Cattlemen Seek Greener Pastures in Niche Market

Angus is the breed of choice for grass-fed beef.

by ***Boyd Kidwell***

Steve McPherson is one of many Angus breeders cashing in on a growing consumer appetite for grass-fed beef. McPherson and his partner, Sam Kiser, manage 200 Angus cows at Triple Tree Farm near Snow Camp, N.C. For many years, McPherson has been successfully marketing registered Angus bulls to commercial cattle producers, but he's recently found that Angus calves are perfect for the lucrative grass-fed beef market.

Without large numbers of feeder calves to make truckloads, marketing the steers and feeder heifers from their Angus herds was always a nagging problem for McPherson and Kiser. The partners solved this dilemma by selling grass-fed Angus beef to an upscale food market at Chapel Hill, N.C., home of the University of North Carolina (UNC).

"For many years, we took high-quality Angus feeder calves to a local stockyard sale and received low prices. Grass-fed beef is a niche market, and we're fortunate to have a large number of consumers in our area willing to pay premium prices for this kind of beef. By selling 100% Angus cattle for grass-fed beef, we provide a consistent product," McPherson says.

McPherson and Kiser sell grass-finished cattle to Weaver Street Market, a food company with three store locations in the UNC area. McPherson is one of three Angus producers selling grass-fed beef to Weaver Street Market.

Providing a steady supply of grass-finished cattle is a challenge, according to the ranchers. McPherson delivers two animals per week weighing around 1,000 pounds (lb.) each and receives approximately $1,200 per head. He manages the farm's forages for year-round grazing and changed his breeding program slightly to fill the steady market demand.

"Selling grass-fed beef blew my controlled breeding season," McPherson notes. "We've moved to calving three times a year, and my goal is to produce a 1,200-pound grass-finished steer in less than two years."

McPherson hasn't changed his genetics a great deal, but he emphasizes easy-fleshing, moderate size and tenderness. To bring the size of his cattle in-line with a grass-fed program, he buys bulls and uses AI (artificial insemination) sires with frame scores of 3 to 4 instead of bulls with a frame score of 7 that he previously used.

"Our cattle weren't large-framed to begin with, but large cattle won't work in a grass-fed program. We need cattle that finish around 1,200 pounds, where a feedlot might want cattle that finish at 1,400 pounds," he says. "All of the AI bulls we used this year have a GeneStar® tenderness rating of five stars and greater."

A genetic test for beef tenderness is available as part of a GeneStar test for tenderness, marbling and feed efficiency. The tenderness test is based on two genes involved in the postmortem tenderization process. Animals carrying favorable forms of the genes have been found to significantly reduce "tough" eating experiences for consumers.

To improve tenderness, breeders select animals with higher numbers of stars for tenderness, with eight stars being the highest number attainable. By choosing breeding animals with five to eight

"What is grass-fed?"

Consumers are attracted to grass-fed beef because of the perceived health benefits, according to the American Grassfed Association (AGA). Research shows that grass-fed beef is relatively high in Omega-3 fatty acids, Vitamin E and conjugated linoleic acid (CLA.) Health conscious consumers consider these very positive attributes that are known to be beneficial to human health.

As grass-fed markets gain momentum, the U.S. Department of Agriculture (USDA) has recently established standards for grass-fed beef marketing claims (see box). According to USDA, animals marketed as grass-fed must have diets made up of forage except for milk consumed prior to weaning. However, USDA's definition of forage allows for diets to include corn silage and also states that grass-fed animals must have access to pastures during the growing season, but doesn't require all feed to be from pasture or hay.

Many grass-fed producers say the USDA standards for grass-fed beef leave loopholes for cattle to spend time in confined feeding areas and to be fed silage. Confined feeding isn't what consumers expect when they pay premium prices for grass-fed beef.

"As grass-fed producers, we are very disappointed in the USDA definition for grass-fed beef," says Will Harris, Bluffton, Ga. "We think the USDA definition opens the gate for cattle to be placed in feedlots and fed rations based on corn silage. I spend a lot of time with consumers, and folks buying grass-fed beef are buying a holistic package that includes calves raised in pastures and treated with dignity and respect through harvest."

Harris is on the board of the AGA, which sets its own standards for grass-fed beef. According to AGA, grass-fed products from ruminants (cattle, bison, goats and sheep) must come from animals that have eaten nothing but their mother's milk and fresh grass or grass-type hay from birth to harvest. AGA also prohibits hormones or non-therapeutic antibiotics.

AGA has developed its own certification program to define and identify grass-fed beef. Here are the four basic requirements:

- ►Total forage diet;
- ►No confinement;
- ►No antibiotics; and
- ►No added hormones.

USDA standards for grass-fed beef

Grass and forage shall be the feed source consumed for the lifetime of the ruminant animal, with the exception of milk consumed prior to weaning. The diet shall be derived solely from forage consisting of grass (annual and perennial), forbs (e.g., legumes, Brassica), browse, or cereal-grain crops in the vegetative (pre-grain) state. Animals cannot be fed grain or grain byproducts and must have continuous access to pasture during the growing season. Hay, haylage, balage, silage, crop residue without grain, and other roughage sources may also be included as acceptable feed sources. Routine mineral and vitamin supplementation may also be included in the feeding regimen. If incidental supplementation occurs due to inadvertent exposure to non-forage feedstuffs or to ensure the animal's well-being at all times during adverse environmental or physical conditions, the producer must fully document (e.g., receipts, ingredients and tear tags) the supplementation that occurs, including the amount, the frequency, and the supplements provided.

stars and avoiding 0 star animals, producers may steadily improve the genetics for tenderness in their herds. On the other hand, heifers sired by bulls with fewer than five stars may produce calves with poor genes for tenderness.

With its mild climate and long grazing season, North Carolina ranches can produce a wide variety of forages to finish cattle on grass. McPherson's pastures are primarily fescue and clover. But he also has stands of Max Q fungus-free fescue, Lakota prairie bromegrass, and Red River crabgrass. McPherson plants pearl millet for improved summer grazing and rye for high-quality winter forage. The Southern cattleman has been pleasantly surprised that Lakota bromegrass performs well in central North Carolina and provides a long grazing period.

Should consumer tastes change and the popularity of grass-fed beef wane, McPherson and Kiser aren't worried about the direction they've taken their genetics and forage programs.

"Even if we stop selling cattle for grass-fed beef, we'll be left with a herd of good Angus cows that are very efficient at producing beef on forage. Since we don't have access to cheap grain in this area, these efficient cows will work well for us, and their bull calves will work well for our customers," McPherson says.

What's old is new

Will Harris raises cattle on Georgia land his great-grandfather settled in 1866. To celebrate 140 years on the farm, Harris returned to producing beef the way his grandfather did — grass-fed.

"I produce beef for a niche market of sophisticated consumers who have educated themselves on where beef comes from and have made a decision they want to buy grass-fed beef. This is a small market but it's growing," says Harris, who manages 650 crossbred cows on a 1,000-acre operation called White Oak Pastures near Bluffton, Ga.

While the cows are commercial crossbreds, 28 of the 34 bulls are Angus. "I don't choose a certain breed of cattle; I choose a certain kind of cattle. The Angus breed offers a wide selection of genetics and the EPD data is very reliable," Harris says.

For the grass-fed market, the Georgia rancher selects bulls with frame scores of 3 to 4 and a high degree of masculinity. On the female side, Harris demands easy-fleshing cows with deep volume and a high level of femininity.

White Oak Pastures garnered a great deal of publicity this year when Harris opened a $2 million harvest facility on his farm to process grass-fed beef. Whole Foods, Publix and upscale restaurants in the Atlanta area are primary customers for White Oak Pastures beef. Whole Foods loaned the cattleman $450,000 to help build the processing plant for grass-fed beef.

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— Steve McPherson

Harris now has nine associate producers raising grass-fed cattle under his guidance. These producers have slightly different calving seasons, so the calves finish throughout the year. Harris travels frequently to meet with customers and to broaden the market for grass-fed beef.

While demand for grass-fed beef is growing, Harris is cautiously optimistic due to the struggling economy and lack of purchasing power for many consumers. Grass-fed beef is a premium product and Whole Foods usually charges more for grass-fed steaks than for grain-fed "natural" steaks.

Grassroots results

When it comes to real-world research and records on grass-fed beef, it's hard to beat the team at Hedgeapple Farm near Frederick, Md. The farm has been selling grass-fed beef since 2002, and Executive Director Scott Barao is a former Maryland Extension beef specialist and a proponent of marketing grass-fed beef directly to consumers.

"Angus is the best option to produce cattle for a grass-fed beef program," Barao says. "There are certain families within the Angus breed that are well-suited for a grass-fed system."

Barao started with Wye Angus bloodlines and then selected genetics for moderate-framed, deep-bodied and easy-fleshing animals. He wants cows from 1,200 to 1,250 pounds (lb.) that produce early-maturing calves weighing 1,050 lb. (heifers) to 1,150 lb. (steers) at 18 to 19 months of age. The key is to keep the calves gaining 2.2 lb. per day, he notes.

Orchard grass, red clover, fescue and bluegrass are the predominant forages. The cattle rotate through paddocks in a management-intensive grazing (MiG) system with the growing calves having access to the highest-quality forages. The Hedgeapple crew harvests excess forage as high-moisture baleage and dry hay to feed during the months when forage isn't available in pastures.

Because of its location, near the affluent residential areas near Washington, D.C., Hedgeapple Farm is well-situated to direct-market an upscale product to highly selective consumers. After years of receiving customer feedback at Hedgeapple Farm's retail beef market, here's how Barao describes grass-fed consumers: "The demographic that buys our grass-fed beef is looking for a portion size of 8 to 10 ounces. The ideal animal produces a ribeye size of 10.5 to 11.5 square inches sliced 1.5 inches thick."

The retired beef specialist says it's a myth that grass-fed cattle don't marble. Hedgeapple's cattle grade 70% Choice and 20% Select-plus. These Angus cattle are bred to be particularly adept at marbling on forage, and Barao is increasing his supply of grass-fed beef by

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providing cows to neighboring producers with arrangements to obtain their Angus-sired calves.

For recordkeeping purposes, Barao gives Hedgeapple's grazing operation $1,200 credit for a 1,100-lb. animal (600-lb. carcass) sold to the retail outlet. The farm averages a net return after processing of $2,860 per carcass through the on-site retail store. Barao emphasizes that most of the customers attracted to grass-fed beef are not switching from purchases of conventional beef.

"I guarantee you the vast majority of our customers had previously taken beef out of their diets. They don't want beef from grain-fed animals or animals that have received hormone implants or antibiotics. The locally produced aspect is huge with these consumers. The advantages associated with grass-fed beef drive them in here the first time, and good eating experiences bring them back as repeat customers," Barao says.

The nitty gritty on grass-fed

Don't let the high prices consumers pay for grass-fed beef lure you into thinking this is a get-rich-quick enterprise. Iowa State University (ISU) did an extensive economic study comparing natural grass-fed beef with conventional grain-fed beef, and the budget shows a loss of $173 per head for grass-fed compared to a profit of $67 per head for grain-fed animals. The budget is based on Upper Midwest production systems, and the conventional grain-fed budget assumes a producer retains ownership of the cattle through a feedlot.

Several factors make grass-fed beef expensive to produce. In the first place, you have to keep grass-fed calves more than a year after weaning to reach a finishing point, and the final liveweight will average 1,029 lb. compared to an average of 1,401 lb. for grain-fed animals.

But the big difference is feed costs. In the ISU budget, grass-fed beef had a total feed cost of $664 per head compared to $294 per head for a grain-fed animal.

"This budget is based on a calf from a spring-calving cow in the Upper Midwest. In this system, a producer would wean lightweight calves in fall and carry them through winter on high-quality hay. Without feeding grain, the calves are going to gain less than a pound per day during winter, and after 150 days you'll only have a 600-pound calf. It also takes a lot of land to produce the necessary forage and hay," ISU livestock economist John Lawrence says.

However, if cattle can graze almost year-round as they can in some areas and producers figure out less expensive ways of growing forages, the gross income from a grass-fed animal is $104 per head higher than for a grain-fed animal. Here's a look at the budget:

	Natural grass-fed	Conventional grass-fed
Feeder weight, lb.	425	475
Feeder cost	$567	$614
Days postweaning	366	303
Postweaning ADG, lb.	1.65	3.06
Final weight, lb.	1,029	1,401
Dressing percent	61%	63%
Carcass weight, lb.	623	876
Expected price (carcass), $/lb.	$1.94	$1.26
Gross income	$1,207	$1,103
Total feed costs	$664	$294
Interest on feeder	$46	$41
Interest on feed	$27	$10
Total variable costs	$1,357	$1,017
Fixed costs (machinery/equipment)	$23	$19
Total all costs	$1,380	$1,036
Profit per head	-$173	$ 67
Price/lb. carcass needed to cover total costs	$2.22	$1.18

"Our take-away message is that producers need to match their production systems to their resources and develop marketing plans to capture as much value as possible from the systems. In an area where there are many consumers willing to pay for a specialty product and there aren't many cattle locally to meet that demand, grass-fed beef could be profitable," Lawrence says.

To read the full ISU economic study see: *www.iowabeefcenter.org/content/Organic_Natural_Grass_Fed_Beef_2006.pdf*.