Hair-Coat Sheeding in Angus Cattle

continued from page 50

in the spring. However, there is variation in how quickly those animals shed that winter hair coat, and that is the focus of the research that we are doing."

The study, funded largely in part by the Angus Foundation, consists of the ranking of hair coats of Angus dams on a scale of 1 to 5. A score of "1" indicates a slick, summer coat. A "5" indicates a full winter coat (see proceedings and PowerPoint presentation available at www.BIFconference.com for a full description of the scoring system and pictures representing the various coat scores). This spring, Cassady and his team ranked nearly 7,000 cattle in Missouri, Texas, Virginia, North Carolina, South Carolina, Mississippi, Iowa, Tennessee, Alabama and Kentucky.

"Our objective in the initial experiment was to assess the amount of variation in the ability to shed the hair coat in Angus cattle and to determine the relationship between hair-coat shedding, pounds of calf weaned and body condition score," Cassady explained. "So, we're looking at the ability of the cow to shed her hair coat and then looking at the pounds of calf that she weaned."

FAR-REACHING EFFECTS

Hair shedding, or the lack thereof, can play a large role in heat stress. Heat stress can cause reduced conception rates, milk production, feed intakes and weight gain and can ultimately lead to death in cattle. When cattle are in hot environments, there are a number of factors that can reduce evaporative cooling, including humidity, wind speed, respiration rate and sweat gland activity.

Thus far, Cassady and his team have discovered that the later in the year a cow sheds her coat, the lower the adjusted 205-day weight of her calf. Cassady concluded that by selecting for hair-shedding traits in the Southeast, producers could increase calf weights.

"About the end of May is when folks in the Southeast would want to put shedding scores on their cattle," he said. "We would expect there to be a response to selection because it's a moderately heritable trait and we would expect cows that slick off sooner to wean heavier calves."

Despite months of research, there is no scientific answer at this point as to why hair shedding correlates with calf weight.

"Why does this happen? The only honest answer to that is, 'I don't know,'" Cassady admitted. "We can speculate a lot. We can go through a lot of scenarios, but the honest answer from a scientific standpoint is 'I don't know.'"

Diet, temperature, environment and genotype are also elements that may affect hair-coat shedding, Additionally, beyond weaning weight, there are additional traits that the research team believes may also correlate.

"We wouldn't be surprised to see an association between longevity and hair-coat shedding. Certainly it affects reproduction and gestation length. I know folks who are telling me that their cows are calving two weeks earlier than they should because of heat stress," Cassady said. "And what about puberty? We haven't done any work in heifers. All the cows we've looked at have produced a calf. But what happens in the developing heifer? We don't know."

As of early June, the goal of the team was to return to all of the same operations in 2012 to re-score the same cattle. By the September 2012 American Angus Association Board of Directors meeting, the team hopes to have its report on hair-coat shedding complete.

To listen to this presentation and to view the PowerPoint and the proceedings paper that accompanied it, visit the Newsroom at www.BIFconference.com.

BIF's 43rd Annual Research Symposium and Annual Meeting was hosted June 1-4 on campus at Montana State University, Bozeman, Mont.

Reprinted with permission from the September 2011 Angus Beef Bulletin

Hair-coat score 1

Hair-coat score 3

Hair-coat score 5

PHOTOS COURTESY NCSU