

See the Big Picture

Heifer development programs provide short-bred heifers and long-term dividends.

Story & photos by
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When commercial bred heifers zip through the ring bringing more than \$1,000/head, sometimes it's hard to remember Georgia's heifer development program is a long-term educational experience. But educate it does.

"The data from the HERD program has helped me identify characteristics we need to work on to produce better replacement heifers," Ben Lee says. The young cattleman is currently a graduate student at Auburn University but takes an active role in his family's Bulloch County, Ga., commercial operation.

HERD stands for "Heifer Evaluation and Reproductive Development." University of Georgia (UGA) researchers and technicians, as well as a team of county agents, give the program's consignors their money's worth (approximately \$250/head) in both the evaluation and development departments.

Consignors deliver their weaned, vaccinated and preconditioned heifers in the fall to university facilities in either Irwinville in south Georgia or Calhoun in northwest Georgia. Along with the heifers, they bring information, including each heifer's sire and dam, birth date, and birth weight.

Data collection

On arrival, university workers give the heifers booster vaccinations and deworm them, then start taking notes. They record their weight and actual frame score, calculate their estimated mature weight from their frame score, and calculate a target weight for breeding (at least 65% of their estimated mature weight).

U.S. Department of Agriculture (USDA) graders assign a muscle score and a value per hundredweight (cwt.), an estimate of what they are worth the week of delivery. A disposition score also is taken every time the heifers go through the chute.

And that's just for starters.

Heifers are put on a high-roughage growing ration of free-choice Bermuda grass or fescue hay supplemented with whole cottonseed and citrus pulp. By the time the heifers go through a spring HERD sale or go back to their home farms, they

will have a recorded rate of gain, an adjusted pelvic measurement, a reproductive-tract maturity score, the predicted maximum unassisted birth weight they can handle, and a ribeye area (REA) measurement.

"We measure everything we know to measure," comments UGA animal scientist Robert Stewart.

They also have a known breeding status. Heifers are synchronized and bred via artificial insemination (AI) to an Angus calving-ease sire, then pasture-exposed to a cleanup bull for 44 days. Open heifers aren't allowed to sell.

A baseline

In both the fall of 1999 and the fall of 2000, Lee delivered 10 Angus-based heifers to the test center in Irwinville, then sold them in the spring sale. Besides the check, Lee came home with new selection criteria.

"Now we've got a baseline to go by," he reports. "Before, I was only evaluating replacement females on appearance and structure. The only numbers I had were the EPDs (expected progeny differences) on the bulls."

With help from Bulloch County Extension agent Jim Collins, Lee is setting targets specifically for his operation.

"I'm now choosing a smaller frame size so I won't have as big a cow to feed," Lee says. "On the limited grass I have, I want a 1,100-pound cow that will wean the same size calf as a 1,300- to 1,400-pound cow."

He is also taking a close look at performance. While the heifers weren't pushed, Lee still was disappointed in the lower gains of a couple of his heifers. He's tracked down their sires and dams. He isn't planning on culling them immediately because of high calf prices, but he says, "I have a better idea of which sires and dams I want to save replacement heifers out of."

Lessons in marketing

Lee also learned lessons in marketing. "The sale certainly rewarded Angus-based cattle," he says.

For Collins, who participates in the HERD program as a consignors, as well as a county agent, the program emphasizes the need to continue to select for early puberty in his Angus heifers.

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11 months, but for sure I want them to catch at 14 months or before. There are cattle that will do that and grow," he states.

Like Lee, he is also spotting market trends. "People who work on their cattle through the Georgia Beef Challenge (the state feedout trial) and similar programs get paid for it."

Because of those healthy prices, Collins says, "the biggest take-home message for me and the producers is that these heifers are a valuable resource. We're learning to manage them as a resource, not an afterthought."

Not alone

That is a message Bourbon County, Ky., producers already have learned from their heifer development program. This fall will mark their 11th annual Elite Heifer® sale.

Bourbon County Extension agent

Glenn Mackie says more than 6,000 heifers have brought their consignors more than \$4.5 million. Still, like the HERD program, he says the Elite Heifer program is about far more than just premium prices for replacement heifers.

"It is an eye-opening experience for producers," Mackie relates. "When new producers get involved in heifer development programs with strict qualifications, only about 50% of their heifers qualify. A lot of folks new to it think their cattle are better than that."

He says that, even with veteran producers, 60% acceptance is usually tops. The heifers fail to qualify because of pelvic measurements, target weights, failure to breed or something as small as a pinkeye scar.

He says a few producers now apply the same strict standards and techniques to the heifers they are keeping for their own herds.

Walter Major is one of them. He and his wife, Evidian, develop 30-40 heifers a year for the Elite Heifer program, along with another 30-40 head for replacements in their own Angus-Charolais-Hereford herd near Lawrenceburg, Ky. Unlike the Georgia program, the Kentucky producers develop the heifers on their home farms, then take them to a central location for sale.

Synchronization

"The heat synchronization program does work," Major says. "It is important."

In the Elite Heifer program, producers use a heat synchronization system developed by animal scientist Dave Patterson

while he was at the University of Kentucky. Now at the University of Missouri-Columbia, he has helped start a similar heifer development program there.

In the synchronization program, the Majors feed their heifers a supplement containing MGA® (melengestrol acetate) for 14 days. Nineteen days after they stop feeding MGA, they give the heifers a prostaglandin (PGF) injection. In three days, most of the heifers come into heat. They AI heifers showing heat to a calving-ease Angus bull. The heifers that don't show heat are bred AI 80 hours after the PGF injection.

"We breed 100% of them AI and will get 50% to 55% of the heifers settled AI," Major says.

After they finish the round of AI, they turn in their bulls for natural service. During their three-day AI season and the first heat following AI, 80% of their heifers conceive.

"The synchronization program gets the heifers cycling earlier, the heifers are easier to watch at calving, and the calves are more uniform," Major comments.

Reproductive efficiency

Producers aren't the only ones who learn from the heifer development programs. UGA veterinarian Mel Pence worked with a similar program in Iowa before he moved to Georgia and became involved with the HERD program.

He says the Georgia experience reaffirmed an important point he already had



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learned in Iowa. "We can evaluate reproductive efficiency and select for it by using measures like target weights and reproductive-tract scores," he says.

With palpation, veterinarians use reproductive-tract maturity scores (RTMS), on a scale of 1 to 5, to score the size and tone of the heifers' uterine horns. Heifers with an RTMS of 1 have small [20 millimeter (mm) in diameter or less] uterine horns with no tone, while heifers with a score of 5 have erect horns larger than 30 mm in diameter with good tone.

After taking RTMS on more than 600 HERD heifers, the numbers back up Pence's statement. None of the heifers with an RTMS of 1 got pregnant during the early AI season. Of the heifers with an RTMS of 2, 55% got pregnant by AI, while 74% of the heifers with an RTMS of 3 conceived early by AI. And 78% of both the RTMS 4 and 5 heifers were safe in calf after the AI season.

Pence says the numbers quickly translate into dollars, whether a producer uses AI or natural service. "For each 21-day heat cycle a cow is late calving, it costs the producer about 40 pounds of calf."

It is usable information like this that makes Lee plan to enroll more of his family's heifers in the HERD program. "Now we're able to see the big picture," he says.



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