

Organic Dairy Transition

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Introduction

There is considerable evidence that the transition from conventional to certified organic milk production is financially challenging. Yet little is known about actual costs and returns during the transition period. This study identified four Minnesota certified organic milk producers who participated in Farm Business Management (FBM) education programs before, during the transition, and after attaining organic certification. For each farm, financial and production information was available to identify its financial position before, during, and after the transition. In addition, the producers completed a survey to provide background information on their decision to transition to organic production and the challenges they faced. Financial measures in the years before, during, and after the transition were analyzed, and the studied farms were compared to conventional peers.

Background

Organic farming is a practice that is growing across the U.S. In 2002, the USDA published standards to create nationwide uniformity in the organic rules and regulations. All organic food products must be grown and processed in accordance with these standards, and operations that sell more than \$5,000 of organic product per year must be certified by a USDA-accredited certifying agency.

According to the Organic Trade Association, organic food sales have increased an average of 18% annually since 2002, making it one of the fastest growing food industry market segments (OTA, 2007). According to the most recent USDA estimates, there were nearly 8,500 certified organic farms in the U.S. as of 2005 (USDA-ERS, 2007). Organic dairy has been one of the strongest performing organic categories, growing 24% between 2004 and 2005, and 25% between 2005 and 2006 (OTA, 2007). The number of certified organic milk cows in the nation grew about 25% per year from 2000 to 2005, from 28,000 to more than 87,000 (McBride and Greene, 2007). The top three organic dairy states (by number of cows) in 2005 were: Wisconsin, California, and Oregon. Minnesota ranked seventh.

Stable organic price premiums are one attraction for producers. McBride and Greene determined that in 2005, organic producers received a nationwide average premium of \$6.69 per cwt compared to conventional producers. Data provided by Organic Valley Family of Farms, one of

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the largest organic dairy processors in the U.S., indicates its producer pay prices have averaged \$6.06 per cwt above conventional prices between 2000 and 2006 (MDA, 2006)

While prices are attractive, cost of production must be an area of concern to producers considering making the switch to organic. Tom Kriegl of the University of Wisconsin Center for Dairy Profitability compared Wisconsin organic herds to grazing and confinement herds. He found that certain expense categories were typically lower for organic herds and other categories of expense were higher. In five years of the study, the average Wisconsin organic herd had lower costs for purchased feed, veterinary and medicine, depreciation of purchased livestock, and chemicals. Non-organic herds had lower costs in repairs, gas, fuel and oil, supplies, seeds purchased, and interest (Kriegl, 2006). These findings are echoed by McBride and Greene, who examined data from a nationwide Agricultural Resource Management Survey (ARMS) of U.S. milk producers conducted in 2005. The survey included a sub-sample targeting organic dairies. McBride and Greene found that organic producers incurred higher mean costs for inputs, including feed, bedding and litter, fuel, repairs, and hired labor, but only those for feed and fuel were statistically different from these costs on conventional operations (McBride and Greene, 2007).

The University of Maine reported in a 2004 study that a 48 cow organic farm spent \$49,416 for purchased feed (\$1,003/cow), \$298 per cow more than non-organic farms. Higher feed costs were the largest difference between organic and non-organic production. Added feed expense consumed 54% of the price differential for organic milk. Labor was another substantial cost for organic producers. Even though the majority of farm labor was provided by the family, the cost of hired labor per cow was significantly higher for organic than for non-organic production, equaling 30% of the price differential between organic and non-organic milk (Dalton, 2005).

Added costs and decreased production during the transition period are reasons for hesitation and reluctance by farmers considering the transition to organic production. Most dairy producers in Minnesota and Wisconsin produce a substantial portion of their own feed, either through grazing or production of grain and forage. Thus, the transition to organic milk production is often a multi-year process to attain organic crop certification rather than the one-year transition required for livestock. Despite long-term benefits of organic certification – receiving a premium price for the product, strong growth in market demand, improved soil and water quality, and reduced handling of hazardous and expensive chemicals – the transition to organic farming, which typically takes three years to complete, is often financially challenging. Before choosing to transition to organic milk production, producers need to consider how long it will take to attain certification and what the transition will cost, as well as the rewards once their goals are achieved.

Common mistakes made during the transition process include underestimating the need for transitional plans, underestimating the need to fully understand the organic standards, and failing to think prevention when it comes to pests and disease ((New Brunswick, 2006). Dalton found that “there was little difference in profitability from the pre-organic transition stage to the first year of receiving organic prices; the third year in the transition stage was the most difficult while the first year of transition was the easiest” (Dalton, 2005).

A farm's profits during the transition period are determined by five different factors according to a study by Dabbert and Madden: rotation adjustment, biological transition, price, learning, and the perennial effect. The rotation adjustment effect refers to the income reduction that occurs as a result of the crop diversification necessary to establish an organic plan. Biological transition effect occurs as a result of natural processes that reduce profits by reducing yields or increasing costs as a result of shifting from dependence on chemicals to organic methods of operation. The price effect is caused by changes in the prices of commodities. The learning effect is related to the decrease in income caused by the farmer's inexperience with organic methods. Finally, the perennial effect occurs because after biological and managerial difficulties are overcome and the rotation is established, there still may be a long term effect on farm profits. (Dabbert and Madden, 1986).

Farm Observations

Four Minnesota organic dairies were identified by instructors from the Minnesota Farm Business Management (FBM) education program. FBM farms participate in various educational programs that focus on financial management, accounting and recordkeeping, and financial analysis. Participating producers receive a detailed financial analysis of their business at the close of each year of study.

The selected farms were FBM participants before, during, and after their transition to organic milk production, providing a unique look at the financial impacts during the transitional phase. Financial information provided included balance sheets, accrual income statements, financial ratio analysis, and enterprise analysis for crop and livestock enterprises. The producers also completed a questionnaire to provide background on their production system prior to the transition, the reasons for their decision to transition to organic, and the challenges they experienced.

The farms selected for this study were nominated by their FBM instructors based on their successful transition to organic systems. They were not randomly selected and are not meant to represent a scientific sample of transitional dairies. They are examples of producers who have successfully completed the transition, with the added benefit of possessing detailed financial information for the periods before, during, and after the transition.

The framework used to study these farms was based on Tom Kriegl's four stages of organic dairy transition: 1) pre-organic – the period of operation before the farm attempts to become organic, 2) transitional organic – the period of operation from the time the farm begins the adoption of organic practices until achieving certification, 3) certified organic – the period of operation from the time it gains certification until receiving organic milk price premiums and 4) certified market organic – the period of operation when the farm receives organic milk price premiums (Kriegl, 2006). Each farm was then compared to conventional dairy farms of similar size over the same years based on data from the FINBIN farm financial database of all Minnesota farms that participated in farm management education programs (Center for Farm Financial Management, 2006).

Farm A

Pre-Organic Period: Farm A entered the transition with approximately 80 cows producing between 17,000 and 18,000 pounds of milk per cow (Table 1). The business was in a strong solvency position with a debt to asset ratio of between 20 and 30%. Financial liquidity was weaker, with a current ratio of 1.33 and limited working capital. Data provided for the two years before their transition showed rates of return on assets (ROA) of 5% and 12% with assets valued at adjusted cost basis. The producer indicated that the decision to transition to organic production was based on belief in chemical-free production methods and for economic reasons. Grass was a major part of the feeding program prior to the transition, but cows received (and still receive) grain as part of their ration.

Table 1: Farm A Production and Financial Measures

Year	1	2	3	4	5	6
Organic Period	Pre-Org	Transition	Transition	Cert Org	Cert Org	Mkt Org
Production per cow	17,700	16,800	13,800	15,900	17,500	15,900
Milk price level ²	Med	High	Low	Low	High	High
Price premium ³	-\$0.35	+\$0.36	+\$0.16	+\$0.02	-\$0.15	\$3.42
ROA (assets at cost ⁴)	12%	10%	2%	-6%	4%	17%
Current ratio	1.3:1	0.8:1	1.5:1	1.3:1	0.7:1	1.5:1
Term debt coverage	103%	32%	-90%	77%	92%	337%
Debt to asset ratio	38%	21%	29%	27%	35%	34%
Earned NW change ⁵	\$43,340	\$43,205	\$-56,584	\$-29,857	\$3,397	\$60,764

Transitional Organic Period: Farm A scaled back to between 50 and 60 cows during the transition, leaving their barn at approximately 75% capacity. (Prior to the transition the barn was at 90% capacity.) The transition began in a high price year, with Farm A receiving \$15.36 per cwt. compared to an average of \$15.00 for all conventional dairies included in the FINBIN database. Over the three year transition period, production fell from 17,700 pounds to 16,800, then to 13,800, and then increased to 15,900 pounds in the year of certification. Price received also fell during the transition, consistent with prices received by conventional producers during this same time period. Profits were relatively strong in the first year of transition, but fell sharply in the following years. Farm A reported large losses of net worth during the transition. Working capital went negative in the second year. Debt coverage was very weak, indicating severe cash flow problems.

Producer A indicated that the major challenge during the transition period was “developing skills to handle the totally organic crops and dairy herd.” He indicated that he had some difficulty finding an organic market because of trucking costs and the distance between farms. The most costly factor was organic feed because the farm lacked adequate land to produce all the feed

² Author’s interpretation of the milk price level received for conventional production based on average prices received by producers in the FINBIN database.

³ Difference between price received by his farm and the average price received by conventional producers.

⁴ For profitability analysis, assets are valued at original purchase cost less economic depreciation.

⁵ Change from previous year excluding inflationary or deflationary changes in asset valuation.

needed. This producer did not identify any specific actions he would have handled differently if he had the chance to re-do the transition.

Certified Organic Period: Financial records indicate that there was a period of time between certification and receiving milk price premiums. This lag between certification and increased milk price may have something to do with the difficulty that this particular farm had in marketing its organic milk. Post-certification, there were two years of receiving milk prices consistent with prices received by conventional producers. The year of certification was the least profitable year for this producer. While milk production rebounded from transitional lows, the price received was low, consistent with prices received by conventional dairies. In the year of certification, this producer reported a net farm loss, a negative ROA, and lost net worth. Debt coverage remained under 100%, indicating that amounts generated for debt repayment were insufficient to meet scheduled payments. The following year, milk prices improved for all producers but this producer did not report an organic premium, perhaps reflecting their difficulty finding a market. Production and profits improved and a very modest net worth change was reported.

Certified Market Organic Period: In the second year (and last year of information available) after certification, Farm A received a \$3.50 per hundredweight premium over the average of all conventional producers. This was a high price year for all producers and Farm A's profits were very strong. The farm reported a 17% ROA with assets valued at adjusted cost basis, the current ratio increased to 1.5:1, and working capital was higher than pre-organic levels. Debt coverage was very solid at over 300%. Net worth increased substantially, but Farm A's debt to asset ratio also increased apparently due to borrowing for undisclosed capital expenditures. As of the last information available, Farm A was in a very strong profitability and liquidity position. Solvency had worsened slightly, but remained relatively strong.

Farm B

Pre-Organic Period: Farm B entered the organic transition with approximately 45 cows in a grass-based production system. Production per cow was 15,600 pounds (Table 2). The producer noted that he was trying to limit chemical inputs and antibiotics prior to the actual organic transition. This producer entered the transitional period in a very strong financial position with a debt to asset ratio of 23% and a current ratio of almost 4:1. Debt coverage was strong at over 200%. Profits prior to the transition were modest but, with limited investment, Farm B's ROAs were 5% and 9% for the two years immediately preceding the transition period.

Organic Transition Period: Producer B indicated that the decision to transition to organic production was because "after farming without chemical and antibiotic inputs we felt we should begin to reap the monetary benefits." The producer identified a four year transition period to gain certification on crops and livestock. During the transition, herd size first decreased slightly and then expanded by about 10 cows. Milk production was inconsistent during the transition, peaking at 17,400 pounds per cow in the second year of transition and with a low point of 14,700 in the third year. Milk prices received were consistent with conventional prices, with strong prices in years 1 and 3 and weaker prices in years 2 and 4.

Farm B's profitability during the transition followed the milk price level. Years 1 and 3 of the transition were more profitable than pre-transition levels. Years 2 and 4 were less profitable but net incomes were no lower than pre-transition levels. ROAs were under 3% in years 2 and 4. Farm B's liquidity was strong throughout the transitional period, with the current ratio never receding lower than 2:1, but weak debt coverage indicates that there were severe cash flow problems. Farm B lost net worth in years 2 through 4 as the farm's debt to asset ratio climbed from 23% to 31% over the four transition period. Producer B identified "weed control and breeding [cows] for more vigor to meet outdoor requirements" as major challenges.

Table 2: Farm B Production and Financial Measures

Year	1	2	3	4	5	6	7
Organic Period	Pre-Org	Trans	Trans	Trans	Trans	Cert Org	Mkt Org
Production per cow	16,100	15,600	17,400	14,700	16,100	13,900	15,300
Milk price level	High	Med	Low	High	Low	Low	High
Price premium	+\$0.49	-\$0.32	-\$0.40	+\$0.91	-\$0.36	+\$6.61	+\$4.07
ROA (assets at cost)	9%	16%	3%	8%	3%	10%	17%
Current ratio	3.9:1	6.3:1	3.4:1	2.7:1	2.3:1	2.8:1	2.7:1
Term debt coverage	202%	281%	11%	63%	37%	214%	267%
Debt to asset ratio	23%	24%	24%	23%	31%	31%	29%
Earned NW change	\$2,188	\$36,775	-\$9,578	-\$2,347	\$3,637	\$29,325	\$55,087

Certified Organic Period: Farm B's financial information revealed no delay between organic certification and receipt of organic price benefits. Producer B indicated that he had no problem finding an organic milk market.

Certified Market Organic Period: Farm B attained organic dairy certification in a year of low prices for conventional producers and received a \$6.50 per cwt. price premium over the average conventional producer. The first year of certified production was the lowest production year for Farm B, with milk per cow falling below 14,000 pounds. Production rebounded in the next two years. Profits have been strong and growing in the years since certification, with ROAs of 10 to 17%. Liquidity remains solid, debt coverage rebounded to pre-transition levels, and solvency has improved, with strong gains in net worth in each of the three years reported.

Farm C

Pre-Organic Period: Farm C identified a two-year transition period. Prior to transitioning to organic this producer milked between 150 and 175 cows in a conventional system, with production consistently in the 15,000 to 16,000 pounds per cow range (Table 3). The farm's solvency level was just slightly into the moderate risk area at a 37% debt to asset ratio. Liquidity was weak with a current ratio of about 1:1 and debt coverage was adequate. Profitability was strong with ROAs in the 11 to 14% range in the three years prior to beginning the transition.

Organic Transition Period: Producer C indicated that the decision to transition to organic was made because "we were having a lot of trouble with soil and herd health, also wanted to get the cows back on pasture and out of confinement." The transition started in a year of low milk prices. Cows were culled to reduce the herd size by about 20 cows. Perhaps because of this

culling, milk production per cow increased during the transition. Profits declined somewhat in year 1 but rebounded in year 2. ROA was between 7 and 10% during the transition. Liquidity remained weak throughout the transition period. Debt coverage fell below 100% coverage in the first year but recovered thereafter. While Farm C reported losses in market value net worth in each of the transition years, earned net worth change was positive. Using market values, Farm C's debt to asset ratio increased to 45% by the last year of the transition. The most challenging aspects, according to Producer C, were "the decision to quit listening to the usual advisors, correcting the soil, and all the organic record keeping."

Table 3: Farm C Production and Financial Measures

Year	1	2	3	4	5
Organic Period	Pre-Org	Transition	Transition	Cert Org	Mkt Org
Production per cow	15,800	15,100	17,000	16,000	14,300
Milk price level	High	Low	Low	High	High
Price premium	+\$0.26	+\$1.64	+\$0.50	+\$0.08	+\$5.94
ROA (assets at cost)	11%	7%	10%	10%	9%
Current ratio	1:1	1:1	1.1:1	1.6:1	1.4:1
Term debt coverage	156%	98%	130%	137%	122%
Debt to asset ratio	36%	42%	45%	43%	43%
Earned NW change	\$107,505	\$12,742	\$47,454	\$70,452	\$77,157

Certified Organic Period: Farm C did not receive organic price premiums of significance in the year of certification, but did benefit from high conventional milk prices in that year. Production levels were maintained as the herd size was reduced by another 20 cows. Feed cost increased by more than \$200 per cow. Producer C indicated that the most costly part of the transition was increased feed cost due to lower than expected crop yields. Profits were strong and very consistent with pre-organic levels, with a 10% ROA. Liquidity improved to a current ratio of 1.6:1 and net worth increased dramatically.

Certified Market Organic Period: One year's financial and production information is available for the period after Farm C began receiving organic price premiums. Production per cow was down by over 1,500 pounds from the previous year. Farm C received a price premium of almost \$6.00 per hundredweight. Feed costs increased by another \$400 per cow. Farm C continued to earn consistently high profits, with a ROA of 9%. Liquidity receded slightly but was still much higher than pre-organic levels, and the farm earned a solid net worth increase. Farm C ended the first market organic year with solid profits, improved liquidity, but a somewhat weaker solvency position. If Producer C could do the transition over again, they would "do more field tiling before switching and more pasture walks to learn about grazing."

Farm D

Pre-Organic Period: Producer D identified a one year transition for livestock certification. Prior to transitioning, the farm had gradually increased from 50 to 70 cows over the previous four years. Production was at almost 18,000 pounds per cow (Table 4). Profits were strong for the three years prior to the transition with ROAs ranging from 13 to 21%. Liquidity was strong with a current ratio of 3.1:1 leading into the transition. Solvency was also very strong at a 20% debt

to asset ratio. The 70 cow conventional dairy system was transitioned to a grass-based system before the organic transition.

Table 4: Farm D Production and Financial Measures

Year	1	2	3	4	5	6
Organic Period	Pre-Org	Transition	Cert Org	Mkt Org	Mkt Org	Mkt Org
Production per cow	17,900	18,300	15,100	17,500	17,600	15,300
Milk price level	Low	High	Low	Low	High	High
Price premium	-\$0.39	+\$0.02	+\$2.39	+\$6.61	+\$3.42	+\$5.58
ROA (assets at cost)	13%	18%	12%	20%	15%	21%
Current ratio	3.1:1	2.3:1	3.2:1	3.8:1	4.1:1	6.1:1
Term debt coverage	216%	411%	264%	401%	271%	508%
Debt to asset ratio	20%	22%	20%	15%	20%	19%
Earned NW change	\$28,457	\$48,024	\$37,122	\$79,716	\$49,045	\$117,562

Organic Transition Period: Producer D indicated that the decision to transition to organic production was made to “increase cash flow and become less dependent on government payments.” Farm D transitioned in a high milk price year. The year of transition was Farm D’s highest milk production year recorded, with production at 18,300 pounds. Feed costs increased by \$150 per cow but overall costs of production were held under control. The transition year was one of this farm’s highest profit years reported, with an ROA of over 18%. Liquidity dipped slightly, but debt coverage was very strong and net worth increased. Producer D indicated that the biggest challenges of the transition were “weed control in row crops and labor changes; herd health was not as much of a challenge as anticipated.”

Certified Organic Period: Prices received indicate that Farm D experienced at least a partial year of accepting conventional prices post-organic certification. In the year of certification, Farm D’s milk production declined by over 3,000 pounds per cow and feed costs increased by another \$130 per cow. This was a year of low milk prices and Farm D received about \$2.50 over prices received by conventional producers. Profits remained strong with a 12% ROA. Liquidity improved and while debt coverage declined, it was more than adequate. Earned net worth change was down slightly but still positive and solvency improved to a 20% debt to asset ratio.

Certified Market Organic Period: Farm D reported three years of history after beginning to sell milk at organic prices. Production per cow stayed at over 17,000 pounds before declining in the last year of available records. Feed costs stabilized at approximately \$600 per cow more than pre-organic levels. Farm D was very profitable over these three years, with ROAs ranging from 15 to 21%. Liquidity continued to improve, debt coverage was exceptional, and net worth grew steadily. At the end of this period, Farm D was in a very strong and profitable financial position.

Peer Group Comparisons

Each farm in the study was matched with a peer group of conventional farms from data reported by all dairy farms that participated in Minnesota farm business management education programs

Table 5: Peer Group Comparisons (Difference from Conventional Dairy Peer Group Average)

	-3	-2	-1	Cert. Year	1	2	3
Net farm income (\$)							
Farm A	n/a	+7,851	-29,243	-62,773	-36,081	+46,534	n/a
Farm B	n/a	-23,427	-21,409	-1,664	-3,721	+9,685	n/a
Farm C	+48,612	+40,704	+55,644	+20,775	+22,380	n/a	n/a
Farm D	n/a	+16,763	+38,336	+31,040	+80,510	+30,091	+90,402
Rate of Return on Assets (% at cost)							
Farm A	n/a	+1.10%	-3.60%	-11.90%	-5.70%	+8.90%	n/a
Farm B	n/a	-0.80%	-2.80%	+3.80%	+6.80%	+8.40%	n/a
Farm C	3%	+3.10%	+3.60%	-0.10%	+0.50%	n/a	n/a
Farm D	n/a	+5.20%	+9.90%	+6.80%	+14.40%	+4.90%	+12.80%
Working capital to gross income (%)							
Farm A	n/a	-15.60%	-3.40%	-5.40%	-18.80%	-1.00%	n/a
Farm B	n/a	+9.40%	+10.60%	+15.60%	+12.20%	+12.00%	n/a
Farm C	-4.20%	-5.90%	-3.30%	+2.90%	+3.40%	n/a	n/a
Farm D	n/a	+4.50%	+2.40%	+8.60%	+7.60%	+7.20%	+14.00%
Term debt coverage ratio (%)							
Farm A	n/a	-145%	-204%	-40%	-79%	+180%	n/a
Farm B	n/a	-82%	-77%	+97%	+96%	+168%	n/a
Farm C	+23%	-7%	-11%	-52%	-44%	n/a	n/a
Farm D	n/a	+91%	+266%	+150%	+284%	+100%	+351%
Net worth change (\$ at market valuation)							
Farm A	n/a	-10,549	-84,749	-48,529	-95,932	+11,440	n/a
Farm B	n/a	-49,105	-37,424	+17,678	-27,540	+93,892	n/a
Farm C	+49,422	-11,796	-111,951	+146,793	-33,146	n/a	n/a
Farm D	n/a	+8,836	-30,439	+14,271	+51,001	+193,596	+96,592
Debt to asset ratio (\$ at market valuation)							
Farm A	n/a	-23%	-17%	-19%	-9%	-8%	n/a
Farm B	n/a	-11%	-10%	-10%	-11%	-15%	n/a
Farm C	-16%	-22%	-13%	-10%	-8%	n/a	n/a
Farm D	n/a	-29%	-23%	-28%	-33%	-26%	-27%
Milk production per cow (lbs.)							
Farm A	n/a	-2,467	-5,109	-3,091	-1,829	-3,205	n/a
Farm B	n/a	-4,595	-2,771	-5,119	-4,048	-3,880	n/a
Farm C	-3,266	-4,970	-2,946	-3,956	-6,107	n/a	n/a
Farm D	n/a	-1,848	-977	-3,739	-1,486	-1,720	-3,868
Milk price per cwt.(\$)							
Farm A	n/a	+0.55	+0.54	+0.23	-0.04	+3.72	n/a
Farm B	n/a	+1.10	+0.02	+6.82	+4.18	+6.69	n/a
Farm C	+0.25	+1.65	+0.49	+0.04	+5.96	n/a	n/a
Farm D	n/a	-0.18	+0.21	+2.77	+6.82	+3.53	+5.88

and reported financial results in FINBIN (Table 5). Peer groupings were based solely on herd size. Farms A, B, and D were compared to all conventional dairies with between 51 and 100 cows, while Farm C was compared to 100 to 200 cow herds.

All four farms were as profitable as or more profitable than their conventional comparison group when they emerged from their transition, based on net farm income and rates of return on assets. Farms C and D were more profitable throughout the entire period. Farms A and B were less profitable than their conventional peers during the transition period but emerged from the transition to report higher profits than their comparison groups.

Liquidity was compared based on the working capital to gross income ratio. All but Farm A emerged from the transition to report higher liquidity than their conventional peers by the end of this study. Farm A began the transition with less liquidity than the comparison conventional farms and emerged from the transition with almost equal liquidity levels. The other farms reported no discernable loss of liquidity compared to their peers as they transitioned to organic. Farms B and D began the transition in more liquid positions than the comparison groups and generally maintained their liquidity, while Farm C began with less liquidity and generally improved as it emerged from the transition.

Farms A, B, and C experienced serious deterioration in their repayment capacity compared to their conventional peers as they moved through the transition, based on term debt coverage. This deterioration indicates that they all experienced more cash flow difficulty than the conventional farms during these periods. All but Farm C had more repayment capacity than their peers when they emerged from the transition. Farm C emerged with positive repayment capacity, but less than conventional dairy farms.

All four farms began their transition with more solvency than their conventional peers, based on market value debt to assets ratios. (Note, a negative difference in debt to assets reported in Table 5 reflects greater solvency.) All maintained this advantage throughout their transitions. However, all had lower net worth changes compared to their peers at some point during their transition or shortly after. Over the entire transition period, Farms A and B lost net worth compared to their pre-transition financial position. Had these farms initiated their transitions with weaker balance sheets, these reductions in net worth would have been very challenging and potentially fatal to their businesses.

All four farms began their transition producing less milk per cow than their conventional peers. All indicated that they had begun feeding a grass-based ration before their dairy transition. There was no consistent discernable impact of the transition on these producers' production per cow in comparison to conventional producers. Many organic producers say production per cow is not an important measure for their operations, instead focusing on net return per cow and other measures that reflect efficiency and cost of production.

Milk price received followed a predictable pattern, varying little from their conventional peers until organic certification was attained and then surpassing the conventional producers. Price premiums after certification appear to be less in years of high milk prices for conventionally produced milk, indicating that organic markets were not affected by the variation in conventional milk prices.

Conclusions

Four farms were selected for this study to examine the financial and production impacts of their transitions to organic milk production systems. Each farm had successfully completed the transition to organic milk production in the recent years. For each farm, detailed production and financial information was analyzed for the periods before, during, and after the transition.

Two of the dairies, Farms C and D, completed the transition with very little sign of financial strain. They were in strong financial positions going into the transition, had perhaps one year of below trend earnings, and emerged from the organic transition as financially strong if not stronger. Farms A and B also entered the transition in strong financial position. However, these farms experienced much more financial stress before emerging from the transition. Each reported low profits, appears to have experienced severe cash flow difficulties, and suffered significant losses in net worth over the transitional period. Both persevered to emerge as profitable organic dairy businesses.

It is difficult to say with certainty why the transition was more difficult for Farms A and B. Farm A's struggles were partially due to difficulty in finding a reliable organic market once certified, but this farm also struggled more throughout the transition period. Farm B had a solid balance sheet but low earnings in the years leading up to the transition, perhaps because of a lack of sales volume. It is this very lack of sales volume – trying to compete in a commodity market on a small scale – that made this farm a good candidate for the transition to the organic system.

It is most likely that the comparable difficulty experienced by Farms A and B related to unique management challenges that they faced – challenges which may or may not have been under their own control.

Each producer indicated that there was a learning curve involved in organic transition. All said they overcame significant challenges. While this study provides no empirical proof, the following factors appear to be significant based on the financial results and the producers' comments:

1. It is beneficial to enter the transition in strong financial position. Each of these farms entered the transition with debt to assets in the 20 to 30% range. This comparative balance sheet strength made it possible for Farms A and B, in particular, to withstand consecutive years of net worth erosion.
2. The transition to organic cropping systems for feed production may be a greater management challenge than the organic livestock transition. Most of these farms did not note problems with herd health or other livestock issues, but did identify weed control and soil fertility problems as more challenging factors when transitioning to organic production.
3. Following the previous point, increased feed costs present a great economic challenge, particularly when crop production does not meet expectations.

4. The producers included in this study recommended that those considering the transition to organic milk production prepare by attending organic field days, participating in pasture walks, and talk to as many successful organic producers as possible, in order to avoid the mistakes of others.
5. Producers must be prepared for challenges both financially and in their production management. Success is unlikely if the transition is undertaken as a last resort to alleviate production or financial problems.

There are countless rewards for a successful transition to organic dairy production. These four farms demonstrate that financial success can be among those rewards. Producers who do business planning, study alternative systems, position their businesses financially, and learn from the experiences of others will likely repeat the successes of these farms.

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