



Introduction

Transitioning to a pasture-based system can be economically competitive as long as milk production decline is minimized, the cow's nutrient requirements are met and pastures are managed intensively to maintain rumen pH values from 5.8 to 6.2 that will support optimal digestibility, nitrogen flow, and desirable components. If pasture quality is less than 35% NDF and over 80 percent digestibility, rumen pH can drop below 5.8

Farmers utilizing the pasture-based system have found that cattle have less foot and leg problems, and thus lower culling rates.

Importance of Genetics

Selection of the genetics is very important in a pasture-based operation. In the U.S., ninety percent of the cattle genetics are Holsteins. They have been bred for a conventional farm operation and the ability to produce in excess of 20,000 pounds of milk per year. In pasture-based operations, they are looking for a smaller framed animal similar to the Jersey, Guernsey or Ayrshire body type. These breeds can also be cross-bred to add hybrid vigor.

Forage Quality

Pasture quality is also extremely important in a pasture-based operation. Producing and managing quality pastureland can have a major impact on herd performance and return. By establishing the type of pasture needed to meet a herd's nutritional requirements, producers not only protect animal health, but also reduce the cost of veterinarian visits. To determine whether your pasture should be improved, ask yourself, "Are there more weeds than consumable grasses?" If weeds have the upper hand, you probably have lower-quality forage, since the desirable grass is competing with weeds for nutrients and moisture. Also, check for signs of plant disease, which can cause forage quality to decline.

When animals graze, the food choices they make is another forage quality indicator. They naturally tend to choose the highest quality forage available. When they would rather eat the hay you put out than grass growing in the pasture, it's a sign forage quality is low.

Body condition is another criteria to use in measuring forage quality. If you see changes like weight loss or deteriorated body condition, it's a sign of poor nutrition. Unfortunately, at that point it requires a great effort to help those animals recover.

Conventional dairies are often skeptical of switching to pasture-based for fear of lost production and profits, which won't necessarily result. The record grain prices make it increasingly difficult to make money on a grain-based dairy. And, grazing is sustainable. What the cows eat, they later drop as fertilizer. The key is to do your research and be prepared to not expect the high herd average that you did with a conventional grain-based operation

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Economics

The Department of Applied Economics and Management at the Cornell University College of Agriculture and Life Sciences has collected and published business summaries for 30-50 NY dairy farmers that make use of Intensive Grazing on their farms. In Table 1 are some of the excerpts from the Dairy Farm Business Summaries (DFBS).

Table 1. Intensive Grazing vs. Confinement Farms: Average 1996-2006*

Item	Grazing Farms	Confinement Farms
Number of cows	91	90
Milk sold/cow	17,025lbs.	18,982lbs.
Operating cost/ cwt	\$10.73	\$11.40
Total cost/cwt	\$16.21	\$16.81
Net Farm income/cow	\$467	\$365
% Return on equity	3.94%	1.18%
Purchased feed+crop exp./cwt	\$5.05	\$5.29
Veterinary medicine exp./cow	\$65	\$87
Machinery cost/cow	\$509	\$591

Summary

Conventional dairies are often skeptical of switching to pasture-based for fear of lost production and profits which isn't necessarily justified. The record grain prices make it increasingly difficult to make money on a grain-based dairy. And, grazing is sustainable. What the cows eat, they later drop as fertilizer. The key is to do your research and be prepared to not expect the high herd average that you did with a conventional grain-based operation.

Resources

Benson, Fay. Hard Times Make for Easy Choices. Graze NY educator with the South Central NY Dairy Team.

<http://counties.cce.cornell.edu/wyoming/agriculture/pdfs/HardTimesMakeforEasyChoices.pdf>

Benson, Geoffrey, A. Journal of International Farm Management. Vol. 4. No.2. February 2008. North Carolina State University. Raleigh, NC

http://www.ifmaonline.org/pdf/journals/Vol4_Ed2_Benson.pdf

National Sustainable Agriculture Information Service. 2009. Dairy Production on Pasture: An Introduction to Grass-Based and Seasonal Dairying.

<http://www.attra.org/atrapub/PDF/grassbaseddairy.pdf>

Rayburn, Edward, B. 2006. *Managing and Marketing for Pasture-Based Livestock Production*. Natural Resource, Agriculture, and Engineering Service.

http://www.nraes.org/nra_order.taf?function=detail&pr_booknum=nraes-174

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