



DAIRY BEEF

CURRENT TOPIC

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Dairy beef is an opportunity to diversify operations and boost income, especially when production is pasture-based. Since many consumers are interested in lean, natural beef, dairy beef also represents an enterprise option for direct marketing to a niche market. Market research is critical before getting started in dairy beef production.

More than four million bull calves are born to dairy breeds each year in the U.S. Since only a few are needed for breeding, these calves represent great potential for meat production (1). Until recently, most dairy bull calves were sold for veal. Beef and dairy cross calves are also valuable for beef production.

Holstein beef production has the advantage of being relatively easy to enter and exit compared to other enterprises. Holstein beef accounts for about 5% of the total beef produced in the U.S. (2).

Production

The enclosed publication, *Agricultural Alternatives: Dairy-beef Production*, describes how young dairy calves are usually sold through local auctions at 2-5 days old, though they are sometimes sold as older animals. Since the health of newly arrived calves can vary greatly, guidelines are given for starting calves out in individual clean stalls with electrolytes and a health maintenance program. An "all-in, all-out" approach is often used in which each batch of calves is treated as a unit from the time of arrival on the farm until departure – new animals are not added to the group.

The feeding program for Holstein beef calves depends on the age at which the calves are acquired. According to the enclosed section from *Raising Holsteins for Beef: An Alternative Enterprise Guidebook*, calves that are less than eight weeks old require milk replacer. Some grain can be fed after 10 days of age. When they are 10-20 weeks old, the calves still require a high-energy feed. Nurse cows and even dairy goats have been used by some producers to suckle dairy calves instead of using milk replacer (3). After 20 weeks, more flexibility in feeding is possible. Forage-feeding, which includes grazing pastures and feeding conserved forage, can be used.

Forage feeding

According to the enclosed publication, "Feeding Holstein Steers: A Summary of 10 Years of Research," forage-feeding Holstein calves up to 600 lbs. does not change how the carcass will grade at slaughter (see page 141). Another enclosed article, "Study Shows Forage Diets Pay for Dairy Steers," states that steers that are fed forage during the growing period (325 to 700 lbs.)

and are later switched back to grain, still reach a market weight of about 1200 lbs. in the same time as steers on a constant grain diet. However, the enclosed *Agricultural Alternatives: Dairy-beef Production* recommends feeding dairy calves a high-grain diet their entire lives and slaughtering at an early age of 12–14 months at 1150–1300 lbs.

Raising cattle on pasture necessitates management decisions about grazing. Controlled grazing or management-intensive rotational grazing (MIG) can increase both plant and animal production. Controlled grazing involves grazing and then resting several pastures in sequence. The rest periods allow plants to recover before they are grazed again. Doubling the forage is often possible when changing from a continuous to a controlled grazing system. Although an intensive system has initial costs of electric fencing and watering investments as well as increased management, many farmers report better profitability.

Please refer to the following ATTRA materials for more information on pastures and grazing:

- *Assessing the Pasture Soil Resource*
- *Nutrient Cycling in Pastures*
- *Introduction to Paddock Design and Fencing-Water Systems for Controlled Grazing*
- *Matching Livestock and Forage Resources in Controlled Grazing*
- *Meeting the Nutritional Needs of Ruminants on Pasture*
- *Sustainable Pasture Management*
- *Grass-Based and Seasonal Dairying*
- *Rotational Grazing*

The enclosed article, “Big Profits from Little Holsteins,” describes how pasture-based Holstein beef production in Mississippi can be more profitable than stocker beef. “The growth rate of a fall-born baby Holstein steer almost perfectly matches the seasonal growth rate of annual ryegrass pasture.” Pasture was fertilized with a high rate of nitrogen, and spring gains were more than 3 lbs. per day. Calves were placed on pasture at 2 months and sold as feeder cattle by late May – before the summer heat set in. A good health program to reduce mortality was critical to profitability. Another enclosed article, “Dairy Wages from Beef Production Possible by Grazing Very Light Calves,” also discusses raising dairy calves on pasture.

Finishing

According to researcher Ted Perry (4), grazing works well for Holsteins up to about 700 lbs. After 800 lbs., they generally need a higher-energy ration, such as corn, in order to be able to grade well at slaughter. Holstein steers are often marketed to feedlots at about 700–800 lbs., where they are finished on grain and slaughtered at around 1200 lbs. Feedlots need to put at least 300 lbs. on the animal in order to be profitable and therefore buy stockers between 700–1000 lbs. (5). However, Holsteins can be finished to a variety of weights (1200–1800 lbs.).

Carcass and meat qualities:

Holsteins, in particular, are valued by meat packers because of the consistency of the breed. They have uniform rates of gain and feed conversion and show predictable carcass characteristics in terms of yield, grade and cutability (6). However, Holsteins tend to be discounted in comparison to traditional beef breeds.

Holstein beef is leaner than most beef, which is important to consumers interested in a low-fat diet—yielding a carcass with 25–30% less trimmable fat than beef breeds (7). “Because they are leaner than traditional beef breeds, dairy-beef steers usually will not produce an acceptable quality carcass if slaughtered beyond 18 months of age” (8). However, dairy breeds tend to marble well since fat accumulates inside the muscle instead of outside. In fact, Jerseys marble better than British or Continental beef breeds. Holsteins also marble well and can produce prime carcasses (4).

Dairy steers have a rate of gain similar to that of traditional beef breeds, but are 10–15% less feed-efficient than beef breeds due to higher maintenance requirements (5). Holsteins do not yield as well as traditional beef (9). The dressing percentage of finished Holsteins is less than beef steers since Holsteins have higher ratios of offal and bone, and the carcass itself is worth less since it has more bone than beef breeds.

Cattle finished on pasture have distinct meat qualities that are receiving more and more attention. See ATTRA’s *Alternative Beef Marketing* for a discussion of pasture-finished beef production, meat qualities, and marketing.

Niche Markets and Direct Marketing

There are niche markets for "natural" beef that is grass-fed to slaughter weight and raised without antibiotics or implanted growth hormones, and perhaps certified organic. Direct-marketing—selling lean Holstein beef directly to individuals and restaurants—is a particularly effective way to access these niche markets.

Valerie and Rick Adamski (10) sell lean, organic, pasture-finished Holstein beef at a farmers’ market in Wisconsin. The male calves, a by-product of the Adamskis’ dairy, are grown to 14 months of age and slaughtered at about 1000 pounds at a state-approved facility. The Adamskis found that it was too difficult to sell quarters and halves because most people do not have that much freezer space. Therefore, the Adamskis have a meat seller’s license (\$20 in Wisconsin) and sell the beef in frozen packages from an ice chest at the farmers’ market. Hamburger is their best-selling item and retails at \$3.00 per pound. Customers prefer to buy the hamburger with clear wrap so they can see it. The Adamskis used surveys to determine their customers’ wants: less fat, no use of hormones or antibiotics in production, tenderness and taste, organic, humane, and ecological production, and family-farm-raised.

Jim Goodman (11) raises dairy beef without chemicals, hormones, or pesticides in Wisconsin and sells to restaurants, farmers’ markets, and local customers. He values his direct contact with customers. When he takes a 1500-lb. steer to the packing plant, he receives about \$800. That same animal brings \$2000, minus about \$400 in processing costs, when he sells it directly. Selling meat himself means more time on the road, including waking at 3:30 a.m. on farmers’ market days, but Goodman is gratified that he now sells one or two animals a month through his own carefully cultivated channels.

The enclosed articles, "The Really Lean Beef Niche" and "Big Dollar Niche", discuss the value of lean beef produced from forage-fed dairy beef. Also enclosed is the article "Opportunities for

Marketing Holstein Beef." ATTRA's *Alternative Beef Marketing* has more information on marketing beef to niche markets. Two related ATTRA publications, *Alternative Meat Marketing* and *Direct Marketing*, provide further details on the tasks, challenges, and opportunities a producer faces when marketing farm products.

Analyzing profitability

The enclosed article, "Are They a Gold Mine or the Shaft?", discusses the importance of the 10-year cattle cycle in marketing dairy beef to feedlots and how it affects profitability. Since dairy beef is a by-product of the dairy industry, the supply of calves does not respond to the traditional beef cycle (5). "When there is a lot of beef on the market, the Holstein will be discounted more than it really deserves" (5). The veal market can also confuse market signals since it rises and falls irrespective of the beef cycle.

According to Allan Nation, editor of *The Stockman Grass Farmer* (12), initial investment in dairy calves is lower than for beef calves, and dairy calves grow faster than beef calves in the spring. However, the advantages of a dairy beef enterprise over a stocker beef enterprise are offset by an oversupply of beef from traditional breeds. "When the beef business catches a cold, the dairy beef business catches pneumonia." Therefore he does not consider dairy beef to be a profitable enterprise in every year of the 10-year cattle cycle. He recommends dairy beef for the 6 out of 10 years when beef is rising or high in price. However, he does believe niche marketing dairy beef can be a winner 10-in-10 years (13).

According to "Are They a Gold Mine or The Shaft?", a reasonable goal for a stocker program is to add 300 lbs. of gain to generate \$150 of margin. "That \$150 allows \$50 for buying, selling, interest, trucking, health, and processing, \$50 for feed, salt, and water, and \$50 in profit." Weighing the calves periodically and knowing the cost of gain help monitor the operation. A sample budget is included in *Agricultural Alternatives: Dairy-beef Production*.

Resources

In 1994 *The Stockman Grass Farmer* (12) sponsored a conference in Minnesota that featured dairy beef. Enclosed is the conference schedule, listing talks about various aspects of raising dairy beef. *The Stockman Grass Farmer* also offers an audio tape called "Dairy Beef Production" by W.A. Brock. Additional information on Holstein beef – nutrition, management and marketing – is available through two 25-minute videos prepared by Land O'Lakes (14). Further general information on dairy beef is available through the Extension service in some states.

References:

- 1) Miller, K.P. et al. 1986. Studies on Dairy Beef Production. Bulletin AD-SB-2896. University of Minnesota Agricultural Experiment Station. p. 4.
- 2) Anon. 1996. Spotlight on research. Beef. September. p. 38.
- 3) Nation, Allan. 1993. Dairy goats suckle dairy calves in Mississippi. *The Stockman Grass Farmer*. December. p. 1, 8.

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Kansas City, MO
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- 5) Bartlett, Ben. 1998. Are they a gold mine or the shaft? *The Stockman Grass Farmer*. September. p. 1, 9-12.
- 6) Johnson, K.L. 1993. Will milk's champ beat beef in the feedlot? *USAgriculture*. January 19. p. 1, 8-9.
- 7) Dvorak, Norval. 1991. Opportunities for marketing Holstein beef. In: *The Proceedings of the Holstein Beef Production Symposium*. Northeast Regional Agricultural Engineering Service, Cooperative Extension, Ithaca, NY. p. 1-5.
- 8) Wilson, Lowell L. 1995. *Agricultural Alternatives: Dairy-beef Production*. 3M1195ps3241. Penn State University Cooperative Extension, University Park. 4 p.
- 9) Price, David. 1995. *The Consulting Nutritionist*. Beef. August. p. 14.
- 10) Valerie and Rick Adamski
Full Circle Farm
W-2407 Hofa Park Rd.
Seymour, WI 54165
920-833-6704
- 11) Jim Goodman
Northwood Farms
E103 CTH.Q
Wonewoc, WI 53968
608-489-2291
- 12) The Stockman Grass Farmer
P.O. Box 2300
Ridgeland, MS 39158
800-748-9808
- 13) Anon. No date. Letters/Network: Dairy beef economics questioned. *The Stockman Grass Farmer*. Issue unknown. p. 32.
- 14) Land O'Lakes
2827 8th Ave.
Fort Dodge, IA 50501
888-366-6488 ext. 4232
Video costs \$10 each.

Enclosures:

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