

Data-Driven Design

Producers share their perspectives on what information is important to collect and how they've put it to work to design their ideal animals.

BY JANET MAYER

Streamlining beef operations to assure a quality product and to sustain profitability should be an important goal for all breeders — purebred and commercial. To achieve this goal, many beef producers are scrambling to collect information on their cattle as the industry swings toward information-based production systems.

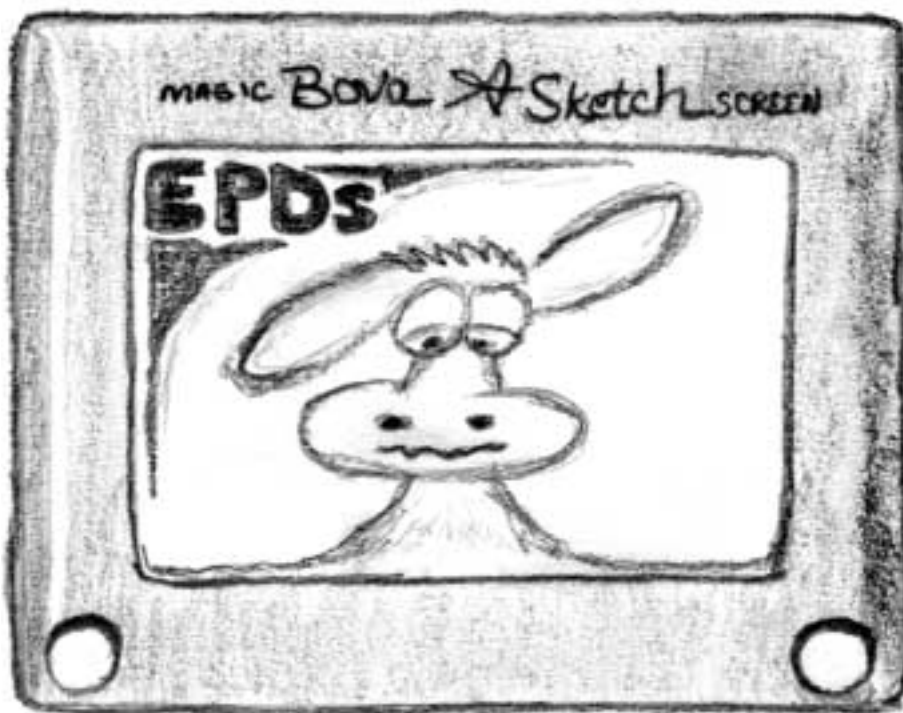
Programs like Angus Herd Improvement Records (AHIR), Angus Information Management Software (AIMS), Cow Herd Appraisal Performance Software (CHAPS), the American Angus Association Centralized Ultrasound Processing (AAACUP), Certified Angus Beef LLC (CAB) Feedlot Licensing Program (FLP) and the Angus Beef Record Service (BRS) are valuable tools that provide breeders insight into the type of cattle they are producing.

Bill Hodge, Owen Jones and S.R. Evans each have taken advantage of information feedback in making genetic changes to achieve a higher-quality end product.

Bill Hodge
Hodge Cattle Co.
Pine Mountain, Ga.

In his work as Carroll County Extension coordinator for the University of Georgia and as a breeder of registered Angus cattle, Bill Hodge constantly promotes cow herd data as the most important component of a breeding program.

"I have collected cow herd data on my own herd, gathering information from the feedlot as well as from the packer, and I also evaluated a number of bulls for a period of 10 years," Hodge says. "It has been my



experience and my opinion that improvement in cattle comes mostly through the maternal side. A lot of the commercial breeders in my area have also told me they find more predictability in cow families than with the sires."

Hodge emphasizes reproductive regularity and longevity as being important traits and advises breeders to choose sires with longevity in their background — meaning those whose dams lived for 12-15 years and produced calves on a regular basis.

"You don't find too many of those," he says. "It seems to be far easier to find bulls with plus-80 yearling EPDs (expected progeny differences) than to find those bulls out of a dam with longevity and reproductive regularity."

Currently doing livestock and forage research for the Extension service in several Georgia counties, Hodge also works with a group of commercial cattlemen, advising and coordinating their efforts to obtain information on their cattle and to market them efficiently. Since the group is made up of small-scale producers, Hodge coordinates the pooling of the cattle into truckload lots.

The cattle are shipped to Iowa where they are channeled into seven small feedlots within the Precision Beef Alliance.

After the cattle are slaughtered, many of the retail cuts are shipped back to Georgia in 1,500-pound (lb.) lots and marketed directly to consumers in family-size packs. The 35- to 55-lb. packages contain a variety of cuts, some precooked product and recipes. At this point, demand is outrunning the supply. Hodge says this system gives breeders the opportunity to double the profit on \$500 feeder calves while allowing breeders to learn what type of product is acceptable to the consumer.

Retaining ownership gave one commercial Angus breeder in Hodge's area the opportunity to gain information from the feedlot and the packer after he had failed in attempts to collect the data on his own. On Hodge's advice, the breeder's cattle were fed through the Tri-County Steer Carcass Futurity under the direction of Darrell Busby, Extension livestock field specialist in southwest Iowa.

The cattle performed at a profitable margin in the feedlot and were exceptional

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in the cooler. The first group of 28 Angus steers graded 96% Choice, with a *Certified Angus Beef*[™] (CAB[®]) acceptance rate of 55%. In later groups, the CAB acceptance rates have increased to 70%-80%.

Hodge says this was achieved on a total-forage environment with 1,000-lb. cows, which are small by today's standards but work in his part of the country.

"The breeder can attribute the carcass merit of his cattle to the fact that his herd of 300 cows had never been outcrossed, and selection was done only by maternal efficiency," Hodge says. "This proves there apparently is a correlation between selection for maternal efficiency and carcass merit in this herd.

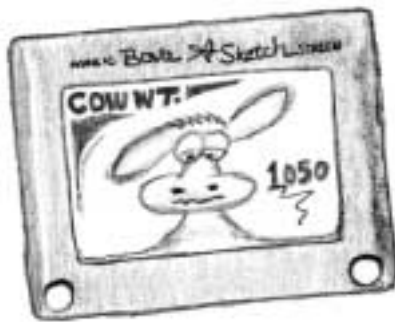
"Sometimes breeders lose sight of the fact that the cow needs to fit the environment she lives in," he continues. "For our environment here on this part of the East Coast, our most efficient cow should weigh only 1,050 to 1,100 pounds and be able to survive in good condition on forage.

"My philosophy for breeding cattle is pretty simple. You first of all have got to identify your end-product users, then back through the system and produce that product as efficiently as you can in your environment. What we have learned in our herd and working with all of the other folks in our area is, if we are going to maintain these cattle as economically as we can in a forage-based management scheme, then you sometimes have to do things just a little differently than other cattle producers in other locations."

**Owen Jones
Penhrose Farms
Britton, S.D.**

In charge of the operation's cattle herd, Owen Jones credits the collection of data through progeny testing, the CHAPS program and the operation's finishing of its own cattle with benefiting his breeding program.

Proof of that comes with data from CAB that shows one lot of 54 steers fed at the farm in 1999 achieved a 69% CAB



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acceptance rate with an average Yield Grade (YG) of 3.2. Jones, who was named the 1996 CAB commercial producer of the year, says the percentage is not always that high, but it is usually at least 50%.

Incorporated and managed by eight members of the Jones family, the 9,000-acre farm calves about 700 commercial Angus

cows each year, grows crops, and maintains a feedlot to feed their own calves and feeder calves purchased at auction, annually finishing a total of 1,500 head.

Jones has worked with cattle for most of his 62 years, but he did not develop a keen interest in the cow herd until about 1960.

"About that time, I began using several bulls from Pioneer Beef Genetics, and in 1965 I started to use artificial insemination (AI), using a lot of Angus bulls and a variety of other breeds, mostly exotics. In 1985 we decided to breed just the Angus cattle because I wanted to get rid of the variation in cattle and to develop a maternal herd I would be proud to leave behind. We also began carcass testing on our own in order to get a more consistent product, looking mostly at ribeye size and yield grade."

About 13 years ago, the operation was offered the opportunity to progeny test for 21st Century Genetics. At first, Jones says, they often had difficulty gathering the carcass information, but

things progressively have gotten better, as have the prices for the operation's Angus cattle.

Until about four years ago, the operation was netting fewer dollars on their good Angus cattle than on the cattle put through the regular sale barn. Although it was costing the operation to gather information about their cattle, Jones felt it was something that needed to be done and feels the end result has been worthwhile because it has put the operation in a position to have a mated breeding program.

"In the past, we have not done that because of doing the progeny testing," he explains. "We breed 10 randomly chosen cows to one bull, and the next 10 cows to come through the chute are bred to another bull. In spite of doing breeding in this manner, about 50% of our cattle make CAB. Just think what I could do if I [were] breeding our cows to proven sires."

Although Jones is interested in carcass traits, he also believes it's important to blend them with maternal traits. Females are selected for moderate size, good udders, easy fleshing and high performance after weaning. Meticulous records are kept on all females in the herd using the CHAPS program, a cow-herd-management program developed by North Dakota State University. Jones says it is an aid in selection

decisions to compare ratios by using the ancestry on the dam's side.

"We feel information on our cow herd is extremely important, and if we go to a mated breeding program, for



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— **OWEN JONES**

maternal and carcass values, I look for about 90% of the offspring of our cows to grade CAB. But to do this, I need to have the information on what a dam's offspring has done. At the present time, we have nine years of carcass information on file with the Association, but it is not on record where it is useable to us."

Jones's advice to other cattle breeders who do not gather information on their cattle: "If we want to get consumption of the end product to go up, then we have to get a more consistent product. All breeders need to know what type of product they are producing by keeping track of their calves until the end, then with that information design their breeding program to fit a program like CAB, Laura's Lean Beef or Coleman's Natural Beef."

S.R. Evans Jr. Evans Angus Farm Greenwood, Miss.

For S.R. Evans Jr., gathering information on his herd of Angus cattle is second nature. He's been doing it for more than 15 years. He believes that breeders in the purebred business for the long haul need all the information possible to understand what type of cattle they are producing.

"I have been serious about the cow business since I got into it almost 30 years ago," the obstetrician explains. "This whole proposition has got to make money, and to do that, a cattle operation still has to be in the parameter of having a sellable product."

In order to stick with his objectives, Evans strives to keep females that can survive and produce well in the farm's forage-based system. Five hundred registered and commercial Angus females are kept on the 1,600-acre farm, which was started as a dairy operation in 1948 by Evans's father. Commercial beef cattle were added in the late 1950s; registered Angus were introduced in 1971.

For the last several years, Evans has expanded the operation, purchasing additional acreage and liquidating the commercial cattle while increasing the number of purebred Angus by retaining heifers. The remaining commercial cows are used as recipients for embryo transfer (ET).

The operation annually backgrounds 700-1,000 calves on grass. The group consists of bulls from the twice-a-year calving that are steered after failing to meet the operation's requirements and additional steers and heifers bought at sales.

"I think data I have collected on my herd has made a big difference," Evans says. "They have gotten better, and I look for continued improvement. Back when we were just doing things by eye without cattle data, we were just floundering around."

"We probably made the most progress through ET when we identified some cows based on EPDs and started multiplying them. We got our first offspring from those cows in 1994, and now we have daughters of those cows in production, and that has given us a better base to build from."

Evans relies heavily on the AIMS program for information feedback.

"If you are a registered breeder and don't have the program, or if you have it and don't use it to its fullest, you are making a mistake," he says. "Too much time and effort is involved in AI to breed with unproven bulls. This program generates everything we need, including the list of AI progeny-proven bulls that have solid data across the board."

"AIMS is also good for finding the EPDs on your calf crop. Punch a key, and it prints it up; it is very quick and simple. I can see expected EPDs on our bull calves from the time the calves are about 3 months old. This information backs me up, guiding me in the direction I want to go."

In addition to using AIMS, Evans has participated in the AHIR program and also has been collecting carcass data for more than 15 years, first from the packers, then from CAB. He much prefers that CAB collect the data, as he often had difficulty collecting the information on his own.

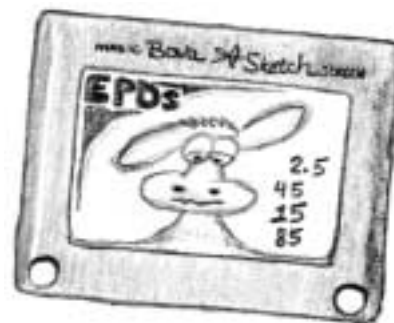
Evans believes improvement comes from both the bull and the females. "I have the EPDs, carcass data and scrotal circumference on all of my cows, and I use this information to breed them. Punch that old computer key to generate the list of what you have got, to let you know where you should go. You build on those females, and that is when you start to make progress."

"Right now, I am breeding my heifers to end up with a certain carcass EPD. Maybe that isn't the thing to do, but at least I know what I've got, and I will use the data on certain bulls to achieve my goal."

Since the operation is forage-based, females are supplemented with some corn and cottonseed prior to breeding them AI. About two-thirds of the fall cattle are bred AI, with the other one-third bred by natural service. In the spring that is reversed. Heifers are synchronized, and bulls from the

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— S.R. EVANS



operation's breeding program are used for the natural-service group and cleanup.

It is Evan's belief that as yearling weight increases, there is an increase in birth weight. When choosing bulls, he spends a considerable amount of time looking for sires that will keep birth weight EPDs at 3 or less, but he avoids bulls with negative values because he finds many of them do not have good scrotal circumference.

He tries to keep the milk EPDs at 15 or greater while still trying to go as high as possible on yearling EPDs. For satisfactory carcass specifications, he is shooting for progeny marbling EPDs better than 0.1 and as much muscling as he can get.

This spring, Evans collected ultrasound data on bulls and heifers for the first time, but he feels it was collected too early. "The data was OK, but I think we need to collect it a different way since we are forage-based. We look at an awful lot of carcass information, and we want that information to support the ultrasound information or vice versa."

"I advise anyone breeding cattle to learn about your end product. Overall, I am surprised at the amount of good cattle people who know very little about the business side of feedlots and how the cattle are being finished. In the long run, they are probably losing a lot of money."

