

Pay Weight

Mature cow weight, body condition and size are keys to a profitable cow herd in its given environment.

by *Corinne Patterson*

A cow's weight has a lot to do with her reproductive efficiency and her ability to live and thrive in the environment provided to her. Central Kansas is a favorable setting for raising Angus cattle for Dick and Shelly Janssen. Their cows have good grass — spring, summer and fall — and the cows are expected to be efficient producers by weaning calves that are a certain percentage of their individual body weights.



Body condition scores must be taken with weights.

"It's efficiency," Shelly says. "That's what we are all about — isn't it? We've got to be able to do more for less, and so you have got to have the most efficient cows out there."

The Janssens' records on their Green Garden Angus herd near Ellsworth are proof that mature cow data plays an important role in the economics of their operation.

"We've observed cow weights over the years," Dick says. "We've noticed some big cows do a very poor job in our environment, so we have used that in a selection process to keep mature size and economy of production in line."

Data collection

Mature weights, heights and body condition scores (BCSs) were first collected by the American Angus Association in fall 1988. Each of the measurements is needed to compute the mature size expected progeny differences (EPDs) that the Association provides. In the past, this data set had been limited by the number of producers who sent measurements in and by the model used in genetic evaluation.

The Association has reevaluated mature cow data and has taken mature size EPDs to the next level to provide producers with



Weigh cows within 30 days of weaning their calves.

more valuable information in return for the investment of taking measurements on their herds.

"In the previous runs you had a very limited data set with few sires evaluated, and you weren't able to capture the value of repeated records on females throughout their lifetimes," Sally Northcutt, Association genetic research director, points out of mature size EPDs reported in previous *Sire Evaluation Reports*. But the formula the Association has developed, which will debut in the spring 2005 report, will take into account repeated records, beginning with an animal's own weight in a true multi-trait animal model formula, much like weaning and yearling EPDs are calculated. The newly evolved mature size EPDs incorporate the cow's projected weight and height at 6 years of age, and account for her rate of maturity.

"Reproduction is really important to the cow-calf operation. And one of the factors associated with efficient reproduction is a cow size that is matched to the production environment and the feed resources," she continues. "The more breeders know about the genetics in their cow herds in terms of mature size, the better they can plan for that efficient production unit."

That's never been a secret to the Janssens, who have collected cow weights and BCSs for 30 years. Shelly says they rely on the data the Association returns from their cow herd records to make management and culling decisions.

"[The cow is] the easiest animal to weigh," Dick says. "You get cows started down a chute and in the alley and on the scales — they just walk in there and stand."

The Janssens weigh cows twice a year.

How can your cow weights pay?

Weighing cows for calculating mature size expected progeny differences (EPDs) can be a simple process. But there are specific pieces to the puzzle that Angus breeders must provide to the American Angus Association for EPDs to be calculated, says Sally Northcutt, genetic research director.

For replacement females:

1. Collect yearling weight and hip height as usually done for the Angus Herd Improvement Record (AHIR) yearling report (between 320 and 440 days of age).
2. Each year, collect the cow's weight with a body condition score (BCS) within 30 days of weaning her calf. Measure and report the hip height at this time.

Northcutt says the trick is to weigh and to weigh often to get effective mature size data on your herd. But just because you miss a year recording weights, BCSs and heights, don't pass by the next opportunity.



Fall-calving cows are weighed in April, and spring-calving cows are weighed in September. They take BCSs with these weights. Shelly points out that it's important to record BCSs. In a drought year, cows may be in poorer condition than in years with high rainfall, which could equate to a 100- to 200-pound (lb.) difference.



It's important to be consistent in taking these measurements, whether it be weight, BCS or height.

Required information

"We've had a lot of producers collect the weights but not send us body condition scores or take hip-height measurements on cows," says Bill Bowman, vice president of information and data programs for the Association. "Those measurements, including body condition scores, are necessary to use any of that data in the genetic evaluation."

The mature cow data set will continue to evolve, Northcutt says. As breeders continue

to report more weights, BCSs and heights on cows, the information will be used in indexes that relate to cow production and efficiency in the future.

"You've got the commitment by the breeder to collect the information," Northcutt points out. "And now, with the new model, I think it's really going to evolve to

where Angus breeders are going to feel like they receive more information back from their investments in collecting the data."

Weighing cows to match their environments and knowing their production efficiency is key to a profitable operation, Dick says. "We just need to do it because economy of production has got to be connected somewhere to cow weight and cow size, and cost of production figures have got to be very important."



"Mature weight is one of the more valuable traits for which to have predictive EPDs because of the long-term impact it could have on your operation."

— Bill Bowman

