



Grass-based dairy and dairy networks/promotions

Abstract: *What is the potential for grass-based dairying in southern Iowa? How can we help beginning farmers and others enter the dairying profession? Fifteen dairy operations participated in a study to answer these questions.*

Background

Ag Connect had in the past tried to match beginning farmer prospects with retiring farmers. Their efforts revealed a very large supply of beginning candidates (100+) but only 12 applications from established operators. The beginners were attracted to southern Iowa because land prices were more reasonable than in other areas of the country. However, there was very little information or evidence to confirm that grass-based dairying was a good career option in Iowa's 20 south central counties.

In order to confirm the suitability of grass-based dairying as a sustainable agriculture enterprise, the project leaders worked with new and existing operations in the area. They

assembled individual case histories from 15 dairy farm families in southern Iowa and northern Missouri between January 2001 and December 2002. Ten of the dairies were new operations and the rest were established businesses.

Project objectives were to establish or identify a group of grass-based dairies in the target area. At the same time, project investigators would evaluate the sustainable farming practices of dairies that agreed to participate and share these experiences with each other and the wider community. This would help create a functional network of current and new grass-based dairy producers who could share information and understanding about this type of dairy farming.

Principal Investigator:
Tim Ennis

Co-investigator:
Bill Beaman
Ag Connect
Lenox

Budget:
\$9,780 for year one
\$29,822 for year two
\$32,153 for year three



On July 17, 2001, this dairy farm and farm pond were the site of a Pasture Water System Field Day, one of five field days conducted for new grass-based dairies in southern Iowa.

In practice, will environmentally friendly, grass-based dairy farming financially sustain beginning farm families and economically benefit rural communities in southern Iowa? Among a complex set of factors, Ag Connect found full implementation of management intensive rotational grazing (MIRG) and rapid milking systems to be key to long-term viability. Since grass-based dairy operations of less than 200 acres will more than double the gross income per acre compared to traditional types of farming such as cow-calf and row-crop farming, establishment of grass-based dairies will benefit the rural communities in southern Iowa.

Approach and methods

A Points of Cooperation Agreement was devised to outline the responsibilities of the participating farmers and the project organizers in the “Grass-based dairy and dairy networks/promotions” project. Participants received a yearly stipend for sharing information about their operations. Privacy of records for individual operators was strictly maintained.

Data were collected on monthly milk sales income, number of cows milked each day, and which paddocks were used on each day of the grazing season. Investigators developed a detailed knowledge of each operation via regular telephone contact with the dairy operators and on-farm visits. Quarterly meetings of the producers involved in the project allowed the group to review information on milk sales records and other issues.

Results and discussion

Most of the operators in this study were new entries into the dairy business in south central Iowa. Many were young married couples in their early thirties with three or four children, and most did not have the backing of an established farming operation.

Even so, the study showed that grass-based dairies have exceptional income potential in production agriculture circles, possibly because they are able to utilize lower-quality acres than those needed for major crops. The dairy operators also noted that the practices associated with grass-based dairying allowed them to keep production costs low, which improved their bottom line figures.

Grass-based dairies use farming methods that promote maximum collection of feed and distribution of manure by the dairy animals. Frequent rotation (once or twice per day) of the dairy herd among small pasture divisions (paddocks) distinguishes grass-based dairying from other grazing approaches where animals graze larger pasture areas and are not rotated as often.

The study also examined the gross income from sale of milk in newer operations with relatively small (average 207 acres) land ownership. The gross income figures are encouraging for prospective beginners with limited resources.

The records collected for the project show great variation in the volume and cost of non-grazed feeds used to produce 100 pounds of milk among this small group of dairies. In one



Dairy barn



Milking parlor

case, mixed feed cost accounted for 40 percent of the value of the milk produced, while in another instance mixed feed cost only 14 percent of the value of the milk sold.

Each dairy operator in the study was at a different stage of development. There were also varying levels of commitment to the practices of management intensive rotational grazing (MIRG) that distinguish grass-based dairies from conventional operations. Ag Connect identified 10 factors associated with successful grass-based dairies and MIRG. Each participant dairy was then assigned a rating from 1 to 10 by the investigators based on interviews and observation of practices carried out on each farm.

Conclusions

Beginning and grass-based dairies recruited to participate in this study earned adequate gross income from sales of milk to conclude that full implementation of MIRG practices will result in a net income for family living that would be attractive to young families interested in entering farming. Fifteen farm families shared records and experiences regarding their dairy operations at various times during the project.

Both the investigators and the participant operators noted that each beginner experiences a

very steep learning curve in the first two years of operation. Ag Connect's efforts to encourage participants to network with other grass-based dairy producers, as well as with one another, proved invaluable during the difficult start up period.

The key factors that threaten the survival of new dairies are the market price of milk, the cost to produce milk, and the heavy labor needs of the milking routine. Although the novice small dairy operator can do very little to change the market price of milk, the operator can act to greatly reduce non-grazed feed costs and total labor requirements.

Dairy parlors providing space and machines to milk eight or more cows at one time will reduce total milking time by two-thirds compared to parlors that milk only three or four cows at one time. The study provided data on the most efficient configurations for dairy parlors used by this small group of operators.

The weakness of the current entry process appears to be that decisions to incur long-term debt are being made at the time when the operator has the least experience, most enthusiasm, and while high milk prices may be temporarily high. Beginners should consider building a parlor within an existing building and purchasing used equipment to minimize initial debt loads.

Impact of results

Ag Connect's work suggests that a well-managed grass-based dairy operation would meet the three tests of agricultural sustainability (environmentally sustainable, financially sustainable, and supportive of a sustainable community).

Environmentally sustainable. A grass-based dairy relies on a well-managed sward of grass to be used as the main source of feed. Grass cover on rolling landscapes helps reduce soil erosion and the corresponding pollution of streams, rivers, and underground water supplies. Manure management is more efficient with grazing animals than animals in a conventional livestock set-up.

Financially sustainable. The study concluded that a prudently structured and managed grass-based dairy offers a greater prospect for financial sustainability than many other farming ventures. It also offers a viable entry option for beginning farmers with few resources.

Sustainable community. Grass-based dairies have the potential to put more gross dollars per acre into their communities than traditional cow-calf and row-crop farms. They are usually family-operated, which is an asset to rural communities. New dairies require feed, labor, veterinary services, supplies, utilities, and maintenance services that can be provided by local suppliers.

Education and outreach

A number of events were held to get the word out to farmers about the project:

- Informational meeting on grass-based dairying, July 13, 2000 in Villisca,
- Five field days with varying themes conducted on Iowa and Missouri dairy farms,
- Five participant review and discussion meetings, and
- Grass-based dairy conference in conjunction with the January 2001 Practical Farmers of Iowa annual meeting.



*For more information
contact Tim Ennis, Ag
Connect, 124 North
Main St, Lenox, Iowa
50851; (641) 333-4656*