

# DNA coming to a sale catalog near you

BY SCARLETT HAGINS

Bull buyers may see something new in sale catalogs this season. Along with EPDs and ultrasound measurements, some producers sitting in the stands will have access to DNA characteristics for a variety of traits.

"DNA technology is taking selection to the next level, helping producers make genetic progress faster," said IGENITY Technical Services Director Kevin DeHaan.

IGENITY, a division of Merial, has been in the DNA business for six years. According to DeHaan, DNA analysis provides information on economically important traits not necessarily covered by EPDs. It also gives producers a more complete picture of potential performance earlier in the animal's life. DNA samples can be taken from newborn calves, but it has proven most convenient for producers at branding or weaning.

The comprehensive IGENITY Profile consists of multiple-marker DNA analysis for traits including tenderness, fat thickness, ribeye area, yield grade, hot carcass weight, quality grade, marbling, coat color, breed-specific horned/poled and parentage confirmation in multiple-sire settings. In addition, it includes the results of a separate diagnostic test identifying cattle persistently infected with bovine viral diarrhea.

"In the past, valuable traits such as ribeye area, marbling and tenderness have been difficult, if not impossible, to measure before processing," DeHaan said. "Now, with the power of DNA profiling, producers have the distinct advantage of knowing this information early."

Harry Moser, a seedstock producer from Wheaton, understands the payoffs

of profiling. He said the genetic data correlates well with his EPD and ultrasound numbers, which aids in the selection process. Moser initially began using DNA technology to determine coat color, but now is using the entire profile to better evaluate his cattle and provide more data to bull customers to help them make bet-



*IGENITY uses a tissue collection ear tag to retrieve DNA samples.*

ter-informed purchasing decisions.

"It's nice to be able to acquire all this data with one tissue sample," said Moser. "We're interested in gaining as much information as we can to select and breed for the kind of cattle that will best benefit our herd and those of our customers."

Moser Ranch utilizes the IGENITY tissue collection ear tag, which takes a tissue sample when applied. Hair samples also can be used. After analysis, the IGENITY Profile incorporates a scoring system for each trait using a scale of 1 to 10. The higher the score, the more potential for the given trait to be expressed. For example, the higher the score for ribeye area, the more potential the animal has for a larger ribeye. However, DeHaan said, bigger is not always better. A higher number just means the animal has the potential for more of that trait. Producers

should select scores based on their herd and the goal of the operation.

In addition to breeding management, DNA profiling can aid in decision making further down the production chain. For example, a producer may choose to retain ownership of calves scoring high for carcass composition traits, such as yield grade and ribeye area.

"Passing profile results on to buyers allows the feeder to sort calves by potential, which means gained efficiencies and reduced risk when selling on a grid," said DeHaan.

Feed efficiency is another area where genetic profiling is making strides. Higher feed costs are causing producers to look for genetic lines that provide feed-efficient animals. Bovigen, LLC, has addressed this need through a DNA test that can identify an animal's genetic ability to efficiently convert feed. According to Bovigen CEO Victor Castellon, producers can use the GeneSTAR Feed Efficiency test to identify up to a \$50 difference in feeding costs when the ration price is \$165/ton. For example, an animal with a feed efficiency of -3.0 will eat 3 lbs. less per day than an animal that rates zero. Over a 150-day feeding period, that animal will cost \$37 less to feed without sacrificing growth or carcass quality.

Regardless of industry segment, the use of DNA profiling reduces the wait-and-see factor. This technology provides producers the chance to make informed decisions early in a calf's life and reap the benefits of tailoring management plans.

"With this technology, we can measure traits affordably, which allows us to select for those traits, ultimately producing a more consistent product," said Moser. **ks**