

Factors to Consider for Organic Dairy Farming in Arkansas

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Introduction

Interest in organic dairy production has increased in the last year because of the increased price of organic milk (\$23-\$25/cwt) compared to conventional milk (\$12-\$19/cwt). Over the last two to three years, demand for organic milk has increased, about 20 percent per year, while the price of conventional milk has dropped markedly. Estimates indicate that the additional costs of organic dairy production compared to conventional dairy farming are about \$5/cwt, with \$3/cwt being an increase in feed costs. Only since 2004 has the price of organic milk significantly and consistently exceeded the costs of production. Another advantage of organic milk production is the stable price which allows for more consistent long-term planning.

The price of organic milk on the farm is now much greater than the costs of production. Organic milk production has become more profitable than conventional production since the price of organic milk has increased and the price of conventional milk has dropped. As with conventional dairy production, the costs of organic production can vary markedly. Moreover, it is recommended that decreases in production be minimized as the dairy herd transitions from conventional dairy farming to organic if profit is to be maximized. Also, data indicate that milk production per cow is usually less, averaging about 10 percent, with organic production primarily due to

decreased feeding of concentrates. Thus, profit per cwt must be greater with organic production than with conventional production to have the same total profit at the end of the year.

Major concerns with organic milk production are the costs of the transition year from conventional to organic production plus the lack of use of antibiotics, hormones and commercial fertilizer. Presently, most certifying agencies do not (but some do) allow 80 percent of the feed (as-fed or wet basis) during the transition year to be organic for the first nine months for producers signing up for the transition (this rule changed on June 9, 2006). Generally, 100 percent of the feed fed during the transition year must be organic for producers signing up after June 9, 2006, or organic heifers must be purchased. Therefore, the commitment to transition to organic dairy farming is a major long-term decision and must be thoroughly investigated as money is usually lost during the transition year.

Organic concentrates presently cost more than twice the price of conventional concentrates. Organic hay is about 15-20 percent more costly than conventional hay. Since there have been shortages of organic feedstuffs, it is essential to plan for such situations with an emphasis on homegrown forages. Some organic milk processors may assist in the costs of transitioning.

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Other challenges of organic producers are the costs and availability of products to treat cows. Use of conventional antibiotics, dewormers, herbicides, pesticides, hormones for breeding and fertilizers is very restrictive and is usually not allowed. Some holistic medicines are available but are generally considered to be less effective in treating disease than most conventional drugs. One organic crop producer describes the paperwork for documentation for organic certification as “overwhelming,” which can be a challenge for some producers. Potential producers have to be good at managing the herd, managing the pastures and managing the paperwork for certification in order to be successful as an organic producer.

If no commercial fertilizers and herbicides have been used on portions of the farm in the last three years, the land can be immediately certified as organic and can be used for pasture and hay. Not all fields have to be certified initially as long as animals are kept on the certified acreage only. The herd still requires a year transition period. Many of the dairy producers in Arkansas now use few antibiotics and hormones, and there is a lot of potential for these producers to increase their price of milk with organic milk production. The best candidates for organic

production are producers who have very clean operations with minimal use of drugs, a low SCC (Somatic Cell Count), few reproductive problems and extensive use of pasture.

Budgets

The budgets for organic dairy farming can vary greatly depending on the costs of the transition from conventional dairy farming and the costs of feeding the organic cows and heifers. Table 1 shows the effects of the price of milk and the loss in production on profits (return to equity, management and operating labor) in the dairy enterprise. If production per cow can be maintained with organic production, the profit from the dairy (\$64,123 versus \$31,898/year) is enhanced since the price of milk is greatly increased (\$24.50 versus \$15.50). However, it should be noted that no costs for the transition period are included in these budgets since they can vary greatly depending on additional requirements needed on the dairy. Additionally, it is important to maintain current levels of production, or profit can be affected. In this projected budget, feed costs remain the same as milk production drops from 16,000 lbs/cow/year to 15,000 lbs/cow/year. Profit drops from \$64,123 to \$38,985/year (which does not include the costs of

Summary of Organic Requirements

The following are requirements that must be met before milk can be sold organically and for the transition to an organic dairy. Organic standards are set by the National Organic Program. Certifying agencies oversee compliance of the standards.

1. Land used for the feed and cows must be managed by organic standards for 36 months.
2. Cows must be managed by organic standards for 12 months.
3. Cows must have access to pasture for at least 120 days of the year.
4. The total feed ration must be certified organic including pasture, grain, forages and supplements.
5. No chemically derived fertilizers, pesticides or herbicides can be used unless specifically certified by the Organic Materials Review Institute (OMRI).
6. Lime, select potash, specific phosphates, chicken litter and cow manure can be used as fertilizer.
7. Antibiotics and hormones cannot be used.
8. Most vaccines can be used.
9. A system plan for management practices of both livestock and land must be prepared and approved by the certifying agency and records of the management practices maintained. A daily journal is best.
10. A yearly certification fee must be paid to the certification agency.
11. Any practice that is new or a possible deviation from the certification plan must be authorized by the certifying agent.

Table 1. Intensive Grazing – Organic and Conventional Budgets¹ – 100 Cows; 15,000 or 16,000 lbs Milk Production/Cow/Year; 250 Days on Pasture; 115 Days on TMR or Hay; Supplemental TMR or Hay With Concentrate Supplementation in Parlor

Item		Unit	Organic Price	Quantity	Organic 16,000/Cow	Conventional 16,000/Cow	Organic 15,000/Cow
Cash Income							
Milk		CWT	\$24.50	\$16,000.00	\$392,000.00	\$248,000.00	\$367,500.00
Cull Cows	26 @ 13	CWT	\$45.00	\$338.00	\$15,210.00	\$15,210.00	\$15,210.00
Bull Calves		HEAD	\$100.00	\$47.50	\$4,750.00	\$4,750.00	\$4,750.00
Patronage Dividends					\$19,600.00	\$12,400.00	\$18,375.00
			TOTAL CASH INCOME		\$431,560.00	\$280,360.00	\$405,835.00
Cash Expenses							
Grass Hay	5.0%	TON	\$140.00	\$200.00	\$28,000.00	\$14,000.00	\$28,000.00
By-Pass Protein	2.0%	TON	\$224.00	\$176.10	\$39,446.40	\$19,723.41	\$39,446.40
Soybean Meal	2.0%	TON	\$500.00	\$100.00	\$50,000.00	\$25,000.00	\$50,000.00
Corn Grain	2.0%	BU	\$5.00	\$12,000.00	\$60,000.00	\$30,000.00	\$60,000.00
NPN	2.0%	TON	\$500.00	\$1.47	\$733.13	\$366.56	\$733.13
Intensive Pasture	2.0%	TON	\$40.00	\$1,200.00	\$48,000.00	\$24,000.00	\$48,000.00
Pasture – Dry Cows/Heifers		ACRE	\$40.00	\$125.00	\$5,000.00	\$2,500.00	\$5,000.00
Minerals		HEAD	\$120.00	\$100.00	\$12,000.00	\$6,000.00	\$12,000.00
Milk Replacer		CWT	\$162.00	\$27.00	\$4,374.00	\$2,187.00	\$4,374.00
Calf Grower		CWT	\$26.00	\$235.00	\$6,110.00	\$3,055.00	\$6,110.00
Breeding		HEAD	\$25.00	\$100.00	\$2,500.00	\$2,500.00	\$2,500.00
Vet and Medicine		HEAD	\$50.00	\$100.00	\$5,000.00	\$5,000.00	\$5,000.00
Supplies		HEAD	\$110.00	\$100.00	\$11,000.00	\$11,000.00	\$11,000.00
DHIA		HEAD	\$25.00	\$100.00	\$2,500.00	\$2,500.00	\$2,500.00
Hauling Milk		CWT	\$0.30	\$16,000.00	\$4,800.00	\$12,800.00	\$4,500.00
Assessment/Adver/etc.		CWT	\$0.26	\$16,000.00	\$4,200.00	\$4,200.00	\$3,937.50
Haul and Market Culls			\$0.00	\$0.00	\$843.20	\$699.20	\$818.70
Bldg. and Fence Repair		HEAD	\$64.00	\$100.00	\$6,400.00	\$6,400.00	\$6,400.00
Machinery (Non-Crop)		HEAD	\$48.00	\$100.00	\$4,800.00	\$4,800.00	\$4,800.00
Utilities		HEAD	\$50.00	\$100.00	\$5,000.00	\$5,000.00	\$5,000.00
Labor (FICA)	\$0.08	MEN	\$20,000.00	\$1.00	\$21,530.00	\$21,530.00	\$21,530.00
Farm Insurance		HEAD	\$21.00	\$100.00	\$2,100.00	\$2,100.00	\$2,100.00
Customer Hire		HEAD	\$16.00	\$100.00	\$1,600.00	\$1,600.00	\$1,600.00
Farm Rent		HEAD	\$15.00	\$100.00	\$1,500.00	\$1,500.00	\$1,500.00
Taxes		HEAD	\$40.00	\$100.00	\$4,000.00	\$4,000.00	\$4,000.00
			TOTAL CASH EXPENSES		\$331,436.73	\$212,461.17	\$330,849.73
Annual Debt Payments					\$36,000.00	\$36,000.00	\$36,000.00
Return to Equity, Management and Operating Labor					\$64,123.28 ¹	\$31,898.83 ¹	\$38,985.28 ¹

¹Costs for organic investment not included in calculations can vary from \$6,000 to \$40,000 per year for three years from a total of \$20,000 to \$100,000 investment during the transition period. Calculations based on 30% cows leaving herd annually and 4% annual cow death loss.

transition). Essentially, the return to equity, management and labor for organic dairy farming with 15,000 lbs milk/cow/year would be approximately equal to that of conventional dairy farming at 16,000 lbs milk/cow/year with these assumptions. In practice, we usually see producers continue to feed above recommended levels of feeding when production drops. If feed costs are reduced as the cows drop in milk production from 16,000 to 15,000 lbs/cow/year, then profits could be increased by more than \$10,000 per year for the 100-cow budget. Generally, maximizing the use of homegrown, high-quality forages and minimizing the amount of expensive grain fed to the cows will improve returns.

Data are limited and variable on changes in costs of items other than feed costs for organic production. In the budgets shown, feed costs are doubled. Some data indicate health costs increase, while other data indicate they decrease. The costs per treatment probably increase with organic production, while the number of treatments for health-related ailments may decrease. Other data indicate an increase in labor per cow for organic production, but most dairy producers in Arkansas use pasture and should have minimal changes in management. Some producers may require greater labor for enhanced cleanliness as incidence of diseases must be minimized since treatment options are limited.

The transition from conventional dairy farming to organic dairy farming offers an opportunity for producers to improve their management of feeding, especially forages, and the health management of the herd. If improvements can be made, these afford an opportunity to reduce a portion of the costs of purchasing organic feeds and possibly reduce the use of drugs and other health costs. Data on these costs vary, can change with different management systems and are not consistent when reviewing the literature. An important factor to consider is that costs of production for milk will increase with organic production. However, the increase in costs needs to be minimized and less than the percentage increase in the price of organic milk compared to conventional milk. Moreover, one needs to recognize that there will be increased costs, or the price of the organic milk would not be much greater than the costs of conventional milk.

The costs of transitioning from conventional to organic dairy production must be considered. Usually, an organic milk processor will provide \$2/cwt for milk produced during the transition period if a contract is signed to sell milk to the processor. If a producer is limited in resources for conventional production, he/she may not be able to borrow the money needed to successfully transition to organic as he/she will lose money during the transitional year. While transitioning to organic production may have the possibility of improving the financial situation on the dairy, it is important to plan for the short-term costs of transitioning to ensure that money is available for cash-flow needs during the year. Long-term success of the dairy should be the primary consideration in planning for either conventional or organic dairy production.

Overall, producers considering the transition to organic milk production must be extremely clean to minimize disease, be prompt in treating disease so the incidence is minimized, maximize the use of high quality forages so the grain purchases are minimized and maintain accurate records.

Summary

The best candidates for organic production are producers who have very clean operations with minimal use of drugs, a low SCC, few reproductive problems and extensive use of pasture. Initially, the costs of transitioning from conventional to organic dairying may limit some producers since the costs of feed and other organic items will exceed the payments to transition. Other challenges to organic producers are the costs and availability of products to feed and treat cows. Many dairy producers in Arkansas are almost “natural” and are good candidates for the transition from conventional to organic dairy production. The use of conventional antibiotics, dewormers, herbicides, pesticides, hormones for breeding and fertilizers is very restrictive and is usually not allowed. Some holistic medicines are available but are generally considered to be less effective in treating disease than most conventional drugs. Potential producers have to be good at managing the herd, managing the pastures and managing the paperwork for certification in order to be successful as an organic producer.

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