



2012

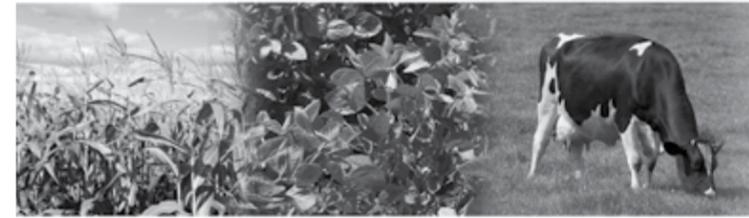
ORGANIC 

FARM PERFORMANCE

IN MINNESOTA



# PROJECT PARTNERS



# 2012



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This report is based on work originally funded by a Research Partnership Grant from the USDA Risk Management Agency (RMA). The RMA was created in 1996 to help farmers manage their business risks through effective, market-based risk management solutions. For more information about RMA programs and services in Minnesota, call the regional office in St. Paul at 651-290-3304.

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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, and information about farms in transition to organic is even harder to come by. This report provides detailed data about many aspects of the 2012 performance in both of these categories.

### Certified Organic Data

Since 2006, the Minnesota Department of Agriculture (MDA) has partnered with Minnesota State Colleges and Universities (MnSCU) and the Center for Farm Financial Management at the University of Minnesota (CFFM) to report financial data about certified organic farms in Minnesota.

Early in their project, participating farmers received scholarships to reduce the cost of tuition for local Farm Business Management (FBM) education programs offered throughout Minnesota by eight colleges within the MnSCU system and one FBM Association. Originally, the effort was funded by a grant from USDA Risk Management Agency. Now, participants fund the effort themselves. Farmers in FBM work one-on-one with a local instructor, learning to keep and use farm records in their business decisions. Their farm data is then stripped of all its identifying characteristics (so the producers remain absolutely anonymous) and incorporated into FINBIN, a public database managed by CFFM and available free of charge at [www.finbin.umn.edu](http://www.finbin.umn.edu).

While participation dropped some when the scholarship support ended, 37 completely organic and 19 partially organic operations contributed data in 2012 – enough to report on whole farm performance as well as some individual crops and forages, along with dairy. This report offers summary data from 2012 and four previous years so readers can examine trends. More detailed information and analysis about each previous year is available in reports at [www.mda.state.mn.us/fbm](http://www.mda.state.mn.us/fbm).

*FBM instructors serve more than 2,000 producers in Minnesota – 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.fbm.mnscu.edu](http://www.fbm.mnscu.edu). Southwest Minnesota also has a Farm Business Management Association; contact Barb Lenning at 507-752-5094.*

### Transitioning/Recently Certified Data

A four-year University of Minnesota study is currently collecting data about transitioning and recently certified organic farms. The study is called “Tools for Transition” (TFT) and was funded by USDA’s Organic Research and Education Initiative. TFT will continue to enroll new participants through the fall of 2013. Participating farmers receive FBM scholarships and the chance to take part in workshops, discussion groups and other opportunities.

**If you are a Minnesota farmer with any crop or forage ground in transition (even if you have other certified acres), please call 651-201-6012 to learn more about the opportunity to be a part of TFT.** You’ll find more information about the project (including newsletters) at <http://eorganic.info/toolsfortransition>.

### Explanation of Data Processing and Report Format

The tables in this report were created using FINPACK and RankEm Central, software programs copyrighted by CFFM. The data are provided by farm business management instructors in the MnSCU system, and by Southwest Minnesota Farm Business Management Association field staff.

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# Introduction and Analysis

By Dale Nordquist<sup>1</sup>, Meg Moynihan<sup>2</sup>, and Ron Dvergsten<sup>3</sup>



Minnesota organic crop and dairy farms had a very profitable year in 2012. Data from organic farms that participated in Minnesota’s Farm Business Management (FBM) program indicate that median *net farm income* was \$85,108, up from \$38,146 in 2011. Organic crop farms benefited from improved yields and very favorable prices. Organic dairy farms were able to overcome extremely high feed costs with improved production and higher milk prices.

This report summarizes individual farm financial results for organic FBM participants in the Minnesota Organic Farm Business Management Project for 2012 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 FBM instructors or by Minnesota Farm Management Associations. A total of 56 organic farms reported data for 2012. Of those, 37 were “completely organic,” meaning that all of the agricultural products produced on the farm were produced under organic certification. The others were “split operations,” which have some certified organic and some conventional production. The *Whole Farm Results* section of this report summarizes **only** the completely organic farms, whereas the crop and dairy enterprise reports include data on the organic production from **both** completely organic and split operations.

The organic farms included in this report generally fall into two types: crop producers who produce traditional Midwest crops such as corn grain, barley, oats, wheat and soybeans; and dairy producers. Few organic vegetable producers participate in FBM education, so data from those types of operations is less available.

## Whole Farm Results

### Financial Performance

Table 1 summarizes the financial performance of participating farms over the past five years. This past year was a very profitable one for these farms compared to recent history. The median *net farm income* (half the farms had higher incomes and half had lower) was \$85,108, more than a twofold increase from \$38,146 in 2011. Average earnings increased to \$135,105, substantially higher than the median. This phenomenon indicates that the returns in 2012, as in 2011, were not evenly shared across the participating farms. It means that some of the most profitable farms were apparently so profitable that they pulled up the average for the whole group.

The average organic farm earned a *rate of return on assets (ROA)* of 12.4% (with assets valued at adjusted cost basis) and a *rate of return on equity (ROE)* of 19.6%. The relationship between ROA and ROE is a good barometer of profitability. Years when the ROE is higher than ROA are profitable years. When this is the case, borrowed capital earned more than it cost (meaning ROA was higher than the average interest rate paid on borrowed capital). This goal was easily met in 2012, and, in fact, has been accomplished in four of the past five years for the average organic producer in this group.

The average of these farms is in a strong liquidity position entering the 2013 growing season. Their current ratio improved in 2012, from 2.14:1 to 2.58:1. (A 2:1 current ratio is commonly considered a good goal.) At the end of 2012, their working capital (current assets minus current liabilities) equaled 33% of a year’s income. A working capital to gross revenue ratio of more than 25% working capital to gross is generally considered adequate.

The debt repayment capacity of these producers improved substantially in 2012. The average farm generated a term debt coverage ratio (TDCR) of 3.15:1, meaning that it generated \$3.15 to cover each dollar of scheduled debt payments. This was up from 1.60:1 in 2011. Lenders use TDCR as a primary measure of loan soundness. In general, a TDCR over 1.50 is considered acceptable.

The average organic farm reported that its net worth grew by \$145,216 in 2012, a 19% rate of growth. Their debt-to-asset ratio improved slightly, down from 40 to 39%.

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<sup>3</sup> Dean of Management Education, Northland Community and Technical College

## Comparison to Conventional Farms

This past year was also a very profitable year for Minnesota's conventional farming operations. Table 2 shows these same financial measures for the almost 2,200 Minnesota conventional farms that participated in FBM education programs. The median conventional farm earned a net farm income of almost \$200,000, the highest level ever reported for farms included in the FINBIN database. Crop farms led the way, but livestock farms of all types (dairy, hog and beef) also earned improved profits.

These conventional farms are, on average, much larger than the organic farms, with total sales of almost three times that of their organic peers. 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 12.4% compared to an average of 15.1% for conventional farms (with assets valued at adjusted cost basis). During the past seven years, conventional farms have consistently earned somewhat higher returns than the organic group based on ROA.

Profit margins were nearly equal between the organic and conventional farms. Conventional farms had a 31% operating profit margin compared to 30% for organic farms. With their smaller volume of sales, organic producers generally need high margins to generate comparable profits. However, this was an exceptionally profitable year for these conventional farms. It is unlikely that conventional farms will be able to maintain these profit margins consistently into the future.

The conventional and organic farms used comparable amounts of debt capital, with average debt-to-asset ratios of 40% for conventional farms compared to 39% for the organic farms. Conventional farms were, on average, in a stronger liquidity position than organic producers, with working capital to gross revenue levels averaging 43% compared to 33% for organic producers. Conventional farms also had stronger debt repayment capacity, generating a term debt coverage ratio of 3.98:1 (meaning that after family living and taxes, they had \$3.98 of income to cover each \$1.00 of scheduled debt payments) compared to 3.15:1 for organic farms.

In sum, the conventional farms outperformed these organic farms in 2012. But this does not mean that these organic farms performed poorly or that they did not meet their goals. While organic producers had a very successful year, according to financial measures, the conventional producers fared even better.

## Profitability Comparisons

As is always the case, the "averages" mask the variability of returns across the wide range of producers. Table 3, which sorts the 2012 organic farms into thirds based on net farm income, shows that there was more than \$150,000 difference between the median net farm incomes of "high" and "low" profit farms. The high profit organic farms were larger, on average, than the low profit organic farms – based on gross sales and on total assets.

High profit farms had higher operating profit margins and higher asset turnover rates; i.e., they outperformed the low profit group in both margin on sales (operating efficiency) and sales per dollar of investment (efficiently using capital). These factors contributed to a huge difference in ROA and ROE.

All was not lost for the low profit group, though. They did generate enough income to cover debt payments; they had a term debt coverage ratio of 1.69:1 (\$1.69 available to repay each dollar of scheduled payments). Their current ratio of 2.58:1 was also reasonably strong. The high profit farms, on the other hand, generated 4.10 times their scheduled debt payments. Their net worth increased, on average, by over \$294,000, while the low profit group's net worth increased by \$78,000.

Economists are always trying to discover why some farms are profitable and others are not in a given year. In many years, it is partly a function of type of farm. That does not appear to be the driving factor in 2012, as both organic crop and dairy farms were profitable. Nor does it appear that debt level was a driving factor. The low profit and high profit groups had almost identical debt to asset ratios. Weather is always a factor. Minnesota largely escaped the worst of the drought that developed across the corn belt and plains in the summer of 2012. But by the end of the summer, some regions of the state were very dry and some individual farms were probably affected more than others. Beyond these factors, there are thousands of decisions, many of them non-financial in nature, that contribute to these results.

In addition to generating organic financial data, part of this project involved developing a tool to help producers explore and track some of the management skills and personal qualities that are ingredients of organic farming success. It consists of several simple self-assessments that farmers can use to evaluate their strengths, preferences, and abilities – and how these change over time. This four-page booklet, *Steps to Success*, is free to use and share at: [www.mda.state.mn.us/organic](http://www.mda.state.mn.us/organic).

## Size of Farm

Unlike conventional farms, where returns generally increased with business size in 2012, the organic farms did not show a similar trend. Table 4 sorts these farms into size groups based on gross farm income. The largest farms were most profitable, but that is where the similarities stop. The smallest farms were more profitable than the mid-sized group—when compared based on ROA. This has been a consistent result for these farms over the years of this project. Why mid-sized organic farms have not been as profitable as their larger and smaller neighbors is a bit of a mystery. Mid-sized farms have generally had lower profit margins, which suggests they may have some operating efficiency and cost control problems. Mid-sized farms were also in the most precarious liquidity position at the end of the year; their average working capital to gross revenue was less than 20%.



## Type of Farm

Of the 37 completely organic farms reporting data in 2012, 12 were crop farms and 21 were dairy farms.<sup>4</sup> (The other 4 farms were organic hog or beef farms, for which there were not enough farms to summarize by category, or were diversified farms that did not fit into any one farm type.) Table 5 shows a five year history for the organic crop farms, which have been on a financial roller-coaster during this period. In 2008, the organic crop farms had a very profitable year. In 2009, they hit on hard times. They bounced back a bit in 2010 and 2011 and were even more profitable in 2012. In 2012, their return on equity was very strong at 19.6%, their liquidity position was solid at 42.7% working capital to gross revenue, and their repayment capacity was also very strong, with an average term debt coverage ratio of 3.91:1.

Crop farms returns were up in 2012 due mostly to improved yields. The state average yield for organic corn was 127 bushels per acre, compared to a 5 year average of 105. Organic soybeans averaged 30 bushels compared to a five year average of 23. Organic prices reported on crop sales were highly variable and were not as big of a factor as might be expected (Table 7).

Even with high feed prices, the 21 dairy farms had a very profitable year, too. Table 6 shows the historical performance of these organic dairy farms. In 2012, the average farm earned a very strong ROE of 17.6%. Dairy farms have traditionally tended to live with a weaker liquidity position than crop producers, but at 28.8% working capital to gross revenue, their short term financial position would be considered strong. Their repayment capacity was also much improved at a 3.08:1 term debt coverage ratio.

The average price received for organic milk was \$29.23 per hundredweight, up from \$27.32 in 2011. Cost of production was also up slightly, at \$26.63. Total costs per cow were up over \$200, but these additional costs were more than offset by the value of increased milk production, up from 12,133 pounds per cow in 2011 to 12,720 in 2012. Feed costs increased from \$1,437 per cow in 2011 to \$1,707 in 2012. In fact, feed costs made up more than the entire increase in costs, because other costs actually decreased.

## Summary

One of the goals of this publication 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 document the financial performance of a group of organic producers in order 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.

This past year was a profitable year, on average, for participating organic crop and organic dairy farms. But looking at only averages can be very deceiving. As with groups of conventional farms, there is tremendous variability in the production and financial

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

performance of these organic producers. For example, the median net farm income for the low third of the organic dairy farms was only \$39,491 while the median of the high third was \$192,778. So while 2012 was a very profitable year on average, not all producers shared equally in those profits.

The tables that follow summarize the whole farm financial performance of this group of organic producers. The first several tables (Tables 1-7) include the whole farm data on which the previous discussion is based. Figures A-E use graphs to visually illustrate some of the key performance measures. The next set of tables provides information about crop and forage enterprises (Tables 8-20) and dairy enterprise (Tables 21-22) performance. Finally, Table 23 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 against these.

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.**

**Table 1. Completely Organic Farms, by Year**

	2012	2011	2010	2009	2008
Number of farms	37	41	54	53	52
<b>Income Statement</b>					
Gross cash farm income	361,532	272,219	274,304	264,339	257,398
Total cash farm expense	276,251	218,670	217,649	210,878	201,582
Net cash farm income	85,281	53,549	56,655	53,461	55,817
Inventory change	72,227	24,727	25,055	(14,347)	31,217
Depreciation	(26,278)	(18,016)	(18,358)	(18,300)	(18,364)
Net farm income from operations	131,231	60,260	63,352	20,814	68,670
Gain or loss on capital sales	3,874	(7)	32	85	134
Average net farm income	135,105	60,253	63,384	20,899	68,803
Median net farm income	85,108	38,146	62,463	19,079	61,666
<b>Profitability (cost)</b>					
Rate of return on assets	12.4%	6.5%	7.0%	1.1%	9.0%
Rate of return on equity	19.6%	8.2%	9.3%	(2.9%)	11.6%
Operating profit margin	29.6%	17.7%	18.4%	3.3%	22.3%
Asset turnover rate	41.8%	36.6%	37.9%	32.7%	40.3%
<b>Liquidity &amp; Repayment (end of year)</b>					
Current assets	222,443	155,103	188,924	146,876	156,751
Current liabilities	86,135	72,311	94,242	92,752	93,929
Current ratio	2.6	2.14	2	1.58	1.67
Working capital	136,308	82,792	94,683	54,124	62,822
Working capital to gross inc	32.5%	28.0%	31.5%	21.6%	21.5%
Term debt coverage ratio	3.15	1.60	1.68	0.58	1.83
Replacement coverage ratio	2.55	1.27	1.42	0.50	1.61
<b>Solvency (end of year at market)</b>					
Total farm assets	1,330,462	1,130,634	1,042,284	940,599	981,585
Total farm liabilities	547,487	477,093	458,645	408,040	402,792
Total assets	1,517,946	1,301,121	1,193,410	1,100,771	1,138,592
Total liabilities	595,498	514,892	488,788	445,661	439,885
Net worth	922,448	786,229	704,622	655,110	698,706
Net worth change	145,216	71,663	56,258	7,564	43,560
Farm debt to asset ratio	41%	42%	44%	43%	41%
Total debt to asset ratio	39%	40%	41%	40%	39%
<b>Nonfarm Information</b>					
Net nonfarm income	27,549	14,382	16,287	18,158	19,668
Farms reporting living expenses	5	5	11	9	10
Total family living expense	79,328	37,411	48,204	48,926	45,662
Total living, invest, cap. purch	99,184	51,852	61,186	50,216	47,034
<b>Crop Acres</b>					
Total acres owned	166	195	209	212	219
Total crop acres	322	295	361	356	358
Total crop acres owned	110	110	119	136	141
Total crop acres cash rented	194	180	239	205	202
Total crop acres share rented	19	4	3	15	14

**Table 2. Non-Organic (Conventional) Farms, by Year**

	2012	2011	2010	2009	2008
Number of farms	2,199	2,295	2,345	2,327	2,331
<b>Income Statement</b>					
Gross cash farm income	907,845	822,314	682,003	634,897	682,612
Total cash farm expense	703,245	642,483	555,235	528,435	562,367
Net cash farm income	204,600	179,832	126,768	106,462	120,245
Inventory change	149,910	64,764	110,850	(16,464)	56,785
Depreciation	(50,919)	(44,636)	(40,856)	(36,238)	(34,685)
Net farm income from operations	303,590	199,960	196,763	53,760	142,345
Gain or loss on capital sales	2,375	1,118	1,127	724	1,111
Average net farm income	305,965	201,078	197,890	54,484	143,456
Median net farm income	195,961	129,027	125,086	34,517	91,749
<b>Profitability (cost)</b>					
Rate of return on assets	15.1%	11.4%	12.6%	3.1%	10.5%
Rate of return on equity	22.5%	16.6%	19.1%	1.4%	14.7%
Operating profit margin	30.6%	24.5%	27.2%	7.9%	21.9%
Asset turnover rate	49.3%	46.5%	46.4%	39.8%	48.0%
<b>Liquidity &amp; Repayment (end of year)</b>					
Current assets	738,548	584,658	553,085	442,774	465,467
Current liabilities	287,226	256,457	260,603	257,382	240,409
Current ratio	2.6	2.28	2.12	1.72	1.94
Working capital	451,322	328,201	292,482	185,392	225,059
Working capital to gross inc	43.2%	37.8%	37.8%	29.2%	31.4%
Term debt coverage ratio	3.98	2.99	3.04	1.03	2.40
Replacement coverage ratio	3.22	2.44	2.50	0.87	2.06
<b>Solvency (end of year at market)</b>					
Number of farms	2,199	2,295	2,345	2,327	2,331
Total farm assets	2,606,130	2,180,006	2,025,596	1,807,503	1,750,487
Total farm liabilities	1,088,684	926,340	907,861	840,303	817,671
Total assets	2,840,999	2,393,206	2,234,930	2,005,137	1,928,087
Total liabilities	1,146,606	981,289	961,338	889,115	862,495
Net worth	1,694,392	1,411,917	1,273,592	1,116,022	1,065,592
Net worth change	296,019	188,195	178,109	60,524	106,392
Farm debt to asset ratio	42%	42%	45%	46%	47%
Total debt to asset ratio	40%	41%	43%	44%	45%
<b>Nonfarm Information</b>					
Net nonfarm income	29,687	28,506	28,261	26,707	25,273
Farms reporting living expenses	530	575	644	649	770
Total family living expense	62,883	59,735	54,604	52,801	50,893
Total living, invest, cap. purch	106,132	94,376	80,989	84,353	77,779
<b>Crop Acres</b>					
Total acres owned	271	257	264	269	266
Total crop acres	838	810	829	813	797
Total crop acres owned	237	226	230	227	221
Total crop acres cash rented	578	563	576	562	553
Total crop acres share rented	23	21	23	23	24

**Table 3. Completely Organic Farms, 2012  
(by Net Farm Income)**

	Avg. All Farms	Low 33%	33 - 66%	High 34%
Number of farms	37	12	12	13
<b>Income Statement</b>				
Gross cash farm income	361,532	237,702	280,351	550,774
Total cash farm expense	276,251	197,403	212,746	407,653
Net cash farm income	85,281	40,298	67,605	143,121
Inventory change	72,227	9,334	37,741	162,116
Depreciation	(26,278)	(7,010)	(24,204)	(45,978)
Net farm income from operations	131,231	42,622	81,142	259,260
Gain or loss on capital sales	3,874	(417)	-	11,411
Average net farm income	135,105	42,205	81,142	270,671
Median net farm income	85,108	38,769	77,802	189,559
<b>Profitability (cost)</b>				
Rate of return on assets	12.4%	4.4%	7.1%	19.1%
Rate of return on equity	19.6%	3.2%	9.3%	31.4%
Operating profit margin	29.6%	15.1%	17.9%	38.8%
Asset turnover rate	41.8%	29.3%	39.5%	49.2%
<b>Liquidity &amp; Repayment (end of year)</b>				
Current assets	222,443	85,662	184,514	383,714
Current liabilities	86,135	33,192	68,630	151,165
Current ratio	2.6	2.6	2.7	2.5
Working capital	136,308	52,470	115,884	232,549
Working capital to gross inc	32.5%	22.3%	36.5%	34.1%
Term debt coverage ratio	3.15	1.69	2.79	4.10
Replacement coverage ratio	2.55	1.41	1.90	3.50
<b>Solvency (end of year at market)</b>				
Total farm assets	1,330,462	1,166,502	919,993	1,860,704
Total farm liabilities	547,487	499,440	395,883	731,780
Total assets	1,517,946	1,381,707	1,071,346	2,055,950
Total liabilities	595,498	541,227	453,774	776,417
Net worth	922,448	840,480	617,572	1,279,533
Net worth change	145,216	78,016	50,701	294,491
Farm debt to asset ratio	41.0%	43.0%	43.0%	39.0%
Total debt to asset ratio	39.0%	39.0%	42.0%	38.0%
<b>Nonfarm Information</b>				
Net nonfarm income	27,549	39,969	25,258	18,198
Farms reporting living expenses	5	-	3	2
Total family living expense	79,328	-	-	-
Total living, invest, cap. purch	99,184	-	-	-
<b>Crop Acres</b>				
Total acres owned	166	192	186	123
Total crop acres	322	174	437	351
Total crop acres owned	110	82	149	99
Total crop acres cash rented	194	93	244	240
Total crop acres share rented	19	-	45	12

**Table 4. Completely Organic Farms, 2012  
(by Size - Gross Farm Income )**

	<b>Avg. All Farms</b>	<b>\$100,001- 250,000</b>	<b>\$250,001- 500,000</b>	<b>\$500,001- 1,000,000</b>
Number of farms	37	13	12	6
<b>Income Statement</b>				
Gross cash farm income	361,532	161,077	347,081	703,085
Total cash farm expense	276,251	117,920	279,244	590,432
Net cash farm income	85,281	43,157	67,837	112,653
Inventory change	72,227	44,377	46,023	188,012
Depreciation	(26,278)	(14,305)	(16,301)	(53,534)
Net farm income from operations	131,231	73,230	97,559	247,131
Gain or loss on capital sales	3,874	-	-	-
Average net farm income	135,105	73,230	97,559	247,131
Median net farm income	85,108	72,399	93,660	208,542
<b>Profitability (cost)</b>				
Rate of return on assets	12.4%	10.2%	8.9%	13.9%
Rate of return on equity	19.6%	15.7%	14.9%	20.5%
Operating profit margin	29.6%	28.9%	22.3%	28.5%
Asset turnover rate	41.8%	35.3%	40.0%	48.6%
<b>Liquidity &amp; Repayment (end of year)</b>				
Current assets	222,443	143,540	157,429	435,344
Current liabilities	86,135	55,040	81,890	137,346
Current ratio	2.58	2.61	1.92	3.17
Working capital	136,308	88,500	75,538	297,998
Working capital to gross inc	32.5%	43.8%	19.7%	35.0%
Term debt coverage ratio	3.15	2.61	2.83	3.91
Replacement coverage ratio	2.55	2.05	2.19	2.95
<b>Solvency (end of year at market)</b>				
Total farm assets	1,330,462	743,621	1,445,603	1,955,553
Total farm liabilities	547,487	309,556	621,906	802,317
Total assets	1,517,946	892,450	1,644,155	2,080,624
Total liabilities	595,498	346,122	691,630	803,838
Net worth	922,448	546,328	952,525	1,276,785
Net worth change	145,216	72,091	85,396	262,260
Farm debt to asset ratio	41%	42%	43%	41%
Total debt to asset ratio	39%	39%	42%	39%
<b>Nonfarm Information</b>				
Net nonfarm income	27,549	31,503	35,038	1,356
Farms reporting living expenses	5	2	2	-
Total family living expense	79,328	-	-	-
Total living, invest, cap. purch	99,184	-	-	-
<b>Crop Acres</b>				
Total acres owned	166	92	196	281
Total crop acres	322	249	224	687
Total crop acres owned	110	100	58	246
Total crop acres cash rented	194	96	166	441
Total crop acres share rented	19	53	-	-

**Table 5. Completely Organic Crop Farms, by Year**

	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>	<b>2008</b>
Number of farms	12	10	14	12	14
<b>Income Statement</b>					
Gross cash farm income	294,771	243,441	238,556	250,717	316,502
Total cash farm expense	204,273	174,413	174,569	184,400	239,070
Net cash farm income	90,498	69,028	63,987	66,317	77,432
Inventory change	73,303	11,572	1,867	(36,747)	69,587
Depreciation	(25,748)	(19,448)	(17,686)	(26,691)	(26,654)
Net farm income from operations	138,054	61,153	48,168	2,879	120,365
Gain or loss on capital sales	(417)	(30)	-	375	-
Average net farm income	137,637	61,123	48,168	3,254	120,365
Median net farm income	78,753	49,019	10,043	2,585	98,337
<b>Profitability (cost)</b>					
Rate of return on assets	13.7%	8.2%	4.6%	(1.1%)	13.3%
Rate of return on equity	19.6%	11.0%	5.1%	(5.0%)	17.9%
Operating profit margin	30.0%	18.9%	14.8%	(4.4%)	28.8%
Asset turnover rate	45.6%	43.4%	30.9%	24.5%	46.1%
<b>Liquidity &amp; Repayment (end of year)</b>					
Current assets	261,304	194,654	282,911	255,948	321,327
Current liabilities	106,468	82,128	160,657	125,704	128,300
Current ratio	2.5	2.4	1.8	2.0	2.5
Working capital	154,837	112,526	122,255	130,244	193,027
Working capital to gross inc	42.7%	46.5%	50.9%	61.5%	49.2%
Term debt coverage ratio	3.91	3.42	1.91	0.51	2.79
Replacement coverage ratio	2.91	2.30	1.62	0.39	2.42
<b>Solvency (end of year at market)</b>					
Total farm assets	982,708	736,164	883,891	1,024,461	1,029,708
Total farm liabilities	420,627	285,708	442,459	444,597	432,622
Total assets	1,202,338	915,996	1,047,317	1,229,514	1,203,099
Total liabilities	487,020	331,245	472,063	487,642	465,108
Net worth	715,318	584,752	575,254	741,872	737,991
Net worth change	123,643	61,148	51,416	(1,243)	74,376
Farm debt to asset ratio	43%	39%	50%	43%	42%
Total debt to asset ratio	41%	36%	45%	40%	39%
<b>Nonfarm Information</b>					
Net nonfarm income	26,493	33,067	28,155	39,378	33,328
<b>Crop Acres</b>					
Total acres owned	155	173	223	265	257
Total crop acres	494	511	664	707	734
Total crop acres owned	145	183	216	288	254
Total crop acres cash rented	291	313	449	379	428
Total crop acres share rented	58	15	-	40	52

**Table 6. Completely Organic Dairy Farms, by Year**

	2012	2011	2010	2009	2008
Number of farms	21	25	31	32	32
<b>Income Statement</b>					
Gross cash farm income	420,674	293,843	315,508	277,792	245,668
Total cash farm expense	333,886	248,183	262,873	224,126	197,375
Net cash farm income	86,788	45,660	52,635	53,666	48,293
Inventory change	68,500	37,091	38,358	(1,086)	18,239
Depreciation	(29,223)	(18,325)	(19,746)	(16,233)	(16,105)
Net farm income from operations	126,065	64,426	71,247	36,347	50,427
Gain or loss on capital sales	7,064	-	56	-	217
Average net farm income	133,129	64,426	71,303	36,347	50,644
Median net farm income	113,628	38,146	63,247	26,237	56,347
<b>Profitability (cost)</b>					
Rate of return on assets	11.3%	6.4%	7.6%	3.0%	6.4%
Rate of return on equity	17.6%	7.9%	10.7%	0.6%	6.8%
Operating profit margin	28.1%	18.0%	17.9%	8.0%	17.6%
Asset turnover rate	40.1%	35.8%	42.3%	37.5%	36.5%
<b>Liquidity &amp; Repayment (end of year)</b>					
Current assets	207,540	151,531	151,906	99,071	99,439
Current liabilities	72,888	72,524	77,223	68,734	81,085
Current ratio	2.85	2.09	1.97	1.44	1.23
Working capital	134,652	79,007	74,683	30,337	18,354
Working capital to gross inc	28.8%	23.5%	20.9%	11.0%	6.9%
Term debt coverage ratio	3.08	1.46	1.59	0.74	1.27
Replacement coverage ratio	2.52	1.16	1.33	0.66	1.16
<b>Solvency (end of year at market)</b>					
Total farm assets	1,498,006	1,292,937	1,136,861	933,445	1,007,845
Total farm liabilities	603,409	566,405	496,861	387,291	403,680
Total assets	1,692,543	1,477,502	1,286,053	1,100,789	1,168,557
Total liabilities	648,588	608,346	531,246	430,154	444,922
Net worth	1,043,955	869,157	754,808	670,635	723,635
Net worth change	163,188	83,004	40,236	14,757	31,070
Farm debt to asset ratio	40%	44%	44%	41%	40%
Total debt to asset ratio	38%	41%	41%	39%	38%
<b>Nonfarm Information</b>					
Net nonfarm income	29,011	8,775	10,094	10,181	14,462
<b>Crop Acres</b>					
Total acres owned	181	205	196	192	207
Total crop acres	241	210	249	210	216
Total crop acres owned	81	77	79	79	99
Total crop acres cash rented	160	133	167	132	116
Total crop acres share rented	-	1	3	-	1

**Table 7. Organic Crop Production and Marketing Summary**

	2012	2011	2010	2009	2008
Number of farms	56	61	79	78	78
<b>Average Yield Per Acre Reported by Participants</b>					
Organic barley (bu)	45.9	31.0	59.9	55.5	51.6
Organic corn (bu)	127.1	93.9	127.3	110.9	110.0
Organic corn Silage(tons)	15.1	14.0	16.8	14.9	13.1
Organic alfalfa Hay(tons)	3.3	4.0	3.8	2.7	3.3
Organic grass Hay (tons)	2.4	2.3	3.8	3.2	3.1
Organic mixed Hay (tons)	3.0	2.5	2.6	2.1	2.5
Organic oats (bu)	64.6	52.4	51.7	58.4	56.7
Organic pasture (aum)	5.3	4.1	5.3	4.0	5.7
Organic sorghum silage (tons)	7.9	-	13.9	6.8	-
Organic soybeans (bu)	30.3	20.9	28.0	23.1	18.6
Organic spring wheat (bu)	40.2	26.0	39.6	52.9	43.4
<b>Average Price Received Reported by Participants (Cash Sales Only)</b>					
Organic barley per bu	-	-	7.05	7.88	10.02
Organic corn per bu	12.85	8.89	6.11	7.74	8.71
Organic alfalfa hay per ton	88.68	79.90	131.55	109.00	120.37
Organic oats per bu	5.52	4.40	3.64	4.58	4.46
Organic soybeans per bu	21.53	18.65	15.00	21.08	22.50
Organic spring wheat per bu	12.87	8.88	5.41	13.42	16.26

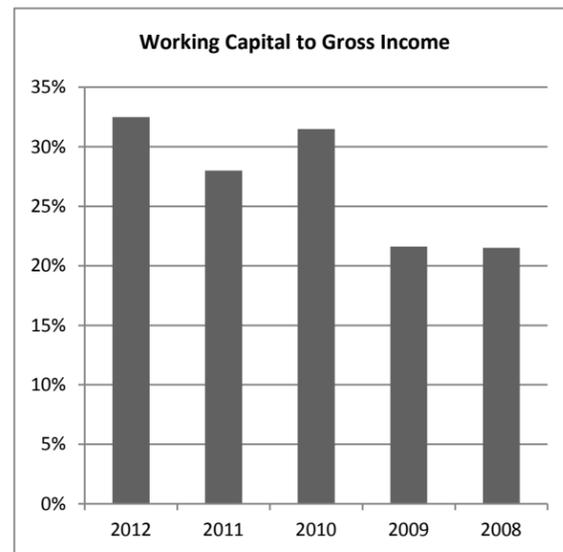
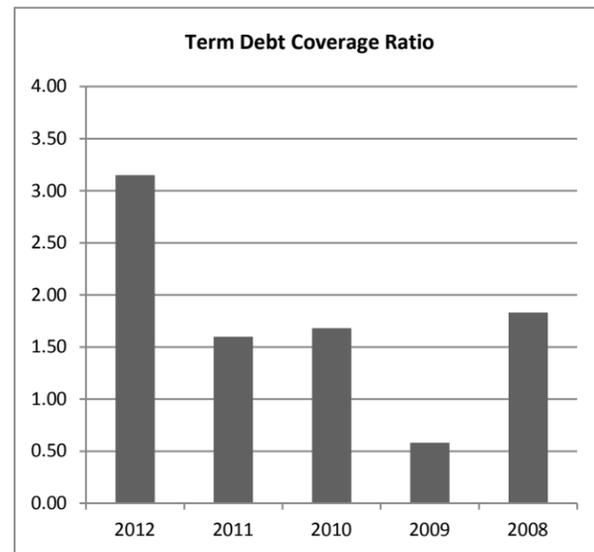
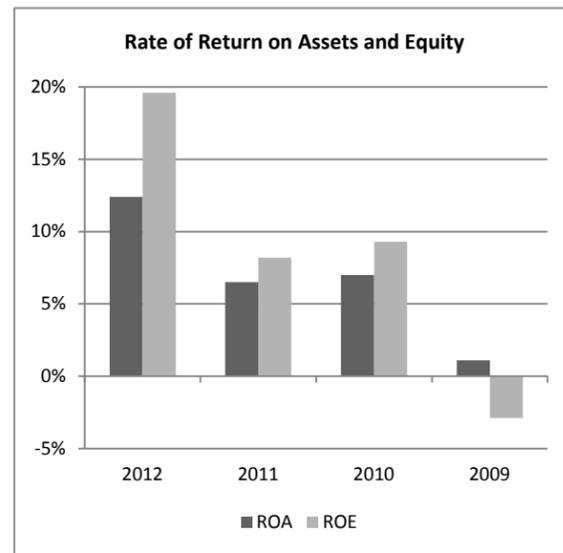
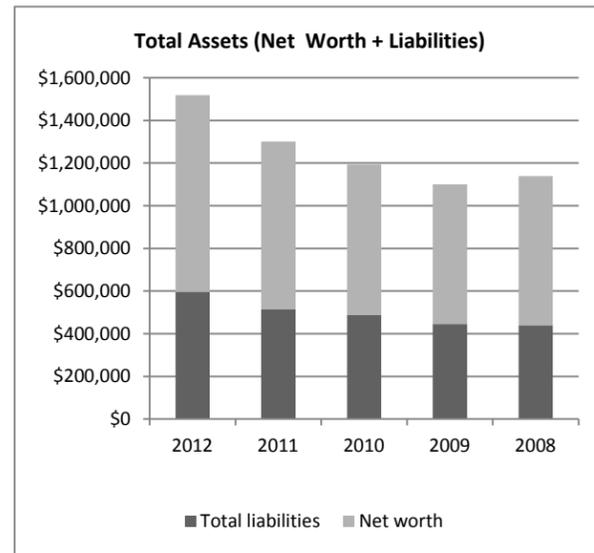
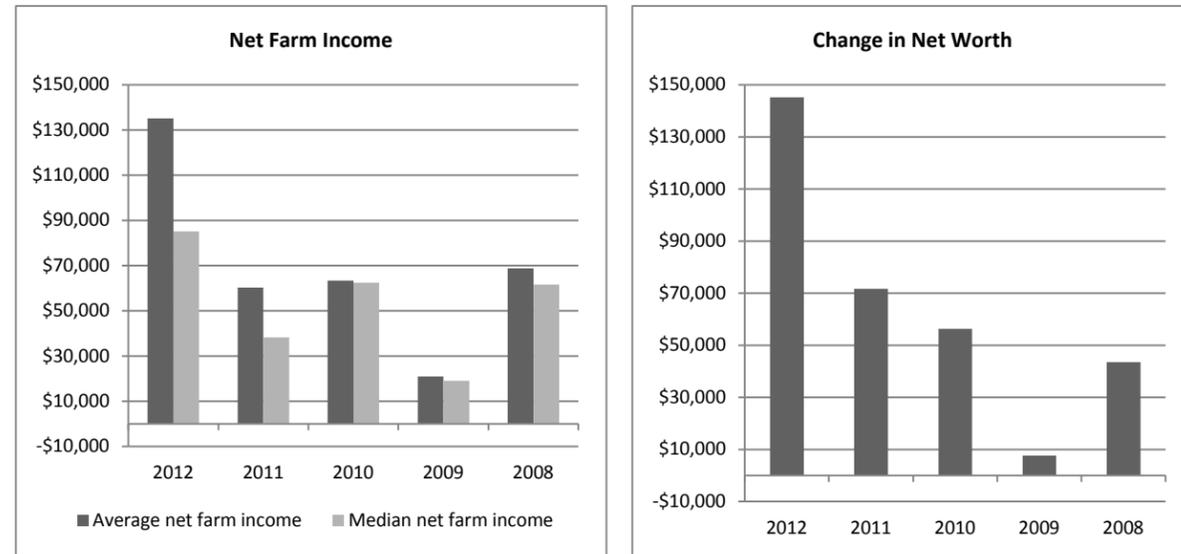
**The following national organic price data is reported with the permission of USDA Agricultural Marketing Service, which collects and publishes spot-market price data every two weeks.**

	2012	2011	2010
Organic barley, feed grade	10.81	7.56	4.35
Organic corn, feed grade	14.47	10.87	5.37
Organic corn, food grade	14.67	-	6.88
Organic oats, feed grade	5.41	5.10	3.12
Organic soybeans, feed grade	26.56	18.86	16.55
Organic soybeans, food grade	27.24	20.99	20.44
Organic hard red winter wheat, feed grade	10.77	9.18	4.45
Organic hard red winter wheat, food grade	13.35	9.76	-

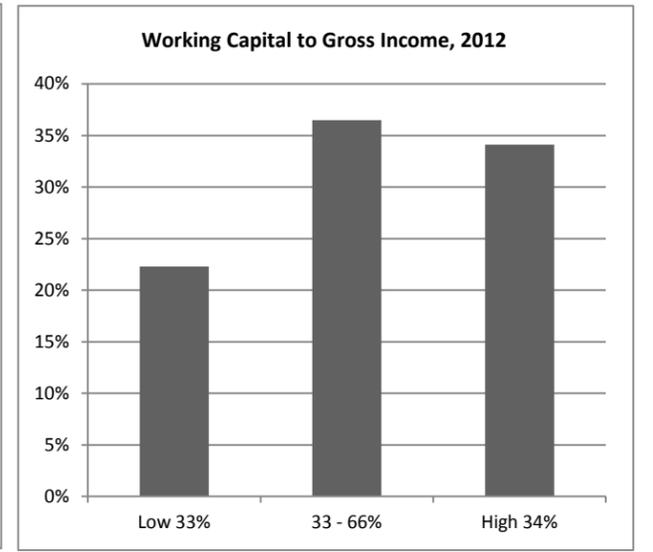
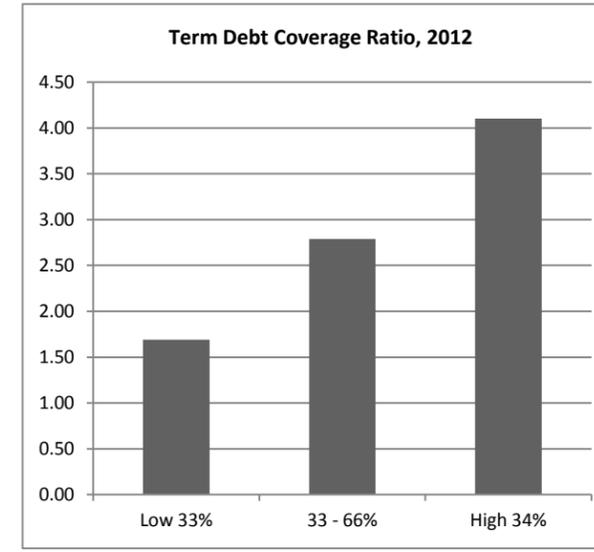
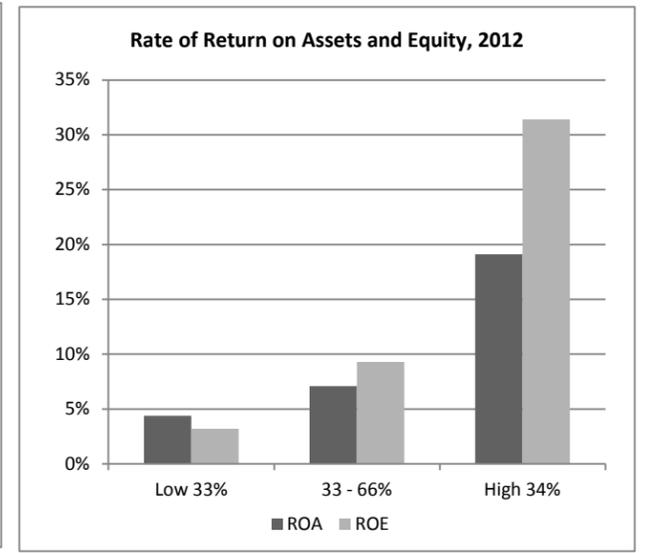
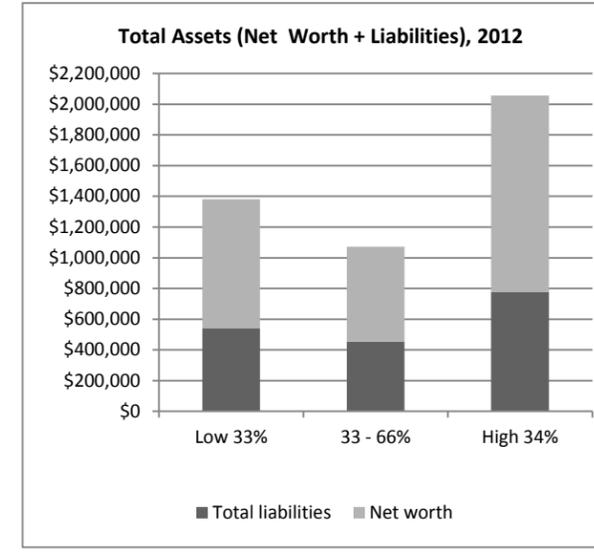
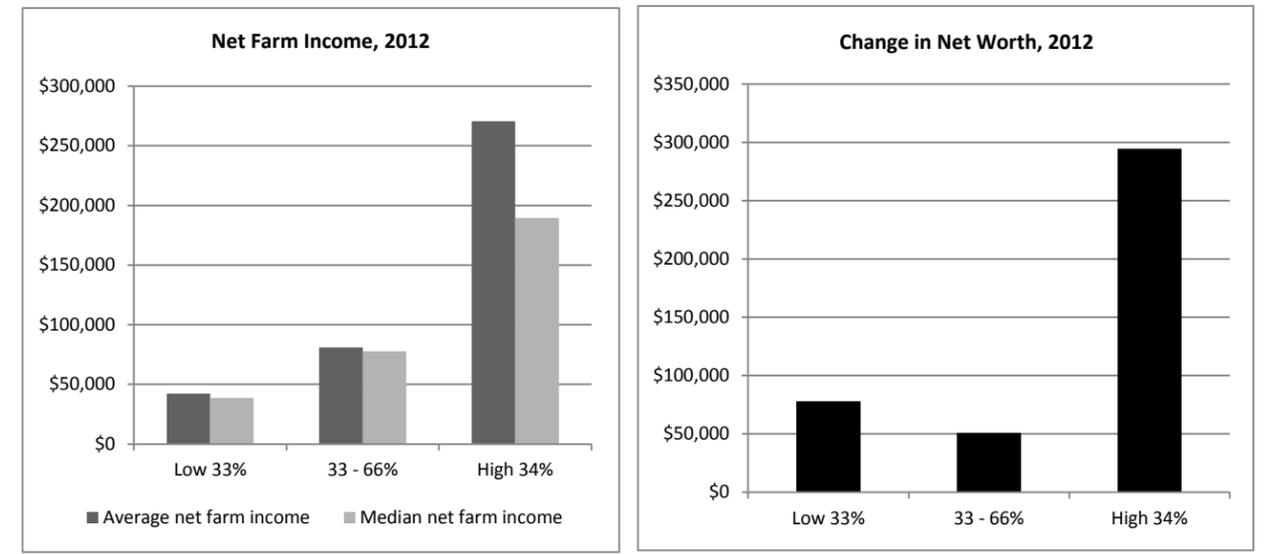
[www.ams.usda.gov/mnreports/lisbnof.pdf](http://www.ams.usda.gov/mnreports/lisbnof.pdf)

NOTE: AUM is "animal unit month" (pasture to graze one 1,000 lb lactating dairy cow for one month)

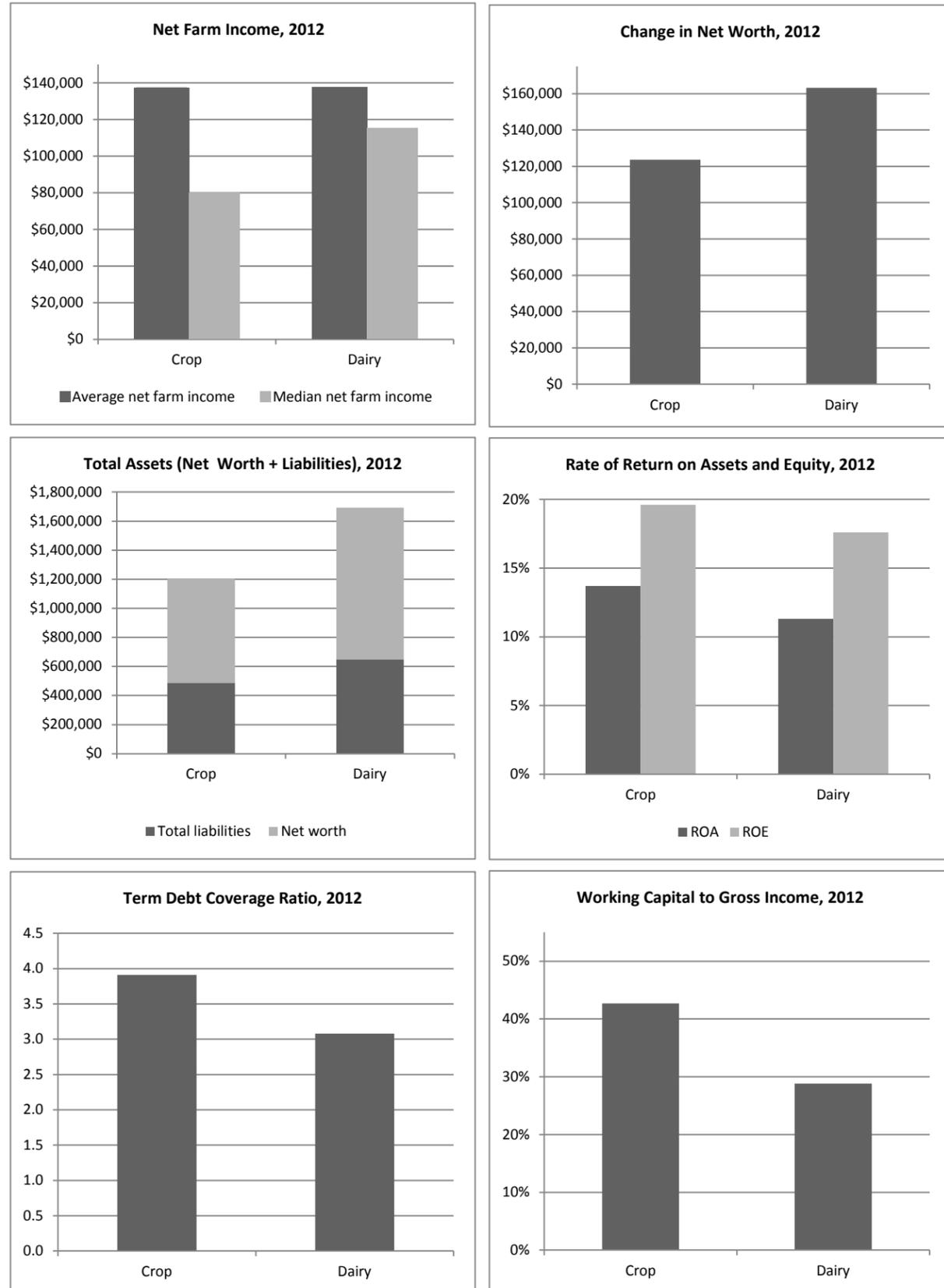
**Figure A. Selected Factors. Completely Organic Farms – by Year**



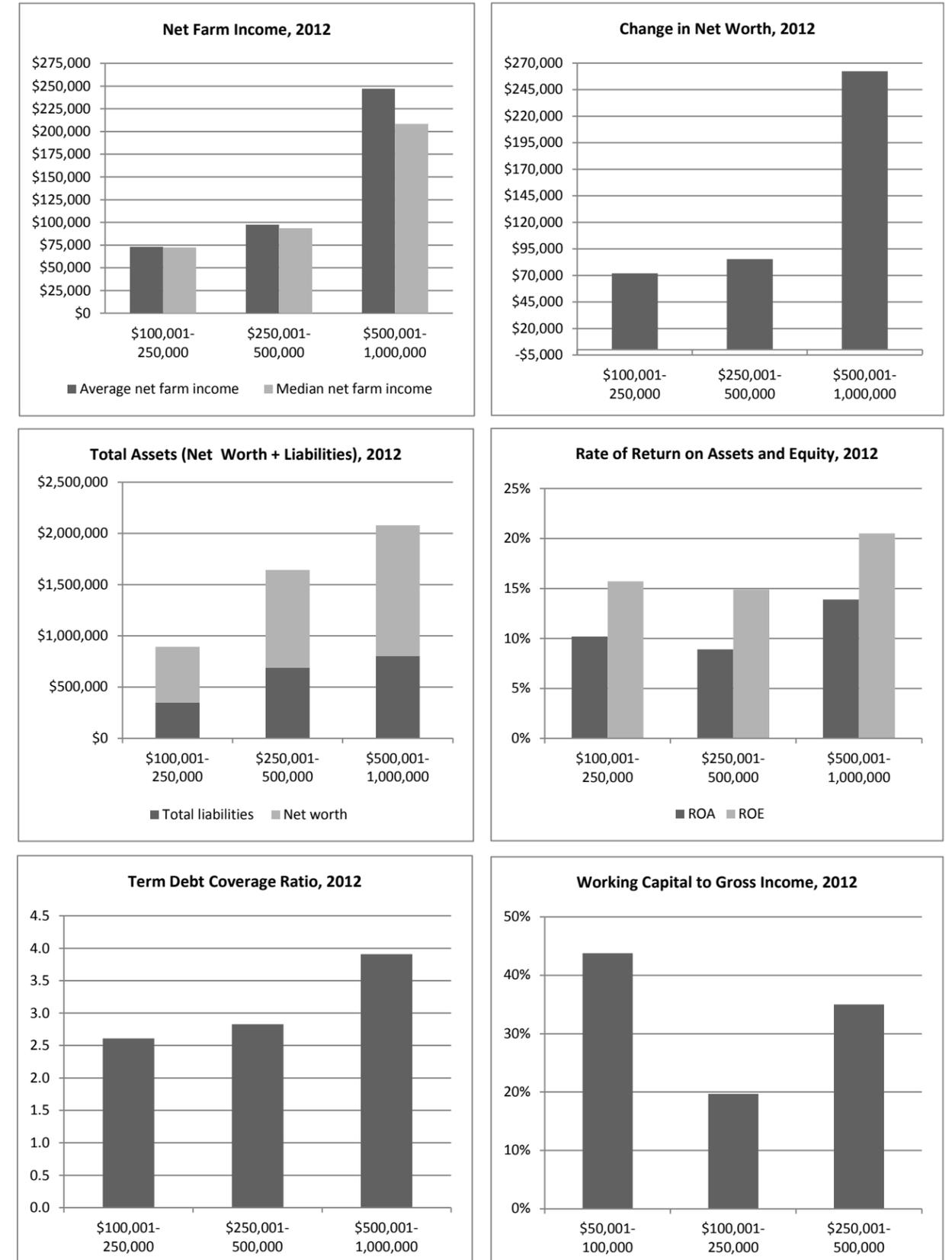
**Figure B. Selected Factors. Completely Organic Farms – by Net Farm Income**



**Figure C. Selected Factors. Completely Organic Farms – by Farm Type**



**Figure D. Selected Factors – Completely Organic Farms, by Farm Size (gross farm income)**

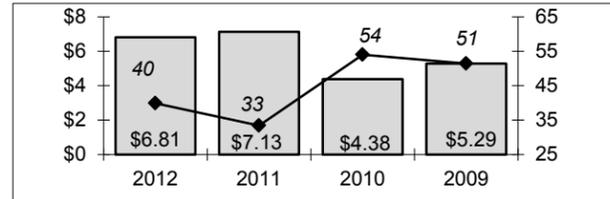


**Figure E. Organic Crop, Forage, and Livestock Trends**

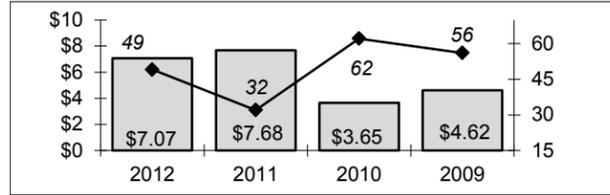
Graphs show:

Cost of Production (bar)   
Yield (line) 

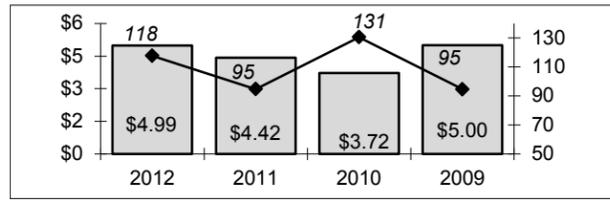
	2012	2011	2010	2009
<b>Barley - Owned Land</b>				
Yield per acre (bu)	40	33	54	51
Value per bu	10.62	8.21	5.08	6.25
Direct Exp per acre	167.67	142.19	136.86	153.99
Total Exp per acre	301.68	274.24	238.74	256.33
Net Return per acre	174.07	58.52	55.32	77.68
Cost of Production per bu	6.81	7.13	4.38	5.29



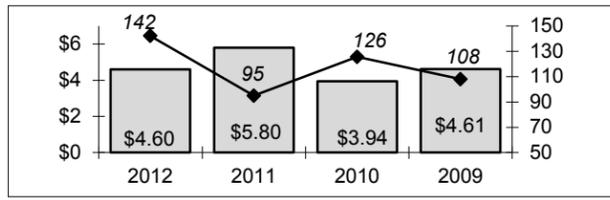
<b>Barley - Rented Land</b>				
Yield per acre (bu)	49	32	62	56
Value per bu	9.18	7.37	5.41	5.37
Direct Exp per acre	270.39	206.2	165.25	181.39
Total Exp per acre	357.9	299.6	209.4	242.46
Net Return per acre	116.95	9.30	128.37	61.90
Cost of Production per bu	7.07	7.68	3.65	4.62



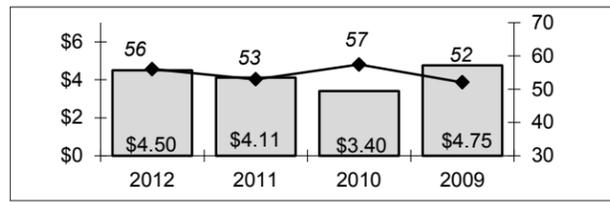
<b>Corn - Owned Land</b>				
Yield per acre (bu)	118	95	131	95
Value per bu	13.97	10.43	6.91	5.97
Direct Exp per acre	367.72	329.54	295.12	256.97
Total Exp per acre	594.17	515.29	477.86	446.37
Net Return per acre	1,110.86	618.05	442.98	132.08
Cost of Production per bu	4.99	4.42	3.72	5



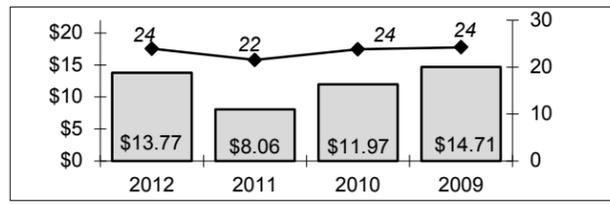
<b>Corn - Rented Land</b>				
Yield per acre (bu)	142	95	126	108
Value per bu	13.94	10.72	7.19	6.62
Direct Exp per acre	517.69	510.15	406.05	383.66
Total Exp per acre	629.20	631.68	488.6	480.36
Net Return per acre	1,382.15	503.81	434.74	240.69
Cost of Production per bu	4.60	5.80	3.94	4.61



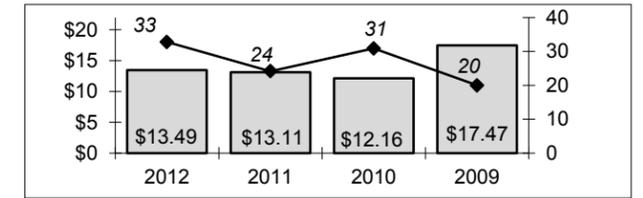
<b>Oats - Owned Land</b>				
Yield per acre (bu)	56	53	57	52
Value per bu	5.97	6.10	4.90	5.15
Direct Exp per acre	116.56	131.83	129.41	129.35
Total Exp per acre	235.61	269.44	246.09	242.79
Net Return per acre	116.33	127.54	84.80	38.12
Cost of Production per bu	4.50	4.11	3.40	4.75



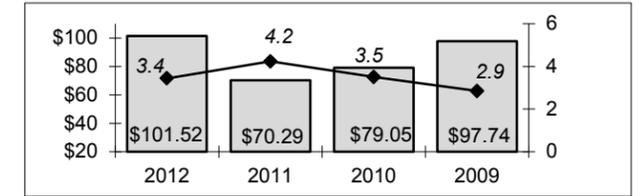
<b>Soybeans - Owned Land</b>				
Yield per acre (bu)	24	22	24	24
Value per bu	25.90	21.24	19.90	17.65
Direct Exp per acre	180.06	189.93	145.07	187.11
Total Exp per acre	381.25	349.84	260.92	354.63
Net Return per acre	348.08	311.42	215.05	92.62
Cost of Production per bu	13.77	8.06	11.97	14.71



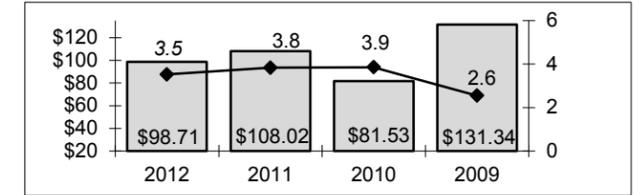
	2012	2011	2010	2009
<b>Soybeans - Rented Land</b>				
Yield per acre (bu)	33	24	31	20
Value per bu	27.39	21.63	18.58	18.19
Direct Exp per acre	383.00	350.20	291.36	272.92
Total Exp per acre	478.78	426.44	357.80	356.98
Net Return per acre	477.71	219.43	223.26	45.13
Cost of Production per bu	13.49	13.11	12.16	17.47



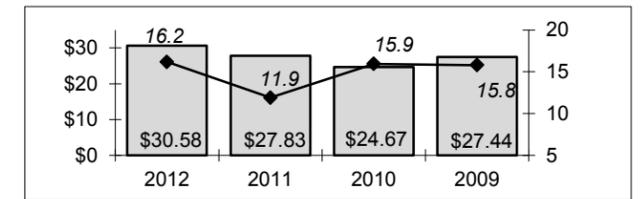
<b>Alfalfa Hay - Owned Land</b>				
Yield per acre (ton)	3.4	4.2	3.5	2.9
Value per ton	162.91	99.43	112.50	122.78
Direct Exp per acre	203.56	160.76	142.54	132.47
Total Exp per acre	334.55	285.78	258.09	247.96
Net Return per acre	238.38	150.26	141.25	106.34
Cost of Production per ton	101.52	70.29	79.05	97.74



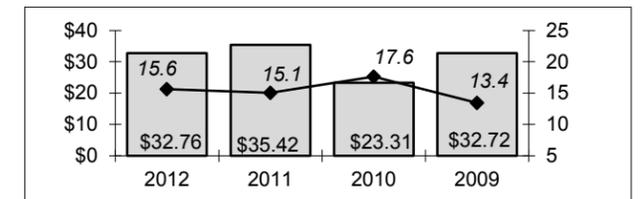
<b>Alfalfa Hay - Rented Land</b>				
Yield per acre (ton)	3.5	3.8	3.9	2.6
Value per ton	166.22	117.75	118.66	127.21
Direct Exp per acre	261.05	264.25	219.87	215.57
Total Exp per acre	345.01	395.70	300.05	307.26
Net Return per acre	255.07	61.34	160.58	17.41
Cost of Production per ton	98.71	108.02	81.53	131.34



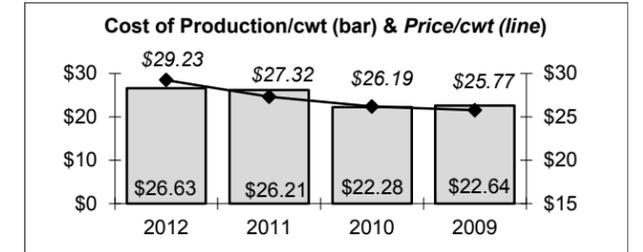
<b>Corn Silage - Owned Land</b>				
Yield per acre (ton)	16.2	11.9	15.9	15.8
Value per ton	58.82	47.40	37.53	40.98
Direct Exp per acre	256.20	279.99	227.38	238.23
Total Exp per acre	489.27	424.76	355.03	385.37
Net Return per acre	497.31	270.70	243.03	262.10
Cost of Production per ton	30.58	27.83	24.67	27.44



<b>Corn Silage - Rented Land</b>				
Yield per acre (ton)	15.6	15.1	17.6	13.4
Value per ton	62.93	50.82	36.05	42.00
Direct Exp per acre	377.14	389.64	294.55	335.20
Total Exp per acre	502.33	512.87	382.31	420.61
Net Return per acre	511.60	258.57	253.24	144.77
Cost of Production per ton	32.76	35.42	23.31	32.72



<b>Dairy</b>				
Production lb/cow	12,720	12,133	12,819	12,129
Avg. Milk Price/cwt	29.23	27.32	26.19	25.77
Total Feed Cost/cwt	13.42	11.85	9.44	10.33
Cost of Production/cwt	26.63	26.21	22.28	22.64
Net Return/cwt	4.54	3.47	5.90	5.37
Net Return/cow	577.49	421.37	756.20	651.63





## Crop Enterprise Reports

While Minnesota largely escaped the worst of the drought that spread across the Midwest in 2012, it was a dry summer here, too. At planting time, only the extreme Northwest part of the state was considered in moderate drought. By mid-summer, abnormally dry conditions were spreading across the western part of the state. By harvest, virtually all farming regions were in drought, with extreme southwest and northwest regions in extreme drought. Yet, yields for both conventional and organic crops were up. Coupled with high prices resulting from drought in other regions, 2012 was a very profitable year for most Minnesota crop producers, organic producers included.

In 2012, all organic crops for which data was available (alfalfa, barley, corn, corn silage, oats, soybeans, and pasture) were more profitable than conventional production on a per acre basis with the exception of alfalfa hay. According to the data reported here, the most profitable crop on a per acre basis in 2012 was corn, with net returns (excluding labor and management) of \$1,382 per acre on rented land. That compares to statewide average returns of \$377 on conventional corn.

Prices for many organic crops were substantially higher in 2012 than 2011, with corn selling for about 30% more, soybeans 35% more, and alfalfa hay up 41% (based on cash sales reported by participating farmers).

Yields were up in 2012, too: organic corn yielded 127 bushels per acre, up from a five year average of 105. Organic soybeans netted \$477 per acre on cash rented land compared to \$216 on conventional soybeans. Organic soybeans yielded 30 bushels per acre, up from a five year average of 22.

The Crop Enterprise Analysis tables that follow show the average physical production, gross return, direct expenses, overhead expenses, and net returns per acre for various certified organic cropping enterprises. In most cases, separate tables are included for owned and cash rented land. The reports include historical comparisons of enterprise returns for years 2008 through 2012. Only crops with sufficient instances to summarize are included.

**Note:** The farms reporting may be completely organic or may be “split operations” reporting here on their certified organic production.

### Brief descriptions of some of the financial terms used in these tables

**Gross Return per acre** includes the value of the crop produced plus any other income directly associated with production of the crop, including 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. An estimated 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, you should not compare net returns from owned and rented land.

**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 breakeven price needed to cover cash costs and depreciation.

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

**With labor and management** is the breakeven 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 8. Crop Enterprise Analysis  
Barley, Organic on Owned Land**

	2012	2011	2010	2009	2008
Number of fields	11	9	8	14	10
Number of farms	9	8	8	10	8
Acres	29.4	37.0	24.6	19.0	71.8
Yield per acre (bu.)	39.9	33.4	54.0	51.4	47.6
Operators share of yield %	100.00	100.00	100.00	100.00	100.00
Value per bu.	10.62	8.21	5.08	6.25	6.63
Other product return per acre	4.10	26.66	3.66	2.79	-
Total product return per acre	428.30	301.01	278.15	324.42	315.72
Crop insurance per acre	9.19	22.48	9.63	-	1.69
Other crop income per acre	38.26	9.26	6.29	9.59	5.04
Gross return per acre	475.75	332.75	294.07	334.01	322.45
<b>Direct Expenses</b>					
Seed	56.72	35.57	33.12	29.78	26.31
Fertilizer	25.14	12.75	28.67	28.03	24.81
Crop insurance	9.50	9.37	4.14	7.91	7.10
Drying expense	-	-	-	14.41	-
Fuel & oil	18.52	22.35	22.54	15.73	31.82
Repairs	24.18	40.26	23.06	33.84	30.60
Custom hire	13.65	4.82	6.06	10.99	1.11
Hired labor	5.91	2.12	0.56	8.37	-
Machinery leases	7.33	-	4.64	-	-
<b>Utilities</b>	-	1.02	-	0.21	-
Hauling and trucking	3.63	1.60	-	-	1.52
Marketing	-	-	-	1.80	-
Organic certification	0.28	0.71	0.66	0.47	4.57
Operating interest	1.16	4.26	13.07	1.58	3.88
Miscellaneous	1.67	7.38	0.34	0.88	8.13
Total direct expenses per acre	167.67	142.19	136.86	153.99	139.85
Return over direct exp per acre	308.08	190.56	157.21	180.02	182.60
<b>Overhead Expenses</b>					
Hired labor	8.54	17.33	7.02	5.53	9.74
Machinery leases	0.18	0.48	2.87	2.60	0.02
RE & pers. property taxes	17.39	14.54	13.97	12.48	8.15
Farm insurance	3.01	4.40	4.54	5.20	5.43
Utilities	5.47	3.20	4.29	5.88	3.59
Dues & professional fees	1.37	2.56	4.10	2.93	2.94
Interest	54.91	46.01	40.32	39.66	24.09
Mach & bldg depreciation	38.74	37.14	18.03	23.73	29.79
Miscellaneous	4.39	6.38	6.75	4.33	0.95
Total overhead expenses per acre	134.01	132.04	101.89	102.35	84.71
Total dir & ovhd expenses per acre	301.68	274.24	238.74	256.33	224.55
Net return per acre	174.07	58.52	55.32	77.68	97.89
Government payments	10.55	12.50	11.80	8.55	14.60
Net return with govt pmts	184.62	71.01	67.13	86.23	112.49
Labor & management charge	32.21	34.89	29.08	36.77	42.35
Net return over lbr & mgt	152.41	36.12	38.04	49.46	70.14
<b>Cost of Production</b>					
Total direct expense per bu.	4.20	4.25	2.53	2.99	2.94
Total dir & ovhd exp per bu.	7.55	8.20	4.42	4.98	4.71
Less govt & other income	6.00	6.08	3.84	4.58	4.27
With labor & management	6.81	7.13	4.38	5.29	5.16
Net value per unit	10.62	8.21	5.08	6.25	6.63
Machinery cost per acre	101.10	104.78	80.69	92.15	94.52
Est. labor hours per acre	2.7	3.2	3.0	4.0	2.9

**Table 9. Crop Enterprise Analysis  
Barley, Organic on Rented Land**

	2012	2011	2010	2009	2008
Number of fields	6	9	9	11	11
Number of farms	6	9	8	10	11
Acres	101.1	90.4	58.5	66.8	56.1
Yield per acre (bu.)	49.1	32.1	62.2	56.1	47.7
Operators share of yield %	100	100	100	100	100
Value per bu.	9.18	7.37	5.41	5.37	8.36
Other product return per acre	-	10.93	-	-	-
Total product return per acre	450.30	247.08	336.34	301.44	399.09
Crop insurance per acre	21.28	52.18	-	1.11	16.22
LDP income per acre	-	-	-	-	0.89
Other crop income per acre	3.27	9.64	1.42	1.81	2.27
Gross return per acre	474.84	308.90	337.77	304.36	418.47
<b>Direct Expenses</b>					
Seed	26.65	26.93	16.97	19.45	20.14
Fertilizer	38.17	3.69	23.67	21.31	24.22
Crop insurance	12.50	13.57	6.00	5.03	5.60
Drying expense	-	3.67	-	9.69	-
Fuel & oil	32.30	25.77	17.98	13.99	16.23
Repairs	46.14	47.81	17.88	33.40	31.91
Custom hire	10.98	2.72	4.63	7.34	8.60
Hired labor	-	0.95	0.34	-	1.11
Land rent	96.89	67.18	68.48	62.71	49.94
Machinery leases	-	0.18	1.14	-	-
Utilities	-	0.89	-	-	1.45
Hauling and trucking	-	0.86	-	-	1.81
Marketing	-	-	-	1.21	1.08
Organic certification	-	0.59	0.67	0.76	2.23
Operating interest	6.33	7.53	7.21	5.99	5.73
Miscellaneous	0.42	3.88	0.27	0.51	6.16
Total direct expenses per acre	270.39	206.20	165.25	181.39	176.20
Return over direct exp per acre	204.46	102.70	172.52	122.97	242.27
<b>Overhead Expenses</b>					
Custom hire	-	12.17	2.19	0.83	1.48
Hired labor	18.80	20.55	12.56	12.67	7.05
Farm insurance	7.16	5.61	5.16	6.30	3.46
Utilities	9.38	7.51	6.38	6.10	2.96
Dues & professional fees	5.23	3.42	2.57	2.14	1.27
Interest	2.11	3.80	1.64	5.19	6.31
Mach & bldg depreciation	31.12	37.73	9.57	24.14	44.13
Miscellaneous	13.71	2.61	4.08	3.69	4.81
Total overhead expenses per acre	87.51	93.39	44.14	61.07	71.47
Total dir & ovhd expenses per acre	357.90	299.60	209.40	242.46	247.67
Net return per acre	116.95	9.30	128.37	61.90	170.80
Government payments	16.84	11.10	14.35	12.58	8.76
Net return with govt pmts	133.79	20.41	142.72	74.48	179.56
Labor & management charge	30.54	30.47	32.90	32.10	32.38
Net return over lbr & mgt	103.25	-10.06	109.82	42.39	147.18
<b>Cost of Production</b>					
Total direct expense per bu.	5.51	6.43	2.66	3.23	3.69
Total dir & ovhd exp per bu.	7.29	9.35	3.37	4.32	5.19
Less govt & other income	6.45	6.73	3.12	4.05	4.60
With labor & management	7.07	7.68	3.65	4.62	5.28
Net value per unit	9.18	7.37	5.41	5.37	8.38
Machinery cost per acre	119.41	126.23	54.10	81.93	104.98
Est. labor hours per acre	2.9	3.1	2.7	3.0	2.7

**Table 10. Crop Enterprise Analysis  
Corn, Organic on Owned Land**

	2012	2011	2010	2009	2008
Number of fields	24	14	31	22	33
Number of farms	19	14	23	19	21
Acres	46.6	40.5	40.1	28.4	26.0
Yield per acre (bu.)	117.7	94.7	130.5	94.6	106.2
Operators share of yield %	100	100	100	100	100
Value per bu.	13.97	10.43	6.91	5.97	8.60
Other product return per acre	1.16	-	4.07	3.56	-
Total product return per acre	1,645.29	987.74	906.52	568.77	913.62
Crop insurance per acre	49.50	144.60	3.46	5.81	35.83
Other crop income per acre	10.25	0.99	10.85	3.88	2.97
Gross return per acre	1,705.04	1,133.33	920.84	578.46	952.42
<b>Direct Expenses</b>					
Seed	83.71	62.50	53.61	61.24	58.24
Fertilizer	92.21	67.16	52.96	54.64	86.23
Non-chemical crop protect	0.29	30.63	0.64	0.96	4.29
Crop insurance	30.45	37.37	12.81	13.98	26.17
Drying expense	4.24	4.18	4.38	7.83	11.56
Irrigation energy	-	-	0.08	-	0.54
Fuel & oil	48.31	38.24	31.55	29.35	41.46
Repairs	58.21	59.71	34.99	60.21	47.34
Custom hire	22.51	5.41	14.16	12.13	8.68
Hired labor	8.46	0.57	0.12	1.24	0.32
Machinery leases	2.29	-	4.75	3.02	-
Hauling and trucking	2.68	-	3.45	3.26	0.12
Marketing	0.17	3.07	0.40	-	0.53
Organic certification	1.17	4.69	0.39	2.05	1.00
Operating interest	12.33	13.67	6.49	6.62	12.59
Miscellaneous	0.70	2.36	10.72	0.42	0.97
Total direct expenses per acre	367.72	329.54	295.12	256.97	300.04
Return over direct exp per acre	1,337.32	803.79	625.72	321.49	652.38
<b>Overhead Expenses</b>					
Hired labor	37.40	23.49	14.34	29.68	34.46
Machinery leases	3.73	-	1.05	2.81	0.63
Building leases	0.47	0.14	-	0.00	5.85
RE & pers. property taxes	20.46	17.29	13.96	11.74	13.19
Farm insurance	11.50	9.56	6.88	4.37	5.76
Utilities	12.38	11.37	7.34	8.53	4.97
Dues & professional fees	6.22	5.09	3.91	5.36	6.47
Interest	70.63	67.72	65.57	74.39	76.92
Mach & bldg depreciation	52.78	43.17	42.36	42.91	39.64
Miscellaneous	10.88	7.91	8.77	9.62	9.12
Total overhead expenses per acre	226.45	185.75	182.74	189.41	197.02
Total dir & ovhd expenses per acre	594.17	515.29	477.86	446.37	497.06
Net return per acre	1,110.86	618.05	442.98	132.08	455.36
Government payments	16.89	22.09	23.12	11.87	20.64
Net return with govt pmts	1,127.75	640.14	466.10	143.95	476.00
Labor & management charge	70.84	71.49	48.95	51.53	52.58
Net return over lbr & mgt	1,056.92	568.65	417.15	92.42	423.42
<b>Cost of Production</b>					
Total direct expense per bu.	3.12	3.48	2.26	2.72	2.82
Total dir & ovhd exp per bu.	5.05	5.44	3.66	4.72	4.68
Less govt & other income	4.39	3.67	3.34	4.45	4.12
With labor & management	4.99	4.42	3.72	5.00	4.62
Net value per unit	13.97	10.43	6.91	5.97	8.60
Machinery cost per acre	187.32	149.73	149.82	155.04	143.12
Est. labor hours per acre	5.7	4.4	5.2	7.4	7.2

**Table 11. Crop Enterprise Analysis  
Corn, Organic on Rented Land**

	2012	2011	2010	2009	2008
Number of fields	31	26	34	22	24
Number of farms	24	23	26	18	23
Acres	46.9	63.2	44.8	57.5	46.3
Yield per acre (bu.)	142.1	95.0	125.6	108.0	106.7
Operators share of yield %	100	100	100	100	100
Value per bu.	13.94	10.72	7.19	6.62	9.49
Other product return per acre	1.38	-	8.58	2.67	-
Total product return per acre	1,982.25	1,017.91	911.41	717.58	1,012.10
Crop insurance per acre	19.42	108.65	3.44	3.47	40.33
Other crop income per acre	9.68	8.93	8.49	-	12.59
Gross return per acre	2,011.34	1,135.49	923.33	721.05	1,065.01
<b>Direct Expenses</b>					
Seed	85.71	72.47	64.03	74.83	48.98
Fertilizer	124.39	89.36	73.21	57.42	50.48
Crop chemicals	-	-	1.18	-	5.92
Non-chemical crop protect	4.33	16.27	5.23	4.21	6.47
Crop insurance	22.93	28.88	11.81	13.58	16.11
Drying expense	5.89	3.13	6.92	24.36	4.79
Storage	-	-	1.11	-	-
Fuel & oil	43.78	42.75	35.29	24.02	29.94
Repairs	56.83	61.81	39.36	39.35	32.82
Custom hire	16.49	6.77	14.71	14.22	21.05
Hired labor	5.41	0.15	1.46	1.61	9.41
Land rent	131.55	166.47	105.78	113.3	82.52
Machinery leases	1.46	-	0.07	0.12	-
Utilities	-	0.89	0.02	0.53	1.69
Hauling and trucking	7.94	5.6	0.25	2.56	-
Marketing	0.12	0.56	0.04	0.16	0.96
Organic certification	1.9	3.48	0.99	1.12	1.08
Operating interest	7.47	9.89	7.14	7.56	8.58
Miscellaneous	1.49	1.66	3.98	4.72	1.49
Total direct expenses per acre	517.69	510.15	406.05	383.66	358.26
Return over direct exp per acre	1,493.65	625.34	517.29	337.39	706.75
<b>Overhead Expenses</b>					
Custom hire	1.64	3.46	0.00	0.20	0.11
Hired labor	24.02	27.73	12.61	14.16	15.03
Machinery leases	4.01	2.58	2.64	2.44	0.89
Farm insurance	7.97	8.63	6.82	5.95	4.98
Utilities	9.41	9.58	6.84	7.92	6.21
Dues & professional fees	8.72	5.28	4.28	3.20	2.93
Interest	6.87	7.91	5.78	10.24	6.46
Mach & bldg depreciation	37.61	43.36	27.43	39.41	26.44
Miscellaneous	11.26	13.00	9.54	13.20	10.84
Total overhead expenses per acre	111.50	121.52	82.55	96.71	80.14
Total dir & ovhd expenses per acre	629.20	631.68	488.60	480.36	438.40
Net return per acre	1,382.15	503.81	434.74	240.69	626.61
Government payments	16.59	19.71	20.74	19.02	16.95
Net return with govt pmts	1,398.74	523.52	455.48	259.71	643.56
Labor & management charge	70.98	56.00	46.99	42.98	43.76
Net return over lbr & mgt	1,327.76	467.53	408.49	216.73	599.80
<b>Cost of Production</b>					
Total direct expense per bu.	3.64	5.37	3.23	3.55	3.36
Total dir & ovhd exp per bu.	4.43	6.65	3.89	4.45	4.11
Less govt & other income	4.10	5.21	3.56	4.22	3.46
With labor & management	4.60	5.80	3.94	4.61	3.87
Net value per unit	13.94	10.72	7.19	6.62	9.49
Machinery cost per acre	164.41	165.05	133.42	125.86	128.84
Est. labor hours per acre	5.3	5.0	4.5	4.7	4.9

**Table 12. Crop Enterprise Analysis  
Corn Silage, Organic on Owned Land**

	2012	2011	2010	2009	2008
Number of fields	10	7	14	11	15
Number of farms	8	6	13	10	12
Acres	16.0	27.3	23.3	26.1	21.4
Yield per acre (ton)	16.2	11.9	15.9	15.8	15.0
Operators share of yield %	100	100	100	100	100
Value per ton	58.82	47.40	37.53	40.98	45.42
Other product return per acre	-	117.80	-	-	-
Total product return per acre	951.86	682.16	598.06	647.48	681.97
Crop insurance per acre	19.88	13.30	-	-	13.21
Other crop income per acre	14.85	-	-	-	0.28
Gross return per acre	986.59	695.45	598.06	647.48	695.46
<b>Direct Expenses</b>					
Seed	69.60	45.42	60.22	57.13	54.42
Fertilizer	38.77	94.38	35.82	26.85	59.92
Non-chemical crop protect	1.24	-	0.10	-	0.23
Crop insurance	14.39	10.74	9.53	9.30	10.96
Storage	-	-	4.91	8.52	5.66
Irrigation energy	-	-	0.21	-	1.54
Fuel & oil	50.74	44.26	42.37	37.40	45.77
Repairs	66.97	67.29	43.46	70.35	57.82
Custom hire	8.95	5.66	10.40	14.43	24.29
Hired labor	0.90	2.88	0.40	9.57	0.76
Machinery leases	-	-	3.07	0.06	-
Organic certification	0.09	0.68	1.78	0.13	2.31
Operating interest	3.83	1.72	14.29	3.82	5.93
Miscellaneous	0.73	6.95	0.82	0.66	4.45
Total direct expenses per acre	256.20	279.99	227.38	238.23	274.07
Return over direct exp per acre	730.39	415.46	370.68	409.24	421.39
<b>Overhead Expenses</b>					
Custom hire	1.22	0.02	0.41	4.03	0.00
Hired labor	57.24	52.59	19.68	29.17	19.83
Machinery leases	7.54	1.66	3.60	4.55	0.88
Building leases	-	0.03	-	-	15.37
RE & pers. property taxes	13.62	9.75	10.71	9.06	9.15
Farm insurance	10.17	5.36	7.74	6.87	4.85
Utilities	6.98	4.16	7.77	6.54	3.95
Dues & professional fees	4.48	2.28	4.24	4.64	2.68
Interest	53.73	27.11	27.50	28.47	31.04
Mach & bldg depreciation	68.20	37.08	37.95	42.01	42.29
Miscellaneous	9.88	4.70	8.06	11.81	10.07
Total overhead expenses per acre	233.07	144.76	127.65	147.14	140.12
Total dir & ovhd expenses per acre	489.27	424.76	355.03	385.37	414.19
Net return per acre	497.31	270.70	243.03	262.10	281.28
Government payments	11.17	6.39	10.23	8.79	60.62
Net return with govt pmts	508.49	277.08	253.26	270.89	341.89
Labor & management charge	51.44	44.11	48.33	56.94	41.68
Net return over lbr & mgt	457.05	232.98	204.93	213.95	300.21
<b>Cost of Production</b>					
Total direct expense per ton	15.83	23.51	14.27	15.08	18.25
Total dir & ovhd exp per ton	30.24	35.67	22.28	24.39	27.59
Less govt & other income	27.40	24.13	21.64	23.84	22.65
With labor & management	30.58	27.83	24.67	27.44	25.43
Net value per unit	58.82	47.40	37.53	40.98	45.42
Machinery cost per acre	208.62	160.74	148.55	176.53	180.37
Est. labor hours per acre	7.5	4.9	5.1	7.5	5.8

**Table 13. Crop Enterprise Analysis  
Corn Silage, Organic on Rented Land**

	2012	2011	2010	2009	2008
Number of fields	17	12	16	18	13
Number of farms	15	11	15	14	12
Acres	26.2	18.6	24.3	21.1	37.0
Yield per acre (ton)	15.6	15.1	17.6	13.4	11.1
Operators share of yield %	100	100	100	100	100
Value per ton	62.93	50.82	36.05	42.00	44.04
Other product return per acre	-	-	-	0.67	-
Total product return per acre	983.23	765.16	635.54	565.38	488.40
Crop insurance per acre	30.62	6.29	-	-	13.44
LDP income per acre	-	-	-	-	3.53
Other crop income per acre	0.08	-	-	-	-
Gross return per acre	1,013.94	771.45	635.54	565.38	505.37
<b>Direct Expenses</b>					
Seed	74.39	69.69	41.87	57.26	44.42
Fertilizer	48.00	49.97	29.79	25.43	28.50
Crop chemicals	1.36	0.65	-	-	1.48
Non-chemical crop protect	0.27	4.00	1.44	8.91	7.42
Crop insurance	13.00	7.87	4.66	5.19	6.63
Storage	-	-	3.35	0.90	2.34
Fuel & oil	41.77	37.73	31.65	24.01	36.33
Repairs	55.83	65.16	31.18	57.04	43.66
Custom hire	48.25	34.80	25.21	70.63	25.25
Hired labor	0.20	2.47	0.75	0.97	-
Land rent	89.23	105.03	69.05	75.76	56.56
Machinery leases	1.94	-	4.19	0.02	-
Organic certification	0.44	4.23	1.38	1.20	0.57
Operating interest	1.33	3.46	2.34	4.64	4.60
Miscellaneous	1.14	4.59	0.70	3.26	3.67
Total direct expenses per acre	377.14	389.64	294.55	335.20	261.44
Return over direct exp per acre	636.80	381.80	340.99	230.17	243.93
<b>Overhead Expenses</b>					
Custom hire	13.51	19.23	0.01	0.02	3.27
Hired labor	28.78	14.86	17.16	17.47	17.71
Machinery leases	8.75	8.44	5.18	1.69	0.54
Building leases	-	0.03	0.05	5.49	-
Farm insurance	6.48	5.54	2.46	2.68	2.85
Utilities	6.82	4.43	2.94	2.83	3.27
Dues & professional fees	4.50	2.15	3.42	1.64	3.19
Interest	5.53	8.58	7.07	6.56	9.16
Mach & bldg depreciation	38.70	44.77	23.51	39.06	32.56
Miscellaneous	12.12	15.21	9.77	7.97	7.99
Total overhead expenses per acre	125.19	123.23	87.76	85.40	80.55
Total dir & ovhd expenses per acre	502.33	512.87	382.31	420.61	342.00
Net return per acre	511.60	258.57	253.24	144.77	163.37
Government payments	16.51	14.03	10.20	10.80	5.94
Net return with govt pmts	528.11	272.60	263.44	155.57	169.31
Labor & management charge	56.71	40.63	38.76	30.83	34.85
Net return over lbr & mgt	471.41	231.98	224.68	124.75	134.46
<b>Cost of Production</b>					
Total direct expense per ton	24.14	25.88	16.71	24.93	23.58
Total dir & ovhd exp per ton	32.15	34.07	21.69	31.28	30.84
Less govt & other income	29.13	32.72	21.11	30.43	28.77
With labor & management	32.76	35.42	23.31	32.72	31.92
Net value per unit	62.93	50.82	36.05	42.00	44.36
Machinery cost per acre	212.14	214.36	143.37	193.68	148.01
Est. labor hours per acre	4.6	5.2	5.2	4.8	5.3

**Table 14. Crop Enterprise Analysis  
Oats, Organic on Owned Land**

	2012	2011	2010	2009	2008
Number of fields	7	7	7	13	10
Number of farms	6	7	7	12	10
Acres	34.2	39.3	39.4	31.4	25.4
Yield per acre (bu.)	56.1	53.0	57.4	52.1	67.9
Operators share of yield %	100	100	100	100	100
Value per bu.	5.97	6.10	4.90	5.15	5.10
Other product return per acre	-	46.09	14.36	2.94	2.84
Total product return per acre	334.78	369.49	295.66	271.17	349.62
Crop insurance per acre	-	-	4.59	4.27	-
LDP income per acre	-	-	-	-	3.08
Other crop income per acre	17.17	27.49	30.65	5.47	44.18
Gross return per acre	351.95	396.98	330.89	280.91	396.88
<b>Direct Expenses</b>					
Seed	25.92	35.56	23.72	12.84	19.40
Fertilizer	-	-	5.82	31.58	8.53
Non-chemical crop protect	-	-	0.62	-	-
Crop insurance	6.99	2.83	2.73	10.22	1.77
Irrigation energy	-	-	0.41	-	0.69
Packaging and supplies	-	0.55	-	-	-
Fuel & oil	29.24	25.25	30.24	23.33	21.26
Repairs	38.62	30.93	31.73	40.22	42.21
Custom hire	1.54	9.19	10.59	2.76	17.41
Hired labor	-	7.58	-	3.56	-
Machinery leases	-	-	3.77	-	-
Hauling and trucking	-	5.49	6.88	-	1.13
Marketing	-	0.57	-	-	-
Organic certification	-	4.38	0.66	2.66	1.24
Operating interest	14.26	0.27	10.89	2.07	2.51
Miscellaneous	-	9.22	1.36	0.11	0.13
Total direct expenses per acre	116.56	131.83	129.41	129.35	116.27
Return over direct exp per acre	235.38	265.15	201.48	151.56	280.61
<b>Overhead Expenses</b>					
Custom hire	-	-	0.00	0.32	0.92
Hired labor	12.14	10.64	5.49	10.88	7.89
Machinery leases	6.24	0.15	2.39	3.85	4.45
RE & pers. property taxes	15.42	13.55	12.93	10.38	14.37
Farm insurance	6.55	4.84	6.45	4.01	6.89
Utilities	5.01	6.96	6.19	5.77	6.32
Dues & professional fees	4.72	3.27	5.89	3.59	3.39
Interest	35.79	67.91	35.70	45.13	46.47
Mach & bldg depreciation	30.42	26.09	35.27	23.61	38.71
Miscellaneous	2.76	4.18	6.38	5.90	4.60
Total overhead expenses per acre	119.05	137.60	116.68	113.44	134.01
Total dir & ovhd expenses per acre	235.61	269.44	246.09	242.79	250.28
Net return per acre	116.33	127.54	84.80	38.12	146.60
Government payments	4.83	15.85	26.67	11.08	12.04
Net return with govt pmts	121.16	143.39	111.47	49.20	158.64
Labor & management charge	38.71	37.54	25.59	28.30	22.35
Net return over lbr & mgt	82.45	105.85	85.88	20.91	136.29
<b>Cost of Production</b>					
Total direct expense per bu.	2.08	2.49	2.25	2.48	1.71
Total dir & ovhd exp per bu.	4.20	5.09	4.28	4.66	3.68
Less govt & other income	3.81	3.40	2.96	4.21	2.77
With labor & management	4.50	4.11	3.40	4.75	3.10
Net value per unit	5.97	6.10	4.90	5.15	5.15
Machinery cost per acre	109.02	95.15	116.83	98.68	117.11
Est. labor hours per acre	4.0	2.4	3.5	3.7	2.7



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

	2012	2011	2010	2009	2008
Number of fields	12	14	16	24	14
Number of farms	12	13	14	18	11
<b>Acres</b>	26.1	47.7	50.8	45.4	54.5
Yield per acre (bu.)	23.9	21.5	23.8	24.2	15.0
Operators share of yield %	100	100	100	100	100
Value per bu.	25.90	21.24	19.90	17.65	19.39
Other product return per acre	-	1.94	-	0.55	-
Total product return per acre	620.05	458.91	473.88	428.13	290.40
Crop insurance per acre	109.13	193.87	1.75	18.61	74.21
Other crop income per acre	0.15	8.48	0.33	0.51	-
Gross return per acre	729.33	661.27	475.96	447.25	364.61
<b>Direct Expenses</b>					
Seed	46.24	38.96	33.09	45.36	30.54
Fertilizer	19.52	4.36	6.06	28.27	15.08
Non-chemical crop protect	-	7.62	1.34	4.12	2.83
Crop insurance	26.69	24.59	7.93	15.30	17.09
Fuel & oil	29.36	25.32	23.35	21.78	27.21
Repairs	27.15	36.44	26.92	33.47	34.18
Custom hire	20.72	14.16	4.93	8.00	3.05
Hired labor	1.36	23.85	14.93	21.89	0.52
Machinery leases	-	4.41	6.38	0.46	6.10
Hauling and trucking	-	2.37	1.00	-	0.51
Marketing	0.04	-	0.54	0.05	0.31
Organic certification	0.89	3.44	0.85	3.20	2.56
Operating interest	7.76	3.83	16.41	4.33	7.70
Miscellaneous	0.34	0.57	1.33	0.87	0.19
Total direct expenses per acre	180.06	189.93	145.07	187.11	147.86
Return over direct exp per acre	549.27	471.34	330.90	260.15	216.74
<b>Overhead Expenses</b>					
Custom hire	-	2.39	0.25	2.76	1.38
Hired labor	22.90	18.57	6.64	18.16	14.17
Machinery leases	1.39	0.07	3.23	0.85	0.46
RE & pers. property taxes	17.77	15.25	12.29	14.25	10.37
Farm insurance	8.36	4.22	4.57	6.16	4.61
Utilities	11.89	7.47	5.24	8.44	3.67
Dues & professional fees	5.25	3.85	6.03	3.70	4.02
Interest	71.44	66.81	44.85	60.20	63.69
Mach & bldg depreciation	51.90	32.91	27.13	46.72	29.89
Miscellaneous	10.29	8.37	5.62	6.27	6.37
Total overhead expenses per acre	201.19	159.92	115.85	167.52	138.63
Total dir & ovhd expenses per acre	381.25	349.84	260.92	354.63	286.49
Net return per acre	348.08	311.42	215.05	92.62	78.12
Government payments	13.85	17.16	19.61	13.61	17.57
Net return with govt pmts	361.93	328.58	234.65	106.24	95.69
Labor & management charge	71.42	44.97	45.79	34.97	41.50
Net return over lbr & mgt	290.51	283.61	188.87	71.26	54.19
<b>Cost of Production</b>					
Total direct expense per bu.	7.52	8.83	6.09	7.72	9.87
Total dir & ovhd exp per bu.	15.93	16.26	10.96	14.64	19.13
Less govt & other income	10.78	5.97	10.05	13.26	13.00
With labor & management	13.77	8.06	11.97	14.71	15.77
Net value per unit	25.90	21.24	19.90	17.65	19.39
Machinery cost per acre	126.74	118.27	94.47	113.16	103.65
Est. labor hours per acre	4.1	3.9	4.0	4.3	4.5

**Table 16. Crop Enterprise Analysis  
Soybeans, Organic on Rented Land**

	2012	2011	2010	2009	2008
Number of fields	11	14	19	17	24
Number of farms	7	12	16	16	18
<b>Acres</b>	71.8	69.1	64.2	55.3	72.3
Yield per acre (bu.)	32.8	24.2	30.9	20.0	18.5
Operators share of yield %	100	100	100	100	100
Value per bu.	27.39	21.63	18.58	18.19	22.93
Other product return per acre	-	-	-	-	10.44
Total product return per acre	897.74	523.15	573.37	363.19	434.24
Crop insurance per acre	37.01	112.08	1.41	38.33	60.16
Other crop income per acre	21.73	10.64	6.27	0.59	55.20
Gross return per acre	956.48	645.87	581.05	402.12	549.60
<b>Direct Expenses</b>					
Seed	35.18	37.85	43.63	47.83	40.40
Fertilizer	12.18	10.41	0.87	1.79	15.72
Non-chemical crop protect	-	18.35	1.91	3.22	5.92
Crop insurance	32.48	27.81	15.44	20.27	18.25
Irrigation energy	-	-	1.27	-	-
Fuel & oil	30.06	27.09	22.75	15.68	23.92
Repairs	28.64	33.75	23.95	17.45	31.23
Custom hire	12.45	3.33	20.21	15.81	24.82
Hired labor	74.78	37.37	36.22	17.61	22.89
Land rent	146.93	135.94	116.11	110.39	96.32
Machinery leases	-	-	-	1.23	-
Utilities	-	0.79	-	0.62	0.24
Hauling and trucking	2.82	3.61	1.10	-	0.67
Organic certification	1.40	4.03	1.92	1.90	3.10
Operating interest	4.76	8.08	4.06	12.03	9.46
Miscellaneous	1.32	1.79	1.90	1.86	3.10
Total direct expenses per acre	383.00	350.20	291.36	272.92	296.04
Return over direct exp per acre	573.49	295.67	289.70	129.20	253.55
<b>Overhead Expenses</b>					
Custom hire	-	0.63	1.20	0.09	0.34
Hired labor	27.98	24.59	11.39	14.08	10.15
Machinery leases	0.00	0.61	0.40	-	1.44
Farm insurance	5.74	4.84	4.04	4.49	5.54
Utilities	8.66	6.05	6.60	8.37	5.60
Dues & professional fees	6.62	3.83	3.52	2.77	3.47
Interest	3.44	6.92	5.02	8.61	8.39
Mach & bldg depreciation	36.57	20.21	26.07	35.90	22.23
Miscellaneous	6.76	8.55	8.19	8.48	7.15
Total overhead expenses per acre	95.78	76.24	66.44	84.07	65.93
Total dir & ovhd expenses per acre	478.78	426.44	357.80	356.98	361.97
Net return per acre	477.71	219.43	223.26	45.13	187.62
Government payments	16.07	20.92	20.19	15.84	14.71
Net return with govt pmts	493.78	240.35	243.45	60.98	202.33
Labor & management charge	38.18	34.35	45.21	46.67	36.19
Net return over lbr & mgt	455.60	206.00	198.24	14.31	166.14
<b>Cost of Production</b>					
Total direct expense per bu.	11.69	14.48	9.44	13.67	16.02
Total dir & ovhd exp per bu.	14.61	17.63	11.59	17.87	19.59
Less govt & other income	12.33	11.69	10.69	15.13	11.98
With labor & management	13.49	13.11	12.16	17.47	13.94
Net value per unit	27.39	21.63	18.58	18.19	22.93
Machinery cost per acre	106.37	91.16	96.55	95.83	109.65
Est. labor hours per acre	3.5	3.4	3.2	3.6	3.2

**Table 17. Crop Enterprise Analysis  
Alfalfa Hay, Organic on Owned Land**

	2012	2011	2010	2009	2008
Number of fields	16	17	26	32	29
Number of farms	13	15	17	24	21
Acres	48.4	72.6	60.3	57.5	62.3
Yield per acre (ton)	3.4	4.2	3.5	2.9	3.6
Operators share of yield %	100	100	100	100	100
Value per ton	162.91	99.43	112.50	122.78	138.16
Other product return per acre	0.80	-	-	-	-
Total product return per acre	561.70	421.83	395.41	349.65	491.20
Crop insurance per acre	-	3.09	-	3.38	-
Other crop income per acre	11.23	11.12	3.92	1.27	1.25
Gross return per acre	572.93	436.04	399.33	354.30	492.44
<b>Direct Expenses</b>					
Seed	1.39	2.05	-	0.05	1.16
Fertilizer	61.92	40.39	33.56	31.73	31.61
Non-chemical crop protect	0.29	0.43	-	0.12	0.64
Crop insurance	1.03	1.50	0.92	1.15	1.51
Storage	0.61	3.31	0.21	0.55	1.07
Packaging and supplies	-	10.36	0.74	-	-
Fuel & oil	27.71	25.51	24.75	25.50	35.58
Repairs	42.33	38.57	31.45	39.87	45.35
Custom hire	51.22	22.05	32.76	23.90	42.00
Hired labor	4.28	5.21	0.22	2.47	0.36
Machinery leases	2.63	0.61	1.19	-	-
Hauling and trucking	-	3.87	6.42	-	0.08
Organic certification	0.44	0.85	0.96	1.58	2.30
Operating interest	6.15	3.76	7.12	3.75	7.44
Miscellaneous	3.56	2.29	2.26	1.80	6.15
Total direct expenses per acre	203.56	160.76	142.54	132.47	175.24
Return over direct exp per acre	369.37	275.28	256.79	221.84	317.21
<b>Overhead Expenses</b>					
Custom hire	-	4.87	1.25	2.40	0.18
Hired labor	18.82	20.85	26.35	20.57	16.12
Machinery leases	2.38	0.71	1.87	3.51	1.87
Building leases	0.03	-	-	-	5.74
RE & pers. property taxes	13.51	12.98	11.31	10.31	11.52
Farm insurance	6.65	5.77	4.91	6.29	6.61
Utilities	6.80	5.61	4.12	6.39	6.38
Dues & professional fees	2.73	2.18	4.34	2.84	3.52
Interest	34.01	36.02	23.50	22.45	30.26
Mach & bldg depreciation	39.36	31.08	29.52	35.15	43.22
Miscellaneous	6.70	4.95	8.38	5.57	6.84
Total overhead expenses per acre	130.99	125.02	115.54	115.49	132.27
Total dir & ovhd expenses per acre	334.55	285.78	258.09	247.96	307.51
Net return per acre	238.38	150.26	141.25	106.34	184.94
Government payments	12.08	8.71	10.57	9.88	17.30
Net return with govt pmts	250.46	158.97	151.81	116.22	202.24
Labor & management charge	39.08	35.35	34.26	44.92	46.05
Net return over lbr & mgt	211.38	123.61	117.55	71.30	156.18
<b>Cost of Production</b>					
Total direct expense per ton	59.12	37.89	40.56	46.52	49.29
Total dir & ovhd exp per ton	97.17	67.36	73.43	87.07	86.49
Less govt & other income	90.17	61.96	69.31	81.97	81.28
With labor & management	101.52	70.29	79.05	97.74	94.23
Net value per unit	162.91	99.43	112.50	122.78	138.16
Machinery cost per acre	168.85	127.16	125.70	132.55	168.41
Est. labor hours per acre	3.9	3.6	5.3	4.9	5.1

**Table 18. Crop Enterprise Analysis  
Alfalfa Hay, Organic on Rented Land**

	2012	2011	2010	2009	2008
Number of fields	28	23	22	28	35
Number of farms	18	20	20	24	20
Acres	76.4	101.3	114.4	87.4	59.6
Yield per acre (ton)	3.5	3.8	3.9	2.6	3.1
Operators share of yield %	100	100	100	100	100
Value per ton	166.22	117.75	118.66	127.21	142.21
Other product return per acre	0.29	-	-	-	-
Total product return per acre	584.90	451.05	456.62	324.67	442.77
Crop insurance per acre	-	0.82	-	-	1.53
Other crop income per acre	15.18	5.17	4.02	-	-
Gross return per acre	600.09	457.04	460.63	324.67	444.30
<b>Direct Expenses</b>					
Seed	0.86	1.29	-	0.12	2.18
Fertilizer	55.77	51.90	20.80	15.98	13.21
Crop insurance	0.27	0.34	0.21	0.64	0.49
Storage	1.21	0.76	0.52	0.03	1.20
Irrigation energy	-	-	-	2.01	0.10
Packaging and supplies	2.04	7.59	1.92	-	-
Fuel & oil	27.58	36.14	24.29	22.87	29.25
Repairs	34.17	46.75	26.59	44.23	37.04
Custom hire	40.80	19.49	48.53	32.96	53.72
Hired labor	3.60	3.68	3.33	1.18	0.15
Land rent	90.66	77.55	75.41	83.46	81.29
Machinery leases	-	0.79	0.40	0.88	-
Hauling and trucking	-	6.99	5.13	-	13.85
Marketing	0.07	-	-	1.11	0.12
Organic certification	0.24	0.95	1.16	1.32	1.77
Operating interest	2.08	6.80	3.40	7.28	10.25
Miscellaneous	1.68	3.22	1.43	1.48	1.21
Total direct expenses per acre	261.05	264.25	219.87	215.57	245.82
Return over direct exp per acre	339.04	192.79	240.76	109.10	198.48
<b>Overhead Expenses</b>					
Custom hire	9.22	17.58	1.18	2.75	0.26
Hired labor	21.57	33.46	20.38	30.03	26.28
Machinery leases	4.41	4.36	3.97	2.52	0.47
Building leases	0.03	-	-	1.83	2.07
Farm insurance	4.00	3.67	2.43	3.78	3.82
Utilities	5.49	4.45	3.13	3.49	3.60
Dues & professional fees	2.27	2.53	3.33	2.01	1.06
Interest	6.57	8.73	10.94	7.88	8.89
Mach & bldg depreciation	21.72	47.20	27.06	32.44	27.48
Miscellaneous	8.68	9.46	4.61	4.97	8.98
Total overhead expenses per acre	83.97	131.45	80.18	91.69	82.91
Total dir & ovhd expenses per acre	345.01	395.70	300.05	307.26	328.73
Net return per acre	255.07	61.34	160.58	17.41	115.57
Government payments	12.74	9.22	10.95	9.01	13.36
Net return with govt pmts	267.81	70.56	171.53	26.43	128.93
Labor & management charge	30.37	33.30	28.66	36.96	42.78
Net return over lbr & mgt	237.44	37.26	142.87	(10.53)	86.15
<b>Cost of Production</b>					
Total direct expense per ton	74.22	68.98	57.14	84.46	78.95
Total dir & ovhd exp per ton	98.09	103.30	77.97	120.39	105.58
Less govt & other income	90.07	99.33	74.08	116.86	100.80
With labor & management	98.71	108.02	81.53	131.34	114.54
Net value per unit	166.22	117.75	118.66	127.21	142.21
Machinery cost per acre	142.35	175.09	142.55	141.64	154.29
Est. labor hours per acre	3.4	3.8	3.5	5.0	4.3

**Table 19. Crop Enterprise Analysis  
Pasture, Organic on Owned Land**

	2012	2011	2010	2009	2008
Number of fields	15	17	24	29	26
Number of farms	10	12	19	19	15
Acres	51.0	70.0	59.7	47.0	51.1
Yield per acre (aum)	3.5	3.2	5.2	4.5	2.9
Operators share of yield %	100	100	100	100	100
Value per aum	51.38	37.19	34.67	37.96	42.23
Other product return per acre	4.50	-	-	1.76	-
Total product return per acre	186.07	120.27	180.07	170.78	120.99
Other crop income per acre	9.17	13.65	10.84	2.90	7.28
Gross return per acre	195.24	133.92	190.92	173.67	128.27
<b>Direct Expenses</b>					
Seed	0.59	2.46	1.06	5.05	9.02
Fertilizer	4.40	3.72	10.21	13.03	16.05
Crop insurance	-	0.50	0.17	0.06	-
Irrigation energy	1.18	-	0.02	2.42	0.66
Fuel & oil	3.11	3.93	5.18	4.56	5.32
Repairs	4.62	4.64	10.11	10.57	6.13
Custom hire	0.91	-	1.60	0.09	0.14
Hired labor	1.27	-	0.52	2.94	1.92
Organic certification	-	0.50	0.52	0.34	0.81
Operating interest	0.42	0.23	0.36	0.41	1.04
Miscellaneous	0.01	-	0.64	0.89	1.27
Total direct expenses per acre	16.51	15.99	30.38	40.36	42.35
Return over direct exp per acre	178.73	117.93	160.54	133.31	85.92
<b>Overhead Expenses</b>					
Hired labor	2.29	2.33	1.52	3.69	1.62
Machinery leases	0.70	0.05	0.08	0.08	0.04
RE & pers. property taxes	19.06	13.69	13.56	12.68	10.51
Farm insurance	0.82	0.89	1.20	0.71	0.69
Utilities	0.55	0.55	0.44	0.49	0.44
Dues & professional fees	0.22	0.27	0.64	0.27	0.33
Interest	60.45	33.86	30.56	29.05	24.11
Mach & bldg depreciation	4.78	3.34	7.22	7.98	4.99
Miscellaneous	1.49	0.24	2.29	1.08	0.97
Total overhead expenses per acre	90.37	55.20	57.52	56.02	43.70
Total dir & ovhd expenses per acre	106.88	71.19	87.90	96.39	86.05
Net return per acre	88.36	62.73	103.02	77.28	42.22
Government payments	4.14	2.55	10.54	5.52	1.49
Net return with govt pmts	92.50	65.28	113.56	82.81	43.71
Labor & management charge	3.58	2.89	4.65	7.84	6.47
Net return over lbr & mgt	88.92	62.39	108.90	74.97	37.24
<b>Cost of Production</b>					
Total direct expense per aum	4.67	4.95	5.85	9.06	14.78
Total dir & ovhd exp per aum	30.24	22.01	16.92	21.65	30.04
Less govt & other income	25.20	17.00	12.81	19.36	26.98
With labor & management	26.22	17.90	13.70	21.12	29.23
Net value per unit	51.38	37.19	34.67	37.96	42.23
Machinery cost per acre	14.97	12.72	24.81	23.89	18.13
Est. labor hours per acre	0.5	0.4	0.7	1.0	0.9

**Table 20. Crop Enterprise Analysis  
Pasture, Organic on Rented Land**

	2012	2011	2010	2009	2008
Number of fields	8	11	10	15	11
Number of farms	6	9	8	13	9
Acres	61.2	62.8	45.9	68.2	52.1
Yield per acre (aum)	7.5	5.7	5.6	3.2	3.6
Operators share of yield %	100	100	100	100	100
Value per aum	36.22	33.54	47.65	46.76	59.38
Other product return per acre	1.47	3.39	2.33	-	-
Total product return per acre	273.46	195.97	267.86	147.49	215.65
Other crop income per acre	2.60	5.97	-	1.19	7.56
Gross return per acre	276.06	201.94	267.86	148.67	223.21
<b>Direct Expenses</b>					
Seed	-	1.56	2.07	4.84	2.70
Fertilizer	0.99	4.95	4.54	1.59	6.99
Fuel & oil	2.49	5.56	3.77	2.19	3.79
Repairs	4.35	6.10	4.08	3.90	3.98
Custom hire	1.79	3.62	0.27	0.12	0.24
Hired labor	0.45	-	0.54	0.47	-
Land rent	90.65	97.28	71.69	48.13	50.53
Utilities	-	-	0.13	0.07	0.67
Organic certification	-	1.48	0.51	0.69	0.51
Operating interest	0.06	0.30	0.43	0.40	0.73
Miscellaneous	-	0.86	0.02	0.82	0.15
Total direct expenses per acre	100.78	121.71	101.57	63.21	70.30
Return over direct exp per acre	175.27	80.24	166.29	85.46	152.91
<b>Overhead Expenses</b>					
Hired labor	2.57	2.56	2.24	2.03	1.79
Machinery leases	1.15	0.43	0.17	0.08	0.00
Farm insurance	0.50	0.50	1.09	0.66	0.77
Utilities	0.62	0.87	0.22	0.25	0.27
Dues & professional fees	0.12	0.63	1.34	0.65	0.48
Interest	0.66	1.29	1.14	1.56	1.05
Mach & bldg depreciation	3.06	3.91	4.70	3.59	3.78
Miscellaneous	1.56	3.70	2.78	2.20	2.72
Total overhead expenses per acre	10.24	13.90	14.38	11.01	10.85
Total dir & ovhd expenses per acre	111.02	135.60	115.94	74.22	81.16
Net return per acre	165.04	66.34	151.91	74.45	142.06
Government payments	10.94	5.20	3.51	3.90	3.13
Net return with govt pmts	175.97	71.54	155.43	78.35	145.18
Labor & management charge	3.71	5.31	2.58	2.42	2.11
Net return over lbr & mgt	172.26	66.23	152.84	75.93	143.07
<b>Cost of Production</b>					
Total direct expense per aum	13.42	21.19	18.23	20.04	19.36
Total dir & ovhd exp per aum	14.78	23.61	20.81	23.53	22.35
Less govt & other income	12.79	21.08	19.76	21.92	19.40
With labor & management	13.28	22.00	20.22	22.69	19.99
Net value per unit	36.22	33.54	47.65	46.76	59.38
Machinery cost per acre	13.44	20.56	14.14	11.23	12.18
Est. labor hours per acre	0.3	0.7	0.6	0.4	0.4

# Dairy Enterprise Reports



Organic dairies continued to generate consistent profits on a per cow basis in 2012. Net return per cow was \$577, up from \$421 in 2011. Returns for conventional dairies were \$288 per cow. A conventional dairy summary is not included in this report, but is available at [www.finbin.umn.edu](http://www.finbin.umn.edu).

The average milk price received was up slightly, from \$27.32 per hundred pounds (cwt) in 2011 to \$29.23 in 2012. Production per cow was up by about 600 pounds. Total cost per cow increased by 8%, and feed cost accounted for this entire increase. While total costs were up by \$219 per cow, feed costs were up by \$270. (In other words, costs were down for all other expense items.) On average, it cost organic producers \$26.63 to produce one hundred pounds of milk.

The dairy enterprise analysis tables that follow show the average production, gross returns, direct expenses, overhead expenses, and net returns per cow for organic dairy farms.

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: 1) historical reports comparing data for years 2008 through 2012, and 2) 2012 dairy results sorted into thirds by net return per cow. For similar reports that describe the performance of conventional dairies in 2012, visit [www.finbin.umn.edu](http://www.finbin.umn.edu).

## Brief descriptions of some of the financial terms used in these tables

**Gross margin** is the accrual gross value produced by the enterprise net of 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 break-even price needed to cover cash costs and depreciation. For grow/finish enterprises, this includes the purchase cost or transfer-in value of the animal.

**With other revenue adjustments** is the break-even 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 break-even 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 21. Organic Dairy Enterprise Analysis  
Average per Cow (\$ value)**

	2012	2011	2010	2009	2008
Number of farms	25	27	38	31	30
Milk sold	3,612.02	3,187.06	3,257.04	3,038.65	3,105.09
Dairy Calves sold	23.47	35.40	17.40	17.27	20.30
Transferred out	74.16	50.74	61.99	44.85	76.40
Cull sales	221.05	189.14	144.60	113.76	99.97
Other income	179.37	143.64	115.46	250.77	117.90
Purchased	(3.88)	(1.14)	(37.67)	(36.51)	(88.40)
Transferred in	(97.83)	(101.00)	(123.94)	(121.92)	(133.42)
Inventory change	0.35	(44.56)	57.52	(8.76)	158.74
Dairy repl net cost	(528.49)	(354.13)	(390.29)	(361.84)	(332.87)
Gross margin	3,480.21	3,105.15	3,102.12	2,936.26	3,023.72
<b>Direct Expenses</b>					
Protein Vit Minerals	260.38	190.24	188.87	188.67	169.83
Complete Ration	33.59	25.84	51.44	16.63	95.16
Corn	148.90	94.14	22.82	25.18	47.70
Haylage, Alfalfa	86.49	100.37	64.22	62.08	78.72
Pasture	49.66	62.93	67.83	67.12	51.73
Corn, Organic	169.35	166.86	154.67	194.67	167.32
Corn Silage, Organic	148.99	172.55	90.61	109.18	90.89
Hay, Alfalfa, Organic	431.06	295.08	263.18	224.03	192.30
Pasture, Organic	89.55	96.76	103.52	107.13	74.33
Hay, Grass, Organic	36.59	27.38	14.30	32.08	72.33
Hay, Mixed, Organic	54.52	14.51	37.99	47.00	36.27
Other feed stuffs	198.29	190.52	150.12	179.32	225.70
Veterinary	42.56	33.96	32.78	27.05	29.23
Supplies	253.00	246.00	230.00	181.01	203.68
Fuel & oil	86.91	96.09	70.21	55.88	73.75
Repairs	146.03	173.93	138.79	116.93	100.38
Hired labor	61.40	104.74	37.40	54.80	47.06
Marketing	27.93	28.30	37.88	57.43	27.53
Bedding	30.02	25.47	23.97	23.49	21.04
Total direct expenses	2,355.19	2,145.68	1,780.58	1,769.67	1,804.94
Return over direct expense	1,125.02	959.47	1,321.54	1,166.60	1,218.79
<b>Overhead Expenses</b>					
Hired labor	178.97	133.32	184.01	169.51	175.23
Farm insurance	32.81	30.81	33.36	29.59	25.97
Utilities	67.31	60.33	60.03	66.48	68.06
Interest	78.53	113.23	72.71	77.64	98.43
Mach & bldg depreciation	94.91	104.49	108.19	93.91	106.59
Miscellaneous	95.00	95.93	107.05	77.82	69.86
Total overhead expenses	547.53	538.10	565.34	514.97	544.14
Total dir & ovhd expenses	2,902.72	2,683.77	2,345.92	2,284.63	2,349.07
Net return	577.49	421.37	756.20	651.63	674.65
Labor & management charge	274.16	296.76	268.51	285.16	262.96
Net return over lbr & mgt	303.33	124.62	487.68	366.47	411.70
<b>Cost of Production Per CWT.</b>					
Total direct expense per unit	18.52	17.68	13.89	14.59	14.29
Total dir & ovhd expense per unit	22.82	22.12	18.30	18.84	18.60
With other revenue adjustments	24.5	23.8	20.2	20.3	20.1
With labor and management	26.63	26.21	22.28	22.64	22.13
Est. labor hours per cow	40.0	39.8	39.3	39.5	39.4
<b>Other Information</b>					
Number of cows	96	85	79	78	77
Milk produced per cow (lb.)	12,720	12,133	12,819	12,129	12,629
Total milk sold (lb.)	1,184,719	988,982	979,760	917,025	940,233
Pounds of milk sold per FTE	865,003	820,043	886,296	836,365	868,396
Culling percentage	27.2	25.5	23.6	21.7	19.0
Turnover rate	32.10	33.20	29.80	27.30	25.30
Cow death loss percent	4.00	6.30	5.40	3.90	5.40
Percent of barn capacity	70.40	98.20	97.60	103.90	102.10
Feed cost per day	4.68	3.94	3.31	3.43	3.57
Feed cost per cwt of milk	13.42	11.85	9.44	10.33	10.31
Feed cost per cow	1,707.35	1,437.20	1,209.56	1,253.08	1,302.27
Avg. milk price per cwt.	29.23	27.32	26.19	25.77	25.39

**Table 22. Organic Dairy Enterprise Analysis (by Avg Net Return per Cow)**

	Low 33%		33-66%		High 34%	
Number of farms	8		8		9	
	Quantity	Value	Quantity	Value	Quantity	Value
Milk sold (hd)	9,626.70	2,742.48	11,986.50	3,552.60	15,884.80	4,646.13
Dairy Calves sold (hd)	0.3	54.39	0.1	15.24	0	2.56
Transferred out (hd)	0.7	46.94	0.8	97.68	1	67.66
Cull sales (hd)	0.3	196.03	0.3	206.29	0.3	270.78
Other income		132.31		183.58		223.96
Purchased (hd)	0	(10.43)	0	-	0	(2.72)
Transferred in (hd)	0.3	-	0.3	(163.94)	0.3	(102.73)
Inventory change (hd)	0	(5.70)	0	19.85	0	(22.96)
Dairy repl net cost		(623.17)		(455.48)		(537.59)
Gross margin		2,532.85		3,455.81		4,545.09
<b>Direct Expenses</b>						
Protein Vit Minerals (lb.)	517.4	144.55	620.1	257.32	933.1	390.71
Complete Ration (lb.)	172.5	42.99	-	-	4,882.50	74.82
Corn (bu.)	7.7	77.19	15.4	213.49	9.1	127.77
Corn Silage (lb.)	3,229.50	89.80	-	-	-	-
Hay, Alfalfa (lb.)	1,115.40	92.02	-	-	-	-
Haylage, Alfalfa (lb.)	865.1	54.07	3,493.60	123.47	2,602.20	65.01
Pasture (aum)	1.2	41.86	1.5	70.05	1.1	26.88
Corn, Organic (bu.)	6.9	96.95	16.6	142.53	40.6	288.93
Corn Silage, Organic (lb.)	2,197.50	49.44	6,455.20	192.33	9,676.90	190.58
Hay, Alfalfa, Organic (lb.)	5,849.80	455.15	6,441.40	462.16	5,054.20	357.31
Pasture, Organic (aum)	2.4	201.63	1.2	51.45	1	26.33
Hay, Grass, Organic (lb.)	1,324.10	76.04	634.5	32.54	-	-
Hay, Mixed, Organic (lb.)	155.8	7.79	2,015.80	101.60	853.8	33.13
Other feed stuffs (lb)	302.5	79.25	268.3	145.08	2,213.60	211.65
Veterinary		38.58		24.34		74.76
Supplies		358.22		356.93		288.60
Fuel & oil		79.42		83.96		99.56
Repairs		94.25		82.44		200.21
Hired labor		70.54		84.24		16.50
Total direct expenses		2,149.74		2,423.94		2,472.76
Return over direct expense		383.11		1,031.87		2,072.33
<b>Overhead Expenses</b>						
Hired labor		146.30		170.10		227.99
Utilities		68.96		61.18		74.89
Interest		116.38		69.62		51.14
Mach & bldg depreciation		90.93		65.01		145.00
Miscellaneous		130.05		91.41		181.09
Total overhead expenses		552.62		457.32		680.11
Total dir & ovhd expenses		2,702.36		2,881.27		3,152.87
Net return		(169.51)		574.55		1,392.22
Labor & management charge		239.85		245.18		355.77
Net return over lbr & mgt		(409.36)		329.37		1,036.45
<b>Cost of Production Per CWT.</b>						
Total direct expense per unit		21.73		19.79		14.98
Total dir & ovhd expense per unit		27.32		23.52		19.10
With other revenue adjustments		30.15		24.84		20.38
With labor and management		32.58		26.84		22.53
Est. labor hours per cow		39.8		36.8		45.0
<b>Other Information</b>						
Number of cows		90.00		127		74
Milk produced per cow (lb.)		9,891		12,249		16,509
Total milk sold (lb.)		865,202		1,520,792		1,170,002
Lb. of milk sold per FTE		677,003		910,926		987,771
Culling percentage		25.50		25.80		31.10
Turnover rate		31.40		30.20		35.60
Cow death loss percent		4.70		3.30		4.10
Percent of barn capacity		105.00		48.10		108.30
Feed cost per day		4.13		4.91		4.91
Feed cost per cwt. of milk		15.25		14.63		10.86
Feed cost per cow		1,508.72		1,792.04		1,793.13
Avg. milk price per cwt.		28.49		29.64		29.25



# Making Sense of Farm Financial Ratios and Guidelines<sup>6</sup>

Use with Table 23 and the Farm Finance Scorecard inside and outside the back cover

## 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.

## 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.

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.

## 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's 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.

## 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.

## 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 these 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 how 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.

<sup>6</sup>Adapted from 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.

**Table 23 . Financial Standards Measures  
Completely Organic Farms, by Net Farm Income**

Use the farm finance scorecard (back cover) to benchmark your farm's performance against these averages.

	<b>Avg. All Farms</b>	<b>Low 33%</b>	<b>33 - 66%</b>	<b>High 34%</b>
Number of farms	37	12	12	13
<b>Liquidity</b>				
Current ratio	2.58	2.58	2.69	2.54
Working capital	136,308	52,470	115,884	232,549
Working capital to gross inc	32.50%	22.30%	36.50%	34.10%
<b>Solvency (market)</b>				
Farm debt to asset ratio	41%	43%	43%	39%
Farm equity to asset ratio	59%	57%	57%	61%
Farm debt to equity ratio	0.70	0.75	0.76	0.65
<b>Profitability (cost)</b>				
Rate of return on farm assets	12.40%	4.40%	7.10%	19.10%
Rate of return on farm equity	19.60%	3.20%	9.30%	31.40%
Operating profit margin	29.60%	15.10%	17.90%	38.80%
Net farm income	135,105	42,205	81,142	270,671
EBIDTA	177,997	70,281	117,140	333,603
<b>Repayment Capacity</b>				
Capital debt repayment capacity	139,437	66,201	74,642	266,850
Capital debt repayment margin	95,221	27,094	47,888	201,800
Replacement margin	84,684	19,330	35,292	190,603
Term debt coverage ratio	3.15	1.69	2.79	4.1
Replacement coverage ratio	2.55	1.41	1.90	3.5
<b>Efficiency</b>				
Asset turnover rate (cost)	41.80%	29.30%	39.50%	49.20%
Operating expense ratio	57.50%	70.10%	63.20%	51.10%
Depreciation expense ratio	6.30%	3.00%	7.60%	6.70%
Interest expense ratio	4.90%	8.80%	3.70%	4.20%
Net farm income ratio	32.20%	18.00%	25.50%	39.60%

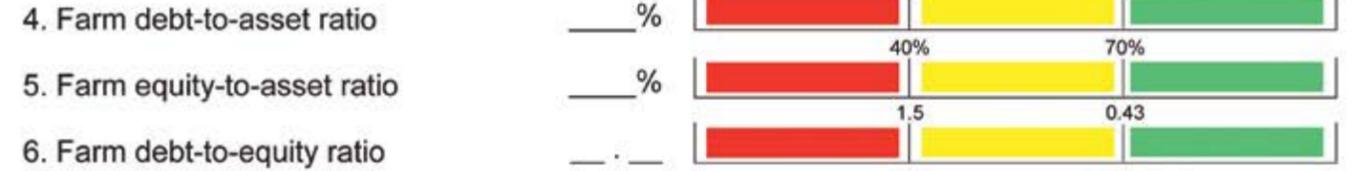
**Farm Finance Scorecard**

Year \_\_\_\_\_

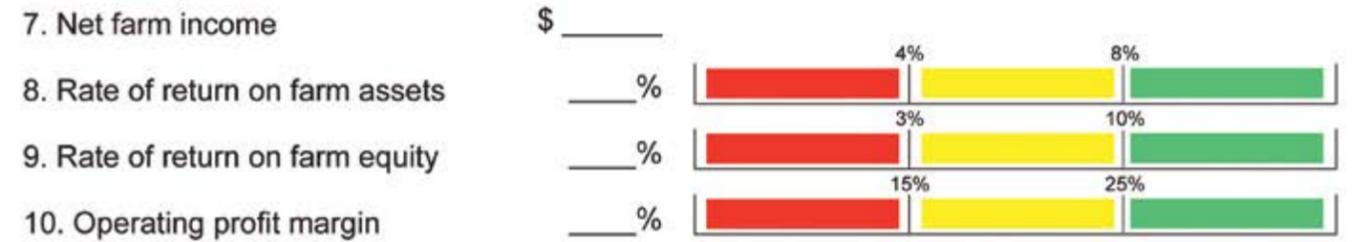
**Liquidity**



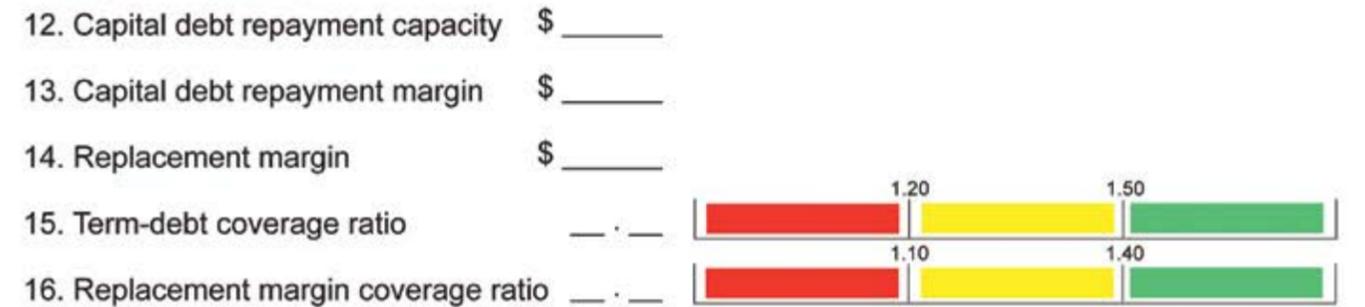
**Solvency**



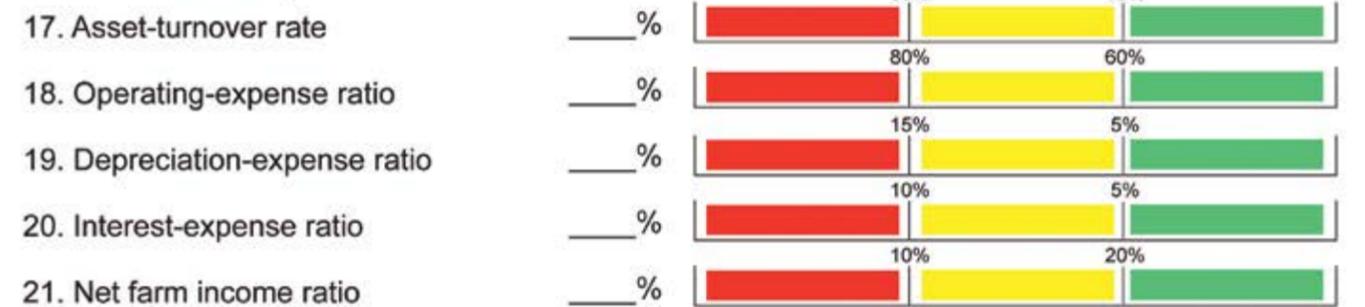
**Profitability**



**Repayment capacity**



**Financial efficiency**

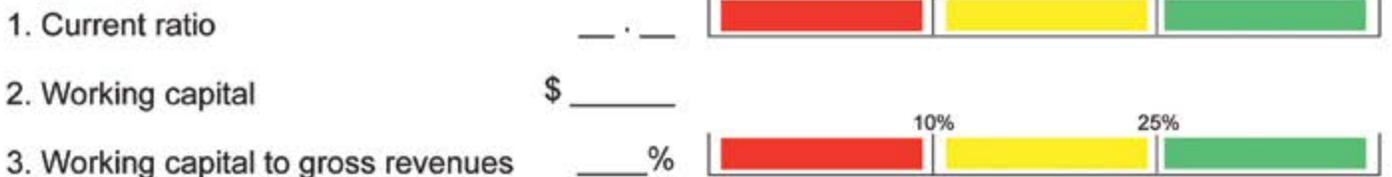


Use these general benchmarks to evaluate the data contained in this report or to assess how your own operation is performing. Form developed by Ron Dvergsten, Suane Jaenicke, Robert Bollesen at Northland Community and Technical College, MNSCU.

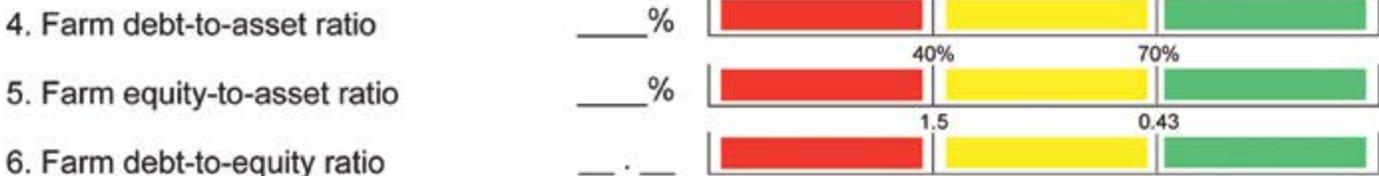
# Farm Finance Scorecard

Year \_\_\_\_\_

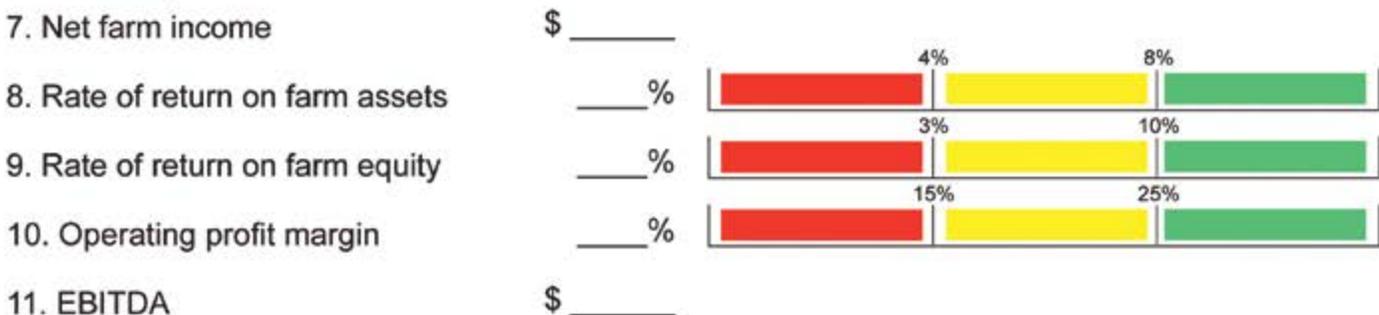
## Liquidity



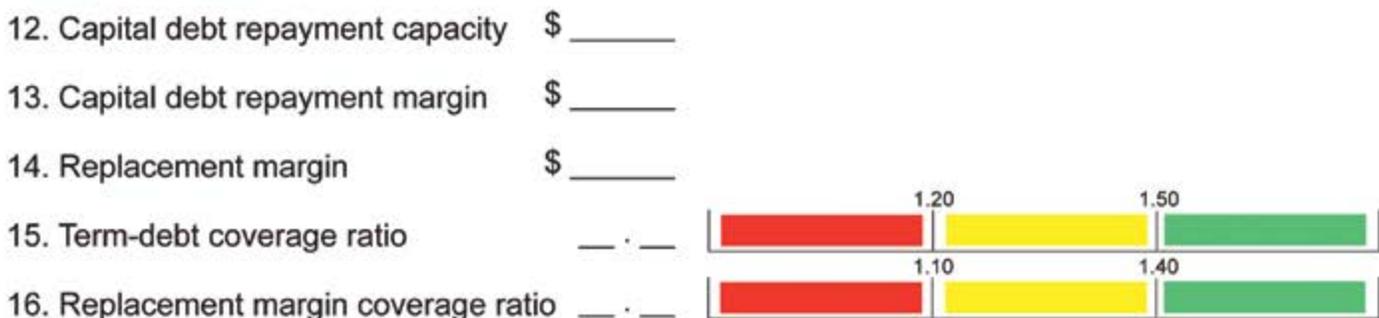
## Solvency



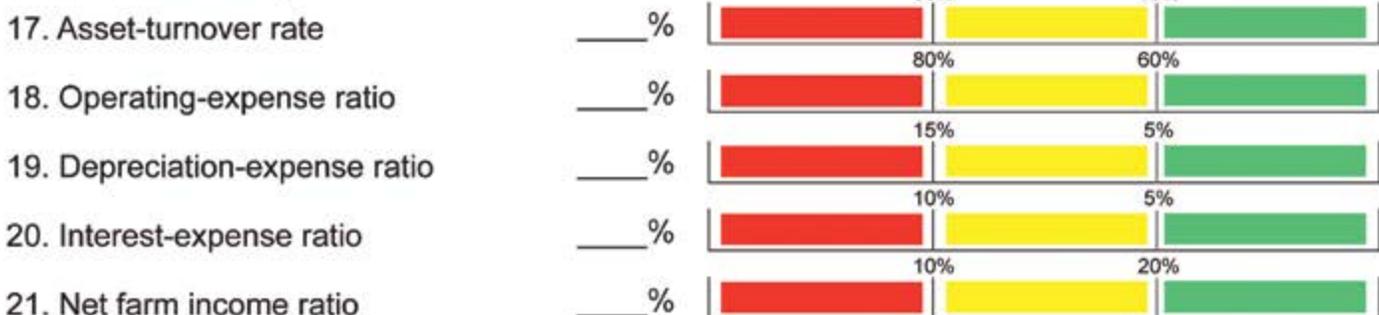
## Profitability



## Repayment capacity



## Financial efficiency



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