	8.03
Miscellaneous	4.72	1.61	1.39	0.24
Total direct expenses per acre	383.66	347.7	319.46	240.06
Return over direct expenses per acre	337.39	681.07	370.79	233.54
<b>Overhead Expenses</b>				
Custom hire	0.2	0.12	12.7	2.52
Hired labor	14.16	16.22	12.06	24.95
Machinery leases	2.44	0.96	6.02	1.12
Building leases	0.45	0.17	-	2.88
Farm insurance	5.95	5.37	7.34	5.98
Utilities	7.92	6.7	5.28	3.74
Dues & professional fees	3.2	3.16	5.15	2.67
Interest	10.24	6.97	8.71	6.98
Mach & bldg depreciation	39.41	28.52	29.28	29.64
Miscellaneous	12.75	11.52	13.53	4.7
Total overhead expenses per acre	96.71	79.72	100.08	85.17
Total dir & ovhd expenses per acre	480.36	427.41	419.54	325.24
Net return per acre	240.69	601.35	270.71	148.37
Government payments	19.02	16.71	18.4	26.27
Net return with govt pmts	259.71	618.07	289.1	174.64
Labor & management charge	42.98	45.64	40.3	34.4
Net return over lbr & mgt	216.73	572.43	248.8	140.24
<b>Cost of Production</b>				
Total direct expenses per bu	3.55	3.37	4.15	2.79
Total dir & ovhd expenses per bu	4.45	4.14	5.45	3.78
Less govt & other income	4.22	3.44	4.34	3.26
With labor & management	4.61	3.88	4.86	3.66
Net value per unit	6.62	9.43	8.09	5.29
Machinery cost per acre	125.86	123.05	140.53	108.84
Estimated labor hours per acre	4.74	4.75	4.06	4.99

**Table 11. Crop Enterprise Analysis**  
**Corn Silage – Organic on Owned Land**

	<u><b>2009</b></u>	<u><b>2008</b></u>	<u><b>2007</b></u>	<u><b>2006</b></u>
<b>Number of fields</b>	11	15	14	9
<b>Number of farms</b>	10	12	12	8
Acres	26.08	21.44	25.16	28.72
Yield per acre (ton)	15.8	15.01	12.25	14.09
Operators share of yield %	100	100	100	100
Value per ton	40.98	45.42	36.22	30.87
Other product return per acre	-	-	-	12.07
Total product return per acre	647.48	681.97	443.67	447.13
Crop insurance per acre	-	13.21	-	-
Other crop income per acre	-	0.28	50.31	-
Gross return per acre	647.48	695.46	493.97	447.13
<b>Direct Expenses</b>				
Seed	57.13	54.42	45.08	41.28
Fertilizer	26.85	59.92	29.19	23.64
Non-chemical crop protect	-	0.23	0.11	2.22
Crop insurance	9.3	10.96	9.39	3.23
Storage	8.52	5.66	2.41	-
Irrigation energy	-	1.54	1.46	-
Fuel & oil	37.4	45.77	33.36	33.17
Repairs	70.35	57.82	73.62	50.3
Custom hire	14.43	24.29	23.2	23.41
Hired labor	9.57	0.76	-	-
Machinery leases	0.06	-	-	1.94
Marketing	-	-	-	2.51
Organic certification	0.13	2.31	0.95	0.71
Operating interest	3.82	5.93	2.85	4.95
Miscellaneous	0.66	4.45	3.38	-
Total direct expenses per acre	238.23	274.07	225.01	187.37
Return over direct expenses per acre	409.24	421.39	268.96	259.77
<b>Overhead Expenses</b>				
Custom hire	4.03	0	9.13	0.11
Hired labor	29.17	19.83	33.61	29.28
Machinery leases	4.55	0.88	5.02	4.48
Building leases	-	15.37	-	2.38
Real estate & pers property taxes	9.06	9.15	9.27	8.69
Farm insurance	6.87	4.85	7.19	7.78
Utilities	6.54	3.95	5.05	4
Dues & professional fees	4.64	2.68	3.06	1.68
Interest	28.47	31.04	37.64	23.21
Mach & bldg depreciation	42.01	42.29	34.82	31.96
Miscellaneous	11.81	10.07	5.96	5.59
Total overhead expenses per acre	147.14	140.12	150.76	119.14
Total dir & ovhd expenses per acre	385.37	414.19	375.77	306.51
Net return per acre	262.1	281.28	118.21	140.63
Government payments	8.79	60.62	13.34	29.21
Net return with govt pmts	270.89	341.89	131.55	169.84
Labor & management charge	56.94	41.68	47.72	29.2
Net return over lbr & mgt	213.95	300.21	83.83	140.64
<b>Cost of Production</b>				
Total direct expenses per ton	15.08	18.25	18.37	13.29
Total dir & ovhd expenses per ton	24.39	27.59	30.68	21.75
Less govt & other income	23.84	22.65	25.48	18.82
With labor & management	27.44	25.43	29.38	20.89
Net value per unit	40.98	45.42	36.22	30.87
Machinery cost per acre	176.53	180.37	188.34	150.43
Estimated labor hours per acre	7.54	5.77	6.38	5.36

**Table 12. Crop Enterprise Analysis  
Corn Silage – Organic on Cash Rent**

	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
<b>Number of fields</b>	18	13	5	10
<b>Number of farms</b>	14	12	5	9
Acres	21.06	36.95	15.4	16.7
Yield per acre (ton)	13.44	11.09	13.57	15.64
Operators share of yield %	100	100	100	100
Value per ton	42	44.04	32.29	27.21
Other product return per acre	0.67	-	-	14.01
Total product return per acre	565.38	488.4	438.2	439.48
Crop insurance per acre	-	13.44	-	-
LDP income per acre	-	3.53	-	-
Other crop income per acre	-	-	9.55	-
Gross return per acre	565.38	505.37	447.74	439.48
<b>Direct Expenses</b>				
Seed	57.26	44.42	37.43	42.87
Fertilizer	25.43	28.5	26.93	29.44
Crop chemicals	-	1.48	4.81	-
Non-chemical crop protect	8.91	7.42	0.92	4.73
Crop insurance	5.19	6.63	4.74	2.46
Storage	0.9	2.34	-	-
Fuel & oil	24.01	36.33	38.77	31.2
Repairs	57.04	43.66	69.78	45.07
Custom hire	70.63	25.25	9.07	55.87
Hired labor	0.97	-	-	-
Land rent	75.76	56.56	95.36	81.09
Machinery leases	0.02	-	-	1.94
Organic certification	1.2	0.57	1.44	1.61
Operating interest	4.64	4.6	2.23	6.32
Miscellaneous	3.26	3.67	5.47	-
Total direct expenses per acre	335.2	261.44	296.94	302.61
Return over direct expenses per acre	230.17	243.93	150.8	136.87
<b>Overhead Expenses</b>				
Custom hire	0.02	3.27	6.82	1.28
Hired labor	17.47	17.71	24.95	30.3
Machinery leases	1.69	0.54	-	2.16
Building leases	5.49	-	3.97	-
Farm insurance	2.68	2.85	5.61	6.39
Utilities	2.83	3.27	4.47	4.11
Dues & professional fees	1.64	3.19	5.56	3.4
Interest	6.56	9.16	15.41	11.27
Mach & bldg depreciation	39.06	32.56	40.2	29.95
Miscellaneous	7.97	7.99	4.52	7.69
Total overhead expenses per acre	85.4	80.55	111.49	96.56
Total dir & ovhd expenses per acre	420.61	342	408.44	399.17
Net return per acre	144.77	163.37	39.31	40.32
Government payments	10.8	5.94	5.48	28.67
Net return with govt pmts	155.57	169.31	44.79	68.98
Labor & management charge	30.83	34.85	62.25	33.08
Net return over lbr & mgt	124.75	134.46	-17.46	35.9
<b>Cost of Production</b>				
Total direct expenses per ton	24.93	23.58	21.88	19.35
Total dir & ovhd expenses per ton	31.28	30.84	30.1	25.53
Less govt & other income	30.43	28.77	28.99	22.8
With labor & management	32.72	31.92	33.58	24.91
Net value per unit	42	44.36	32.29	27.21
Machinery cost per acre	193.68	148.01	175.78	173.63
Estimated labor hours per acre	4.77	5.25	10.69	6.36

**Table 13. Crop Enterprise Analysis**  
**Oats – Organic on Owned Land**

	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
<b>Number of fields</b>	13	10	9	7
<b>Number of farms</b>	12	10	7	7
Acres	31.44	25.37	42.62	51.29
Yield per acre (bu)	52.06	67.94	82.11	46.04
Operators share of yield %	100	100	100	100
Value per bu	5.15	5.1	4.17	3.23
Other product return per acre	2.94	2.84	5.63	-
Total product return per acre	271.17	349.62	348.17	148.59
Crop insurance per acre	4.27	-	-	-
LDP income per acre	-	3.08	-	-
Other crop income per acre	5.47	44.18	31.68	15.06
Gross return per acre	280.91	396.88	379.85	163.64
<b>Direct Expenses</b>				
Seed	12.84	19.4	13.29	9.74
Fertilizer	31.58	8.53	13.09	18.47
Crop insurance	10.22	1.77	7.1	11.14
Irrigation energy	-	0.69	-	-
Fuel & oil	23.33	21.26	22.9	20.72
Repairs	40.22	42.21	21.87	22
Custom hire	2.76	17.41	22.11	-
Hired labor	3.56	-	-	12.2
Machinery leases	-	-	-	3.64
Hauling and trucking	-	1.13	2.27	2.49
Organic certification	2.66	1.24	2.55	2.38
Operating interest	2.07	2.51	3.73	10.47
Miscellaneous	0.11	0.13	0.52	0.82
Total direct expenses per acre	129.35	116.27	109.42	114.07
Return over direct expenses per acre	151.56	280.61	270.44	49.57
<b>Overhead Expenses</b>				
Custom hire	0.32	0.92	4.95	6.05
Hired labor	10.88	7.89	13.5	0.4
Machinery leases	3.85	4.45	7.25	0.05
Real estate & pers property taxes	10.38	14.37	13.99	5.39
Farm insurance	4.01	6.89	6.09	3.83
Utilities	5.77	6.32	4.82	4.04
Dues & professional fees	3.59	3.39	5.1	2.1
Interest	45.13	46.47	51.64	30.41
Mach & bldg depreciation	23.61	38.71	30.67	21.85
Miscellaneous	5.9	4.6	7.27	3.41
Total overhead expenses per acre	113.44	134.01	145.29	77.53
Total dir & ovhd expenses per acre	242.79	250.28	254.71	191.6
Net return per acre	38.12	146.6	125.15	-27.95
Government payments	11.08	12.04	16.67	18.88
Net return with govt pmts	49.2	158.64	141.82	-9.08
Labor & management charge	28.3	22.35	38.74	23.31
Net return over lbr & mgt	20.91	136.29	103.08	-32.38
<b>Cost of Production</b>				
Total direct expenses per bu	2.48	1.71	1.33	2.48
Total dir & ovhd expenses per bu	4.66	3.68	3.1	4.16
Less govt & other income	4.21	2.77	2.44	3.42
With labor & management	4.75	3.1	2.92	3.93
Net value per unit	5.15	5.15	4.17	3.23
Machinery cost per acre	98.68	117.11	113.61	74.54
Estimated labor hours per acre	3.69	2.7	3.52	2.1

**Table 14. Crop Enterprise Analysis**  
**Oats – Organic on Cash Rent**

	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
<b>Number of fields</b>	10	12	7	13
<b>Number of farms</b>	10	12	5	12
Acres	40.36	39.51	79.83	87.78
Yield per acre (bu)	66.23	57.54	71.89	38.26
Operators share of yield %	100	100	100	100
Value per bu	3.67	4.59	5.04	3.03
Other product return per acre	-	-	11.77	-
Total product return per acre	242.85	264.07	373.79	116.1
Crop insurance per acre	-	2.68	-	-
Other crop income per acre	30.56	27.73	4.03	7.55
Gross return per acre	273.4	294.48	377.81	123.65
<b>Direct Expenses</b>				
Seed	12.96	17.55	15.96	11.76
Fertilizer	2.15	-	42.25	23.05
Non-chemical crop protect	-	-	-	2.78
Crop insurance	4.25	1.29	6.45	6.45
Fuel & oil	12.2	19.91	18.86	18.64
Repairs	23.23	24.02	18.87	20.71
Custom hire	4	10.31	21.66	1.36
Hired labor	0.37	0.29	-	10.73
Land rent	46.52	45.1	61.1	47.01
Machinery leases	1.07	-	-	3.2
Utilities	1.15	0.38	-	-
Hauling and trucking	-	0.16	-	2.19
Organic certification	0.43	0.85	2.89	1.86
Operating interest	0.81	4.9	10.1	11.53
Miscellaneous	2.32	2.74	0.39	0.61
Total direct expenses per acre	111.48	127.5	198.55	161.87
Return over direct expenses per acre	161.92	166.98	179.27	-38.22
<b>Overhead Expenses</b>				
Custom hire	0.08	2.09	22.09	6.91
Hired labor	8.23	10.74	12.97	4.02
Machinery leases	0.09	0.87	0.16	0.33
Farm insurance	2.07	3.32	6.2	3.67
Utilities	2.48	2.89	2.47	2.87
Dues & professional fees	1.04	1.67	2.75	3.66
Interest	6.42	5.26	5.44	4.91
Mach & bldg depreciation	16.78	26.41	27.43	20.73
Miscellaneous	1.51	2.44	7.65	3.56
Total overhead expenses per acre	38.72	55.69	87.15	50.65
Total dir & ovhd expenses per acre	150.2	183.19	285.7	212.52
Net return per acre	123.2	111.29	92.11	-88.88
Government payments	10.29	11.56	16.65	20.1
Net return with govt pmts	133.49	122.85	108.76	-68.77
Labor & management charge	13.19	17.47	14.1	27.33
Net return over lbr & mgt	120.3	105.38	94.66	-96.1
<b>Cost of Production</b>				
Total direct expenses per bu	1.68	2.22	2.76	4.23
Total dir & ovhd expenses per bu	2.27	3.18	3.97	5.56
Less govt & other income	1.65	2.45	3.52	4.83
With labor & management	1.85	2.76	3.72	5.55
Net value per unit	3.67	4.59	5.04	3.03
Machinery cost per acre	62.73	84.84	113.08	73.54
Estimated labor hours per acre	1.54	1.9	2.09	2.16

**Table 15. Crop Enterprise Analysis**  
**Soybeans – Organic on Owned Land**

	<u><b>2009</b></u>	<u><b>2008</b></u>	<u><b>2007</b></u>	<u><b>2006</b></u>
<b>Number of fields</b>	24	14	17	14
<b>Number of farms</b>	18	11	16	14
Acres	45.36	54.46	76.58	77.99
Yield per acre (bu)	24.23	14.98	23.01	13.76
Operators share of yield %	100	100	100	100
Value per bu	17.65	19.39	19.63	14.37
Other product return per acre	0.55	-	1.63	-
Total product return per acre	428.13	290.4	453.26	197.77
Crop insurance per acre	18.61	74.21	-	-
Other crop income per acre	0.51	-	20.08	38.16
Gross return per acre	447.25	364.61	473.34	235.93
<b>Direct Expenses</b>				
Seed	45.36	30.54	35.19	29.09
Fertilizer	28.27	15.08	4.48	8.46
Non-chemical crop protect	4.12	2.83	2.99	10.74
Crop insurance	15.3	17.09	10.98	10.38
Fuel & oil	21.78	27.21	21.11	19.35
Repairs	33.47	34.18	22.12	25.82
Custom hire	8	3.05	2.74	2.97
Hired labor	21.89	0.52	1.16	7.17
Machinery leases	0.46	6.1	3.33	1.26
Hauling and trucking	-	0.51	1.86	0.71
Organic certification	3.2	2.56	1.84	1.46
Operating interest	4.33	7.7	3.63	8.85
Miscellaneous	0.92	0.5	0.36	0.29
Total direct expenses per acre	187.11	147.86	111.79	126.55
Return over direct expenses per acre	260.15	216.74	361.56	109.39
<b>Overhead Expenses</b>				
Custom hire	2.76	1.38	4.21	2.94
Hired labor	18.16	14.17	10.71	9.79
Machinery leases	0.85	0.46	1.36	0.79
Real estate & pers property taxes	14.25	10.37	11.47	9.03
Farm insurance	6.16	4.61	4.34	3.59
Utilities	8.44	3.67	4.4	3.52
Dues & professional fees	3.7	4.02	3.9	1.8
Interest	60.2	63.69	57.42	29.16
Mach & bldg depreciation	46.72	29.89	30.25	23.64
Miscellaneous	6.27	6.37	6.46	4.45
Total overhead expenses per acre	167.52	138.63	134.53	88.7
Total dir & ovhd expenses per acre	354.63	286.49	246.32	215.25
Net return per acre	92.62	78.12	227.03	20.68
Government payments	13.61	17.57	19.45	19.98
Net return with govt pmts	106.24	95.69	246.47	40.66
Labor & management charge	34.97	41.5	35.82	30.18
Net return over lbr & mgt	71.26	54.19	210.65	10.49
<b>Cost of Production</b>				
Total direct expenses per bu	7.72	9.87	4.86	9.19
Total dir & ovhd expenses per bu	14.64	19.13	10.71	15.64
Less govt & other income	13.26	13	8.92	11.41
With labor & management	14.71	15.77	10.47	13.61
Net value per unit	17.65	19.39	19.63	14.37
Machinery cost per acre	113.16	103.65	87.88	77.31
Estimated labor hours per acre	4.25	4.47	3.34	2.72
Machinery cost per acre	91.32	107.1	85.59	82.51
Estimated labor hours per acre	3.49	3.04	2.91	2.27

**Table 16. Crop Enterprise Analysis  
Soybeans – Organic on Cash Rent**

	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
<b>Number of fields</b>	16	23	23	35
<b>Number of farms</b>	15	17	19	18
Acres	49.11	72.18	68.5	105.89
Yield per acre (bu)	18.36	18.27	19.29	14.13
Operators share of yield %	100	100	100	100
Value per bu	20.62	22.84	19.06	14.63
Other product return per acre	-	10.92	0.52	-
Total product return per acre	378.55	428.36	368.14	206.76
Crop insurance per acre	45.87	51.74	-	-
Other crop income per acre	0.71	57.71	20.41	55.68
Gross return per acre	425.13	537.82	388.54	262.43
<b>Direct Expenses</b>				
Seed	47.22	40.28	31.07	32.67
Fertilizer	2.14	16.44	4.49	15.85
Non-chemical crop protect	3.85	6.19	1.96	5.54
Crop insurance	21.54	18.36	12.7	15.99
Irrigation energy	-	-	0.94	-
Fuel & oil	13.22	22.29	19.25	21.45
Repairs	20.88	30.51	23.6	23.34
Custom hire	18.73	25.95	9.48	4.22
Hired labor	16.4	16.52	6.41	20.16
Land rent	92.77	95.47	85.96	60.15
Machinery leases	1.48	-	-	3.4
Utilities	0.74	0.25	-	-
Hauling and trucking	-	0.7	2.67	2.33
Organic certification	2.27	3.24	2.26	1.32
Operating interest	12.71	9.46	6.14	11.03
Miscellaneous	2.03	3.22	1.33	0.74
Total direct expenses per acre	255.94	288.89	208.27	218.19
Return over direct expenses per acre	169.19	248.93	180.27	44.24
<b>Overhead Expenses</b>				
Custom hire	0.1	0.36	4.26	8.3
Hired labor	16.84	10.61	6.16	5.77
Machinery leases	-	1.5	3.63	0.27
Farm insurance	5.37	5.75	4.45	3.41
Utilities	10.01	5.53	3.41	3.06
Dues & professional fees	3.31	3.58	4.24	5.28
Interest	9.81	8.77	5.42	4.06
Mach & bldg depreciation	30.89	22.21	21.78	21.33
Miscellaneous	10.06	7.43	8.19	3.75
Total overhead expenses per acre	86.41	65.75	61.54	55.23
Total dir & ovhd expenses per acre	342.35	354.64	269.81	273.42
Net return per acre	82.78	183.18	118.73	-10.99
Government payments	13.94	14.47	11.77	20.06
Net return with govt pmts	96.72	197.65	130.5	9.07
Labor & management charge	51.88	37.1	35.75	28.9
Net return over lbr & mgt	44.85	160.55	94.75	-19.83
<b>Cost of Production</b>				
Total direct expenses per bu	13.94	15.81	10.8	15.44
Total dir & ovhd expenses per bu	18.65	19.41	13.99	19.35
Less govt & other income	15.35	12.03	12.29	13.99
With labor & management	18.18	14.06	14.15	16.04
Net value per unit	20.62	22.84	19.06	14.63
Machinery cost per acre	91.32	107.1	85.59	82.51
Estimated labor hours per acre	3.49	3.04	2.91	2.27

**Table 17. Crop Enterprise Analysis**  
**Wheat, Spring – Organic on Owned Land**

	<u>2009</u>	<u>2008</u>	<u>2006</u>
<b>Number of fields</b>	8	10	7
<b>Number of farms</b>	8	7	7
Acres	68.5	54.48	81.3
Yield per acre (bu)	40.96	37.17	28.46
Operators share of yield %	100	100	100
Value per bu	6.56	13.88	6.7
Other product return per acre	9.36	-	-
Total product return per acre	277.92	516.08	190.79
Crop insurance per acre	26.55	-	-
Other crop income per acre	0.01	-	18.99
Gross return per acre	304.48	516.08	209.78
<b>Direct Expenses</b>			
Seed	33.12	41.08	16.69
Fertilizer	57.53	46.64	24.94
Crop insurance	15.88	21.99	3.35
Drying expense	-	-	0.16
Fuel & oil	18.56	32.12	24.86
Repairs	27.35	26.64	25
Custom hire	13.03	0.61	6.32
Hired labor	-	2.14	-
Hauling and trucking	-	-	4.74
Organic certification	2.47	2.07	0.72
Operating interest	2.95	6.49	4.59
Miscellaneous	0.12	1.81	-
Total direct expenses per acre	171.02	181.59	111.38
Return over direct expenses per acre	133.46	334.49	98.4
<b>Overhead Expenses</b>			
Custom hire	4.12	0.41	2.59
Hired labor	27.15	17.82	11.05
Machinery leases	0.48	0.1	0.85
Real estate & pers property taxes	13.58	11.41	10.35
Farm insurance	7.09	5.81	4.61
Utilities	6.3	3.93	3.76
Dues & professional fees	2.62	3.24	3.6
Interest	30.13	36.23	25.9
Mach & bldg depreciation	29.86	23.37	17.48
Miscellaneous	6.68	4.73	3.39
Total overhead expenses per acre	128	107.03	83.58
Total dir & ovhd expenses per acre	299.02	288.63	194.96
Net return per acre	5.46	227.45	14.82
Government payments	8.76	12.91	12.1
Net return with govt pmts	14.22	240.36	26.92
Labor & management charge	28.57	35.97	30.03
Net return over lbr & mgt	-14.35	204.39	-3.11
<b>Cost of Production</b>			
Total direct expenses per bu	4.18	4.89	3.91
Total dir & ovhd expenses per bu	7.3	7.76	6.85
Less govt & other income	6.21	7.42	5.76
With labor & management	6.91	8.39	6.81
Net value per unit	6.56	13.88	6.7
Machinery cost per acre	93.38	88.37	79.63
Estimated labor hours per acre	3.69	3.57	3.3

**NOTE: 2007 data unavailable due to insufficient number of operations reporting**



**Table 18. Crop Enterprise Analysis**  
**Wheat, Spring – Organic on Cash Rent**

	<u><b>2009</b></u>	<u><b>2008</b></u>	<u><b>2007</b></u>
<b>Number of fields</b>	7	8	9
<b>Number of farms</b>	7	7	6
Acres	68.81	93.84	123.37
Yield per acre (bu)	49.21	43.84	28.16
Operators share of yield %	100	100	100
Value per bu	8.29	15.04	13.99
Other product return per acre	10.71	-	-
Total product return per acre	418.55	659.33	394.07
Crop insurance per acre	3.92	5.44	-
Other crop income per acre	0.11	17.05	7.28
Gross return per acre	422.58	681.82	401.36
<b>Direct Expenses</b>			
Seed	35.22	47.51	27.27
Fertilizer	53.07	47.43	34.52
Crop chemicals	-	2.02	-
Non-chemical crop protect	-	-	-
Crop insurance	11.49	21.95	13.4
Drying expense	-	2.05	1.11
Fuel & oil	16.96	22.64	19.41
Repairs	30.28	45.12	25.48
Custom hire	3.55	11.93	8.87
Hired labor	0.65	0.32	-
Land rent	95.15	80.23	64.34
Hauling and trucking	-	1.61	12.58
Marketing	-	0.57	-
Organic certification	2.77	1.57	2.28
Operating interest	6.89	7.88	9.6
Miscellaneous	0.2	2	-
Total direct expenses per acre	256.22	294.82	218.87
Return over direct expenses per acre	166.36	387	182.48
<b>Overhead Expenses</b>			
Custom hire	2.24	0.58	12.95
Hired labor	23.04	23.94	15.76
Machinery leases	0	1.65	0.07
Farm insurance	5.99	5.47	5.05
Utilities	7.47	6.5	4.32
Dues & professional fees	1.36	2.05	2.66
Interest	2.53	3.63	3.04
Mach & bldg depreciation	29.81	26.47	21.65
Miscellaneous	6.74	2.57	5.62
Total overhead expenses per acre	79.19	72.86	71.13
Total dir & ovhd expenses per acre	335.41	367.68	290
Net return per acre	87.17	314.14	111.35
Government payments	11.18	23.43	16.08
Net return with govt pmts	98.35	337.57	127.44
Labor & management charge	28.74	30.84	23.88
Net return over lbr & mgt	69.62	306.73	103.55
<b>Cost of Production</b>			
Total direct expenses per bu	5.21	6.72	7.77
Total dir & ovhd expenses per bu	6.82	8.39	10.3
Less govt & other income	6.29	7.34	9.47
With labor & management	6.87	8.04	10.32
Net value per unit	8.29	15.04	13.99
Machinery cost per acre	81.47	107.7	91.07
Estimated labor hours per acre	3.5	3.61	2.34

**NOTE: 2006 data unavailable due to insufficient number of operations reporting**

**Table 19. Crop Enterprise Analysis**  
**Hay, Alfalfa – Organic on Owned Land**

	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
<b>Number of fields</b>	32	29	28	28
<b>Number of farms</b>	24	21	21	19
Acres	57.47	62.28	62.17	49.03
Yield per acre (ton)	2.85	3.56	3.56	3.54
Operators share of yield %	100	100	100	100
Value per ton	122.78	138.16	148.96	122.17
Total product return per acre	349.65	491.2	530.92	432.77
Crop insurance per acre	3.38	-	-	-
Other crop income per acre	1.27	1.25	-	14.97
Gross return per acre	354.3	492.44	530.92	447.75
<b>Direct Expenses</b>				
Seed	0.05	1.16	6.49	1.3
Fertilizer	31.73	31.61	30.59	34.14
Non-chemical crop protect	0.12	0.64	-	-
Crop insurance	1.15	1.51	1.63	0.65
Storage	0.55	1.07	-	-
Fuel & oil	25.5	35.58	35.84	26.01
Repairs	39.87	45.35	44.57	33.76
Custom hire	23.9	42	61.03	92.94
Hired labor	2.47	0.36	-	4.52
Machinery leases	-	-	-	1.61
Hauling and trucking	-	0.08	7.85	13.17
Marketing	0.15	0.14	-	1.22
Organic certification	1.58	2.3	2.56	1.37
Operating interest	3.75	7.44	7.68	6.56
Miscellaneous	1.65	6	0.74	1.83
Total direct expenses per acre	132.47	175.24	198.98	219.08
Return over direct expenses per acre	221.84	317.21	331.94	228.66
<b>Overhead Expenses</b>				
Custom hire	2.4	0.18	19.87	3.88
Hired labor	20.57	16.12	14.08	11.81
Machinery leases	3.51	1.87	6.47	1.42
Building leases	-	5.74	-	1.06
Real estate & pers property taxes	10.31	11.52	10.89	10.02
Farm insurance	6.29	6.61	8.23	5.99
Utilities	6.39	6.38	5.62	3.41
Dues & professional fees	2.84	3.52	9.32	4.17
Interest	22.45	30.26	48.3	37.01
Mach & bldg depreciation	35.15	43.22	37.13	24.5
Miscellaneous	5.57	6.84	6.25	6.45
Total overhead expenses per acre	115.49	132.27	166.17	109.73
Total dir & ovhd expenses per acre	247.96	307.51	365.15	328.81
Net return per acre	106.34	184.94	165.77	118.94
Government payments	9.88	17.3	14.42	14.29
Net return with govt pmts	116.22	202.24	180.19	133.23
Labor & management charge	44.92	46.05	46.57	31.08
Net return over lbr & mgt	71.3	156.18	133.62	102.14
<b>Cost of Production</b>				
Total direct expenses per ton	46.52	49.29	55.83	61.85
Total dir & ovhd expenses per ton	87.07	86.49	102.45	92.83
Less govt & other income	81.97	81.28	98.4	84.56
With labor & management	97.74	94.23	111.47	93.34
Net value per unit	122.78	138.16	148.96	122.17
Machinery cost per acre	132.55	168.41	215.12	189.96
Estimated labor hours per acre	4.87	5.09	4.6	4.31

**Table 20. Crop Enterprise Analysis**  
**Hay, Alfalfa – Organic on Cash Rent**

	<u><b>2009</b></u>	<u><b>2008</b></u>	<u><b>2007</b></u>	<u><b>2006</b></u>
<b>Number of fields</b>	28	35	24	18
<b>Number of farms</b>	24	20	16	17
<b>Acres</b>	87.39	59.59	80.8	67.83
Yield per acre (ton)	2.55	3.11	3.18	4.05
Operators share of yield %	100	100	100	100
Value per ton	127.21	142.21	139.15	115.69
Total product return per acre	324.67	442.77	442.76	468.99
Crop insurance per acre	-	1.53	-	-
Other crop income per acre	-	-	1.19	7.01
Gross return per acre	324.67	444.3	443.95	476
<b>Direct Expenses</b>				
Seed	0.12	2.18	7.01	2.37
Fertilizer	15.98	13.21	30.4	21.97
Non-chemical crop protect	-	-	1.28	3.63
Crop insurance	0.64	0.49	0.48	0.6
Storage	0.03	1.2	-	-
Irrigation energy	2.01	0.1	0.42	-
Fuel & oil	22.87	29.25	27.89	22.35
Repairs	44.23	37.04	33.76	30.66
Custom hire	32.96	53.72	39.53	112.3
Hired labor	1.18	0.15	-	8.06
Land rent	83.46	81.29	67.72	71.78
Machinery leases	0.88	-	-	2.4
Hauling and trucking	-	13.85	7.06	-
Marketing	1.11	0.12	-	1.12
Organic certification	1.32	1.77	2.27	1.68
Operating interest	7.28	10.25	11.89	4.87
Miscellaneous	1.48	1.21	1.16	0.82
Total direct expenses per acre	215.57	245.82	230.85	284.6
Return over direct expenses per acre	109.1	198.48	213.1	191.4
<b>Overhead Expenses</b>				
Custom hire	2.75	0.26	25.37	4.31
Hired labor	30.03	26.28	21.72	16.51
Machinery leases	2.52	0.47	1.67	1.85
Building leases	1.83	2.07	-	0.43
Farm insurance	3.78	3.82	9.53	4.85
Utilities	3.49	3.6	4.7	2.75
Dues & professional fees	2.01	1.06	2.7	1.35
Interest	7.88	8.89	5.36	5.04
Mach & bldg depreciation	32.44	27.48	32.16	22.51
Miscellaneous	4.97	8.98	18.67	6.17
Total overhead expenses per acre	91.69	82.91	121.88	65.76
Total dir & ovhd expenses per acre	307.26	328.73	352.73	350.36
Net return per acre	17.41	115.57	91.22	125.64
Government payments	9.01	13.36	15.37	11.77
Net return with govt pmts	26.43	128.93	106.59	137.41
Labor & management charge	36.96	42.78	33.23	25.95
Net return over lbr & mgt	-10.53	86.15	73.36	111.46
<b>Cost of Production</b>				
Total direct expenses per ton	84.46	78.95	72.55	70.21
Total dir & ovhd expenses per ton	120.39	105.58	110.85	86.43
Less govt & other income	116.86	100.8	105.65	81.8
With labor & management	131.34	114.54	116.09	88.2
Net value per unit	127.21	142.21	139.15	115.69
Machinery cost per acre	141.64	154.29	164.2	198.97
Estimated labor hours per acre	5.03	4.33	3.19	5.19

**Table 21. Crop Enterprise Analysis  
Pasture – Organic on Owned Land**

	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
<b>Number of fields</b>	29	26	13	13
<b>Number of farms</b>	19	15	9	11
<b>Acres</b>	46.97	51.1	68.53	67.8
Yield per acre (aum)	4.45	2.86	4.16	7.07
Operators share of yield %	100	100	100	100
Value per aum	37.96	42.23	32.79	14.84
Other product return per acre	1.76	-	-	-
Total product return per acre	170.78	120.99	136.5	104.99
Other crop income per acre	2.9	7.28	-	0.98
Gross return per acre	173.67	128.27	136.5	105.97
<b>Direct Expenses</b>				
Seed	5.05	9.02	2.04	1.1
Fertilizer	13.03	16.05	2.62	6.55
Irrigation energy	2.42	0.66	-	-
Fuel & oil	4.56	5.32	2.46	2.74
Repairs	10.57	6.13	3.49	4.46
Hired labor	2.94	1.92	-	-
Organic certification	0.34	0.81	0.89	0.31
Operating interest	0.41	1.04	0.06	1.04
Miscellaneous	1.04	1.41	-	-
Total direct expenses per acre	40.36	42.35	11.56	16.2
Return over direct expenses per acre	133.31	85.92	124.94	89.77
<b>Overhead Expenses</b>				
Hired labor	3.69	1.62	1.01	1.48
Real estate & pers property taxes	12.68	10.51	7.96	9.15
Farm insurance	0.71	0.69	0.62	0.73
Interest	29.05	24.11	15.47	20.28
Mach & bldg depreciation	7.98	4.99	3.77	4.9
Miscellaneous	1.91	1.78	1.53	1.71
Total overhead expenses per acre	56.02	43.7	30.36	38.23
Total dir & ovhd expenses per acre	96.39	86.05	41.92	54.43
Net return per acre	77.28	42.22	94.58	51.54
Government payments	5.52	1.49	5.9	8.37
Net return with govt pmts	82.81	43.71	100.48	59.91
Labor & management charge	7.84	6.47	3.69	5.01
Net return over lbr & mgt	74.97	37.24	96.78	54.9
<b>Cost of Production</b>				
Total direct expenses per aum	9.06	14.78	2.78	2.29
Total dir & ovhd expenses per aum	21.65	30.04	10.07	7.69
Less govt & other income	19.36	26.98	8.65	6.37
With labor & management	21.12	29.23	9.54	7.08
Net value per unit	37.96	42.23	32.79	14.84
Machinery cost per acre	23.89	18.13	10.77	12.79
Estimated labor hours per acre	1	0.89	0.48	0.69

**NOTE: aum = animal unit month**

**Table 22. Crop Enterprise Analysis  
Pasture – Organic on Cash Rent**

	<u><b>2009</b></u>	<u><b>2008</b></u>	<u><b>2007</b></u>
<b>Number of fields</b>	15	11	6
<b>Number of farms</b>	13	9	5
Acres	68.17	52.05	85.63
Yield per acre (aum)	3.15	3.63	7.76
Operators share of yield %	100	100	100
Value per aum	46.76	59.38	30.15
Total product return per acre	147.49	215.65	233.98
Other crop income per acre	1.19	7.56	-
Gross return per acre	148.67	223.21	233.98
<b>Direct Expenses</b>			
Seed	4.84	2.7	1.92
Fertilizer	1.59	6.99	10.71
Fuel & oil	2.19	3.79	2.46
Repairs	3.9	3.98	1.65
Land rent	48.13	50.53	100.44
Utilities	0.07	0.67	-
Organic certification	0.69	0.51	0.9
Operating interest	0.4	0.73	0.03
Miscellaneous	1.41	0.39	-
Total direct expenses per acre	63.21	70.3	118.11
Return over direct expenses per acre	85.46	152.91	115.88
<b>Overhead Expenses</b>			
Hired labor	2.03	1.79	1.27
Farm insurance	0.66	0.77	1.27
Utilities	0.25	0.27	1.32
Dues & professional fees	0.65	0.48	0.19
Interest	1.56	1.05	0.87
Mach & bldg depreciation	3.59	3.78	2.24
Miscellaneous	2.27	2.72	0.1
Total overhead expenses per acre	11.01	10.85	7.26
Total dir & ovhd expenses per acre	74.22	81.16	125.37
Net return per acre	74.45	142.06	108.62
Government payments	3.9	3.13	7.49
Net return with govt pmts	78.35	145.18	116.11
Labor & management charge	2.42	2.11	7.62
Net return over lbr & mgt	75.93	143.07	108.49
<b>Cost of Production</b>			
Total direct expenses per aum	20.04	19.36	15.22
Total dir & ovhd expenses per aum	23.53	22.35	16.15
Less govt & other income	21.92	19.4	15.19
With labor & management	22.69	19.99	16.17
Net value per unit	46.76	59.38	30.15
Machinery cost per acre	11.23	12.18	6.85
Estimated labor hours per acre	0.38	0.38	0.83

**NOTE: aum = animal unit month**  
**2006 data unavailable due to insufficient number of operations reporting**

# DAIRY REPORTS

Organic dairies generated a profit per cow very similar to that of 2008. However, compared to conventional dairies, they had a very good year. Contract pricing in organic dairy protects organic farmers against the price volatility conventional farmers experienced in 2009. In addition, at least one of the major organic dairy buyers instituted some supply management measures. Reducing the amount of milk their producers could ship by 7%, was intended to protect the cooperative from losses and prevent price erosion for the producers.

The Dairy Enterprise Analysis tables that follow show the average production, gross returns, direct expenses, overhead expenses, and net returns per cow and per hundredweight for organic milking cows, as well as similar measures per animal for dairy replacement heifers.

As in other years of this project, dairy was the only type of organic livestock production with sufficient numbers to summarize here. Two formats are included for the dairy reports: historical reports comparing enterprise returns for years 2006 through 2009, and 2009 dairy results sorted into thirds by enterprise net return. For similar reports that describe the performance of conventional dairies in 2009, visit [www.finbin.umn.edu](http://www.finbin.umn.edu).

*Gross margin* is the accrual gross value produced by the enterprise *minus* the cost of purchased animals. It includes income from the sale of offspring and livestock products, cull income, non-cash transfers to other enterprises, and the value of production used in the home or for feed. It also includes the value of inventory change from beginning to the end of the year. The cost of livestock purchased and the value of animals transferred in are deducted.

*Net return* is the amount contributed per cow of the enterprise toward operator labor, management, and equity capital.

*Net return over labor* and management is the return remaining after compensating the operator for unpaid labor and management. This is the per unit return to equity capital.

*Cost of Production* section shows the average cost per unit sold in each cost category. *Total direct and overhead expense per unit* is the breakeven price needed to cover cash costs and depreciation.

*With other revenue adjustments* is the breakeven price adjusted for cull sales, other offspring sales, the cost of replacement stock, and any other miscellaneous income. This assumes that some costs can be covered by these other income sources.

*With labor and management* is the final breakeven price to provide a labor and management return for the operator(s).

*Other Information* contains both economic and technical efficiency measures for each enterprise.

**Table 23. Dairy Enterprise Analysis**  
**Organic Dairy – Average per Cow**

	<u>2009</u>		<u>2008</u>		<u>2007</u>		<u>2006</u>	
<b>Number of farms</b>	31		30		23		22	
	<u>Quantity</u>	<u>Value</u>	<u>Quantity</u>	<u>Value</u>	<u>Quantity</u>	<u>Value</u>	<u>Quantity</u>	<u>Value</u>
Milk sold (hd)	11,793.20	3,038.65	12,228.80	3,105.09	12,976.50	3,171.95	12,109.80	2,681.93
Dairy calves sold (hd)	0.2	17.27	0.2	20.3	0.1	22.99	0.2	46.64
Transferred out (hd)	0.7	44.85	0.7	76.4	0.8	150.91	0.7	148.88
Cull sales (hd)	0.2	113.76	0.2	99.97	0.2	105.28	0.2	80.53
Other income		250.77		117.9		114.52		109.15
Purchased (hd)	0	-36.51	0.1	-88.4	0	-75.74	0	-16.44
Transferred in (hd)	0.3	-121.92	0.3	-133.42	0.2	-342.67	0.3	-352.11
Inventory change (hd)	0	-8.76	0.1	158.74	0.1	107.05	0.1	103.43
Dairy repl net cost		-361.84		-332.87		-		-
Gross margin		2,936.26		3,023.72		3,254.28		2,802.01
<b>Direct Expenses</b>								
Protein, vit, minerals (lb)	19,012.00	188.67	6,387.70	169.83	1,115.40	182.76	777.6	145.97
Complete ration (lb)	88	16.63	651.2	95.16	401.4	87.07	108.5	24.45
Corn (bu)	31.5	219.85	29.6	215.02	39.7	304.55	31.7	153.46
Corn silage (lb)	6,609.40	125.12	7,827.50	121.21	6,151.80	97.4	4,495.00	64.5
Hay, alfalfa (lb)	4,212.30	245.54	3,531.00	240.79	3,263.10	193.89	4,497.40	213.13
Hay, grass (lb)	1,785.90	88.41	2,040.60	116.05	3,563.80	172.23	2,077.40	71.74
Haylage, alfalfa (lb)	1,903.40	62.08	2,386.20	78.72	3,064.60	86.78	1,768.70	53.7
Oats (bu)	8.5	32.86	6.2	26.81	9.3	44.52	9.7	29.72
Pasture (aum)	3.9	174.25	7.6	126.06	7.9	142.29	4.1	125.84
Other feed stuffs (lb)	1,346.30	99.68	1,706.50	112.62	1,722.40	88.72	1,270.80	59.33
Veterinary		27.05		29.23		31.22		30.49
Supplies		189.99		212		190.25		178.54
Fuel & oil		55.88		73.75		57.35		55.21
Repairs		116.93		100.38		139.06		128.38
Custom hire		14.51		12.72		13.72		30.83
Hired labor		54.8		47.06		1.93		-
Marketing		57.43		27.53		33.86		29.08
Total direct expenses		1,769.67		1,804.94		1,867.59		1,394.37
Return over direct expense		1,166.60		1,218.79		1,386.69		1,407.65
<b>Overhead Expenses</b>								
Hired labor		169.51		175.23		195.06		236.31
Farm insurance		29.59		25.97		35.18		36.24
Utilities		66.48		68.06		68.56		59.27
Interest		77.64		98.43		100.02		88.05
Mach & bldg depreciation		93.91		106.59		94.3		93.38
Miscellaneous		77.82		69.86		78.65		72.86
Total overhead expenses		514.97		544.14		571.78		586.11
Total dir & ovhd expenses		2,284.63		2,349.07		2,439.37		1,980.48
Net return		651.63		674.65		814.91		821.54
Labor & management charge		285.16		262.96		273.42		253.25
Net return over lbr & mgt		366.47		411.7		541.49		568.28
<b>Cost of Production per Cwt</b>								
Total direct expenses per unit		14.59		14.29		13.97		11.32
Total dir & ovhd expenses per unit		18.84		18.6		18.24		16.07
With other revenue adjustments		20.29		20.05		18.31		15.42
With labor and management		22.64		22.13		20.35		17.47
Estimated labor hours per unit		39.48		39.43		45.19		48.36
<b>Other Information</b>								
Number of cows		77.8		76.9		64.7		72.3
Milk produced per cow		12,129		12,629		13,372		12,323
Total milk sold		917,025		940,233		838,957		875,756
Pounds of milk sold per FTE		836,365		868,396		803,966		701,129
Culling percentage		21.7		19		16.1		16.2
Turnover rate		27.3		25.3		25.4		21.9
Cow death loss percent		3.9		5.4		8.4		4.8
Percent of barn capacity		103.9		102.1		98.5		105
Feed cost per day		3.43		3.57		3.84		2.58
Feed cost per cwt of milk		10.33		10.31		10.47		7.64
Feed cost per cow		1,253.08		1,302.27		1,400.20		941.84
Avg milk price per cwt		25.77		25.39		24.44		22.15

**Table 24. Dairy Enterprise Analysis**  
**Organic Dairy – Average per Cow (Sorted by Net Return)**

	<u>Low 33%</u>		<u>33%-66%</u>		<u>High 64%</u>	
Number of farms	10		10		11	
	<u>Quantity</u>	<u>Value</u>	<u>Quantity</u>	<u>Value</u>	<u>Quantity</u>	<u>Value</u>
Milk sold (hd)	9,488.10	2,434.86	13,115.90	3,495.93	13,769.60	3,477.82
Dairy Calves sold (hd)	0.3	12.02	0.2	29.74	0.1	15.06
Transferred out (hd)	0.5	25.46	0.5	60.19	1	58.48
Cull sales (hd)	0.2	102.05	0.2	117.25	0.2	126.08
Other income		212.59		251.88		298.25
Purchased (hd)	-	-	-	-	0.1	-108.51
Transferred in (hd)	0.3	-64.39	0.3	-104.61	0.3	-206.91
Inventory change (hd)	0	-45.02	0	-104.74	0.1	105.08
Dairy repl net cost		-421.85		-379.17		-273.72
Gross margin		2,255.71		3,366.48		3,491.62
<b>Direct Expenses</b>						
Protein, vit, minerals (lb)	386.3	155.58	78,162.50	214.89	649.7	211.93
Complete ration (lb)	64.4	10	254.5	51.95	-	-
Barley (bu)	5.4	30.47	13.5	74.28	4.6	25.65
Corn (bu)	27.1	191.31	47.8	375.04	25.5	145.99
Corn Silage (lb)	5,149.30	97.2	4,776.50	101.76	9,753.40	176.95
Corn, ear (lb)	-	-	-	-	1,213.30	75.95
Hay, alfalfa (lb)	5,129.80	283.12	4,773.30	307	2,655.20	154.49
Hay, grass (lb)	1,577.60	74.35	1,473.90	72.62	2,270.30	117.36
Haylage, alfalfa (lb)	-	-	2,367.70	85.55	3,980.30	123.91
Oats (bu)	4.8	19.9	13.4	51.32	9.7	36.16
Pasture (aum)	3.8	233.26	3.6	121.94	4.1	136.71
Other feed stuffs (lb)	780.5	19.76	1,862.20	60.52	461.8	35.7
Veterinary		17.9		38.2		30.7
Supplies		121.57		192.09		171.09
Fuel & oil		53.73		53.95		59.98
Repairs		86.77		149.68		131.83
Hired labor		-		133.81		68.08
Hauling and trucking		22.74		38.18		21.4
Marketing		56.49		69.4		50.14
Bedding		8.91		19.25		44.93
Total direct expenses		1,483.06		2,211.42		1,818.96
Return over direct expense		772.66		1,155.06		1,672.66
<b>Overhead Expenses</b>						
Hired labor		286.72		68.26		93.1
Utilities		58.79		84.06		63.75
Interest		102.81		76.67		46.53
Mach & bldg depreciation		134.05		68.73		61.03
Miscellaneous		117.95		105.78		95.26
Total overhead expenses		700.32		403.49		359.67
Total dir & ovhd expenses		2,183.37		2,614.91		2,178.63
Net return		72.34		751.57		1,312.99
Labor & management charge		193.45		313.5		381.01
Net return over lbr & mgt		-121.11		438.07		931.98
<b>Cost of Production per Cwt</b>						
Total direct expenses per unit		15.21		16.4		12.83
Total dir & ovhd expenses per unit		22.39		19.39		15.37
With other revenue adjustments		24.84		20.94		15.9
With labor and management		26.82		23.27		18.59
Estimated labor hours per unit		37.99		44.28		37.97
<b>Other Information</b>						
Number of cows		102.5		57.5		73.7
Milk produced per cow		9,751		13,483		14,175
Total milk sold		972,526		753,533		1,015,198
Pounds of milk sold per FTE		699,281		829,417		1,015,468
Culling percentage		22.6		20.9		21.2
Turnover rate		28.8		26.8		25.8
Cow death loss percent		4.3		4.4		3
Percent of barn capacity		99		104.5		110.2
Feed cost per day		3.05		4.16		3.4
Feed cost per cwt of milk		11.43		11.25		8.75
Feed cost per cow		1,114.95		1,516.87		1,240.80
Avg milk price per cwt		25.66		26.65		25.26



**Table 25. Dairy Enterprise Analysis**  
**Organic Replacement Heifers – Average per Head**

	<u>2009</u>		<u>2008</u>		<u>2007</u>		<u>2006</u>	
<b>Number of farms</b>	22		22		20		20	
	<u>Quantity</u>	<u>Value</u>	<u>Quantity</u>	<u>Value</u>	<u>Quantity</u>	<u>Value</u>	<u>Quantity</u>	<u>Value</u>
Replacements sold (hd)	0.3	46.61	0.2	41.83	0.2	110.04	0.2	65.13
Transferred out (hd)	0.4	367.07	0.4	529.1	0.3	447.18	0.4	423.28
Cull sales (hd)	0	0.65	-	-	0	10.2	0	0.79
Other income		3.37		13.24		6.7		1.84
Purchased (hd)	0	-26.85	0	-4.6	0	-5.92	0	-20.91
Transferred in (hd)	0.8	-143.7	0.8	-169.8	0.7	-150.43	0.7	-160.66
Inventory change (hd)	0	7.8	0.1	94.42	0.1	118	0.1	135.37
Gross margin		254.96		504.19		535.77		444.83
<b>Direct Expenses</b>								
Protein, vit, minerals (lb)	8,028.50	42.55	1,610.40	22.2	104.1	35.99	100	42.67
Milk (lb)	142	48.5	189.7	42.85	313	67.16	207.5	38.2
Complete ration (lb)	4,587.40	4.44	302.6	23.32	117.2	34.14	52.4	10.7
Barley (bu)	0.8	4.84	1.2	8.79	1.4	5.35	1.9	6.52
Corn (bu)	3.7	25.53	2	17.24	3.5	24.3	3.5	19.52
Corn Silage (lb)	2,288.30	37.76	2,488.60	38.89	1,680.00	29.73	1,459.30	19.96
Hay, Alfalfa (lb)	1,042.90	59.07	1,263.00	73.52	1,602.40	83.09	1,983.60	85.23
Hay, Grass (lb)	1,541.90	63.79	928.9	41.40	1,346.40	53.66	839.2	28.97
Haylage, Alfalfa (lb)	804.3	23.38	463.9	20.19	325.9	8.22	358	9.83
Oatlage (lb)	1,656.40	34.89	1,133.90	15.21	41.8	0.59	69.7	1.05
Oats (bu)	5.2	18.24	3.8	7.37	3.5	14.54	3.9	11.35
Pasture (aum)	1.6	53.97	4.1	69.62	4.2	40.51	2.4	60.09
Other feed stuffs (lb)	660.4	21.36	374.1	11.81	1,220.80	31.5	788.6	12.95
Veterinary		5.92		3.9		6.92		6.37
Supplies		17.79		22.22		15.71		21.36
Contract production expenses		10.92		32.58		28.56		33.42
Fuel & oil		9.24		14.76		7.49		9.92
Repairs		23.95		21.98		19.24		25.58
Hired labor		11		11.5		0.18		-
Bedding		14.31		10.91		5.29		2.8
Total direct expenses		531.46		510.27		512.18		446.5
Return over direct expenses		-276.5		-6.08		23.59		-1.67
<b>Overhead Expenses</b>								
Hired labor		32.65		32.07		27.47		46.54
Utilities		14.01		11.54		10.48		10.75
Interest		16.12		21.99		15.34		14.38
Mach & bldg depreciation		16.06		19.76		12.59		18.13
Miscellaneous		19.73		15.64		18.94		19.28
Total overhead expenses		98.57		101		84.81		109.08
Total dir & ovhd expenses		630.03		611.27		596.99		555.58
Net return		-375.07		-107.08		-61.22		-110.75
Labor & management charge		54.7		51.89		42.35		44.34
Net return over lbr & mgt		-429.77		-158.97		-103.57		-155.09
<b>Cost of Production per Head per Day</b>								
Total direct expenses per unit		1.89		1.62		1.46		1.34
Total dir & ovhd expense per unit		2.16		1.9		1.69		1.64
With other revenue adjustments		2.16		1.87		1.69		1.64
With labor and management		2.31		2.01		1.81		1.76
Estimated labor hours per unit		8.07		8.42		6.44		9.35
<b>Other Information</b>								
Number purchased or trans in		46		49		49		47
Number sold or trans out		39		36		33		35
Average number of head		60		64		65		65
Percentage death loss		9.5		9.6		12.6		11.3
Feed cost per average head		438.32		392.42		428.8		347.04
Feed cost/head sold/trans		672.88		703.37		836.87		643.72
Total cost/head sold/trans		1,294.81		1,308.26		1,289.63		1,193.63
Feed cost per head per day		1.2		1.08		1.17		0.95
Avg purch price per head		1,135.48		1,083.33		1,275.00		1,800.00
Avg sales price per head		170.22		252.78		528.5		373.73

# MAKING SENSE OF FARM FINANCIAL RATIOS AND GUIDELINES<sup>2</sup>

*Use with Table 26 and the Farm Finance Scorecard inside and outside the back cover.*

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## LIQUIDITY

- is the ability of your farm business to meet financial obligations as they come due – to generate enough cash to pay your family living expenses and taxes, and make debt payments on time.

### **1. Current ratio**

- measures the extent to which current farm assets, if sold tomorrow, would pay off current farm liabilities.

### **2. Working capital**

- tells us the operating capital available in the short-term from within the business.

### **3. Working capital to gross revenues**

- measures operating capital available against the size of the business

### **4. Farm debt-to-asset ratio**

- is the bank's share of the business. It compares total farm debt to total farm assets. A higher ratio is an indicator of greater financial risk and lower borrowing capacity.

### **5. Farm equity-to-asset ratio**

- is your share of the business. It compares farm equity to total farm assets. If you add the debt-to-asset ratio and the equity-to-asset ratio you must get 100%.

### **6. Farm debt-to-equity ratio**

- compares the bank's ownership to your ownership. It also indicates how much an owner has leveraged ( i.e., multiplied) his/her equity in the business.

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## SOLVENCY

- is the ability of your business to pay all its debts if it were sold tomorrow. Solvency is important in evaluating the financial risk and borrowing capacity of the business.

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## PROFITABILITY

- is the difference between the value of goods produced and the cost of the resources used in their production.

### **7. Net farm income**

- represents return to three things: 1) your labor; 2) your management, and 3) the equity that you have invested in the business. It is the reward for investing your unpaid family labor, management, and money in the business instead of elsewhere. Anything left in the business, i.e., not taken out for family living and taxes, will increase your farm net worth.

### **8. Rate of return on farm assets**

- can be thought of as the average interest rate being earned on all (yours and creditors') investments in the farm. Unpaid labor and management are assigned a return before return on farm assets is calculated.

### **9. Rate of return on farm equity**

- represents the interest rate being earned by your investment in the farm. This return can be compared to returns available if your equity were invested somewhere else, such as a certificate of deposit.

### **10. Operating profit margin**

- shows the operating efficiency of the business. If expenses are low relative to the value of farm production, the business will have a healthy operating profit margin. A low profit margin can be caused by low product prices, high operating expenses, or inefficient production.

### **11. EBITDA**

- stands for Earnings Before Interest, Taxes, Depreciation, and Amortization. Measures earnings available for debt repayment.

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<sup>5</sup>Adapted from by K. Becker, D. Kaupila, G. Rogers, R. Parsons, D. Nordquist, R. Craven at University of Vermont Extension and Center for Farm Financial Management, University of Minnesota.

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## REPAYMENT CAPACITY

- shows the borrower's ( i.e., your) ability to repay term debts on time. It includes non-farm income and so is not a measure of business performance alone.

### **12. Capital debt repayment capacity**

- measures the amount generated from farm and non-farm sources, to cover debt repayment and capital replacement.

### **13. Capital debt repayment margin**

- is the amount of money remaining after all operating expenses, taxes, family living costs, and scheduled debt payments have been made. It's really the money left, after paying all bills, that is available for purchasing or financing new machinery, equipment, land, or livestock.

### **14. Replacement margin**

- the amount of income remaining after paying principal and interest on term loans and unfunded (cash) capital purchases.

### **15. Term-debt coverage ratio**

- tells whether your business produced enough income to cover all intermediate and long-term debt payments. A ratio of less than 1.0 indicates that the business had to liquidate inventories, run up open accounts, borrow money, or sell assets to make scheduled payments.

### **16. Replacement margin coverage ratio**

- A ratio under 1.0 indicates that you did not generate enough income to cover term debt payments and unfunded capital purchases.

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## FINANCIAL EFFICIENCY

- shows how effectively your business uses assets to generate income. Past performance of the business could well indicate potential future accomplishments. It also answers the questions: Are you using every available asset to its fullest potential? What are the effects of production, purchasing, pricing, financing, and marketing decisions on gross income?

### **17. Asset-turnover rate**

- measures efficiency in using capital. You could think of it as capital productivity. Generating a high level of production with a low level of capital investment will give a high asset-turnover rate. If, on the other hand, the turnover is low, you will want to explore methods to use the capital invested much more efficiently or sell some low-return investments. (It could mean getting rid of that swamp on the back 40 and getting something that produces income.)

The last four ratios show how Gross Farm Income is used. The sum of the four equals 100% (of Gross Farm Income).

### **18. Operating-expense ratio**

- shows the proportion of farm income that is used to pay operating expenses, not including principal or interest.

### **19. Depreciation-expense ratio**

- indicates how fast the business wears out capital. It tells what proportion of farm income is needed to maintain the capital used by the business.

### **20. Interest-expense ratio**

- shows much of gross farm income is used to pay for interest on borrowed capital.

### **21. Net farm income ratio**

- compares profit to gross farm income. It shows how much is left after all farm expenses, except for unpaid labor and management, are paid.

**Table 26. Financial Standards Measures**  
**Completely Organic Farms (Sorted by Net Farm Income)**

	<u>Avg of All Farms</u>	<u>Low 33%</u>	<u>33 - 66%</u>	<u>High 34%</u>
Number of farms	47	15	16	16
<b>Liquidity</b>				
Current ratio	1.78	1.83	1.34	2.03
Working capital	64,547	96,668	19,626	79,355
Working capital to gross income	28.60%	44.40%	14.30%	24.70%
<b>Solvency (market)</b>				
Farm debt to asset ratio	43%	47%	46%	36%
Farm equity to asset ratio	57%	53%	54%	64%
Farm debt to equity ratio	0.74	0.87	0.84	0.57
<b>Profitability (cost)</b>				
Rate of return on farm assets	0.90%	-6.40%	0.20%	8.40%
Rate of return on farm equity	-2.90%	-17.60%	-6.20%	10.60%
Operating profit margin	2.80%	-26.20%	0.70%	21.90%
Net farm income	18,821	-37,992	8,610	82,295
EBIDTA	51,497	1,823	30,581	118,981
<b>Repayment Capacity</b>				
Capital debt repayment capacity	22,972	-27,190	18,593	74,378
Capital debt repayment margin	-14,084	-67,910	-11,500	33,793
Replacement margin	-19,190	-75,062	-13,228	27,229
Term debt coverage ratio	0.62	-0.67	0.62	1.83
Replacement coverage ratio	0.54	-0.57	0.58	1.58
<b>Efficiency</b>				
Asset turnover rate (cost)	30.20%	24.60%	25.80%	38.30%
Operating expense ratio	77.20%	99.20%	77.80%	62.90%
Depreciation expense ratio	7.60%	9.20%	6.90%	6.90%
Interest expense ratio	6.50%	8.30%	8.10%	4.70%
Net farm income ratio	8.30%	-17.50%	6.30%	25.60%

# Farm Financial Scorecard

## Liquidity

Current ratio \_\_\_\_\_ . \_\_\_\_\_

Working capital \$ \_\_\_\_\_

Strong

2.0

Vulnerable

1.0



## Solvency (Market)

Note: These solvency ratios exclude deferred liabilities

Farm debt/asset ratio \_\_\_\_\_ %

Farm equity/asset ratio \_\_\_\_\_ %

Farm debt/equity ratio \_\_\_\_\_ %

30%

70%



70%

30%



43%

233%



## Profitability (Cost)

Net farm income \$ \_\_\_\_\_

Rate of return on farm assets \_\_\_\_\_ %

Rate of return on farm equity \_\_\_\_\_ %

Operating profit margin \_\_\_\_\_ %

8%

3%



15%

5%



25%

10%



## Repayment Capacity (Accrual)

Term-debt coverage ratio \_\_\_\_\_ %

Capital-replacement margin \$ \_\_\_\_\_

150%

110%



## Financial Efficiency

Asset-turnover rate (market) \_\_\_\_\_ %

Operating-expense ratio \_\_\_\_\_ %

Depreciation-expense ratio \_\_\_\_\_ %

Interest-expense ratio \_\_\_\_\_ %

Net farm income ratio \_\_\_\_\_ %

Can vary depending on the type of farm

65%

80%



5%

11%



5%

11%



20%

10%

