



PHOTO BY KATIE GAZDA

Evaluating Hair-coat Shedding

Research funded by the Angus Foundation shows that many factors relate to hair-coat shedding in Angus cows. These factors can give producers insight on how to evaluate hair-coat shedding and increase herd profit.

by *Katie Allen* for the Angus Foundation

As temperatures cool and leaves turn to rust, many cattle producers might not think about hair-coat shedding in their cow herd. Cows will soon begin to put on more hair for the winter months. However, evaluating hair coats can be ongoing year-round.

The Angus Foundation and American Angus Association funded a project, titled “Development and evaluation of hair shedding scores in Angus cattle,” from 2008 to 2010. The goal of the project was to create a reasonable method to assess hair-coat shedding in Angus cattle, to determine how much shedding variation exists among Angus cows, and to estimate its effects on the cow’s body condition score and the weaning weight of their calves.

In May and June for the past several years, researchers at Mississippi State University (MSU) and North Carolina State University (NC State) have evaluated hair-coat shedding within the cow herds at both universities, as well as at 18 different farms across the United States, including farms in states such as Texas, Missouri, Kentucky, Tennessee, Alabama, Mississippi, North Carolina, South Carolina and Virginia.



Trent Smith, associate professor of beef cattle breeding and genetics at MSU, and Joe Cassady, former associate professor of animal science at NCSU and current animal science department head at South Dakota State University, are the lead researchers on the project.

All times of the year

The research provides evidence that cows that shed late in the summer season wean lighter calves. Hair-coat shedding is a heritable trait and could be altered by selection. Producers within the southeastern and southern parts of the United States who have observed late hair-coat shedding within their herds can select for hair-coat shedding earlier in the season, mid- to late-May. This could result in higher weaning weights, making the cow herd more productive and profitable.

The cows evaluated thus far have had calves at side. Prior research in this area was done mostly on cows that were fall calvers,

and the calves would be weaned in the spring. Smith says if the cows were stressed in the spring for a period of time, and lack of shedding hair could lead to stress in a hot and humid climate, you could see a decrease in performance. In this case, it may be decreased nutrition provided for the calf, which could translate into lower weights at weaning.

Cassady says in their evaluations, calves from early-shedding cows weighed about 24 pounds (lb.) more at 205 days of age compared to calves from late-shedding cows.

He suggests producers make it a point to evaluate their cattle in the springtime while they are handling them, giving each a hair-coat shedding score.

“Our goal is for producers to be able to score cows as they are putting them out to pasture,” Cassady says.

Producers seeking to reduce heat stress in their herds should score their cows on hair-coat shedding using a 1-to-5 scale in late May. Cows with hair-coat shedding scores of 4 or 5, indicating little or no shedding, should be considered for culling.

In addition to evaluating hair coats in the late-spring to early-summer months, the

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researchers have been looking closer at how cows put hair back on in the fall and winter, and furthermore, if how early they begin to put hair back on in the fall relates to the timing of shedding the hair in the spring.

Every other month after Labor Day, researchers brought the cows in, clipped a small patch of hair behind the shoulder and evaluated the hair sample for weight, hair density and surface temperature — factors that may determine how insulating the coat will be in the winter.

Smith says cows that put hair on later in the fall seemed to shed quicker in the spring, but he points out that the cows under study for growing hair were part of a small group of cows at MSU. He says it is much easier to see the shedding vs. visibly watching the cows put hair back on.

A regional evaluation

Hair-coat shedding evaluations are useful to producers on a regional level.

“[Hair shedding] may not be something

to select for north of Missouri,” Smith says. “For southern areas it may be an important characteristic to consider when keep/cull decisions are made each year. Our goal is always to provide information for producers that will help them to be more profitable.”

Cassady says when evaluating research he asks himself three questions: What do I think? What do I know? What can I prove?

“I think hair-coat shedding is related to fescue,” he says.

Cassady thinks this because of differences in hair-coat shedding that he’s seen regionally, such as in cattle in Missouri vs. cattle in Texas.

The effect, he believes, is from endophyte-infested tall fescue.

“There is something going on with the fescue endophyte,” Cassidy says. “This is giving us some insight into cattle that are fescue-tolerant and fescue-susceptible.”

Looking specifically at the fescue issue, the researchers this time evaluated the calves for hair-coat shedding. In states where fescue endophyte plays a role, there was a more visible difference in 205-day weaning weights in calves, and that difference could be linked to the shedding scores.

“Those calves that were more susceptible to the fescue endophyte hung onto their

hair and gained less,” Cassidy says, “and the difference in pounds is startling.”

The calves were put into three groups that included fast shedding, medium shedding and slow shedding. When grazing endophyte-infested tall fescue, calves that shed slower gained 1.6 lb. per day during the 60-day postweaning period compared to faster-shedding calves, which gained 2.1 lb. per day.

The next step

Cassidy says they will continue to evaluate this fescue issue as it relates to hair-coat shedding. The researchers will also pay close

attention to if and how genetics play a role in the future.

Prolactin, a hormone that drives milk production, affects not only mammary development, but also may be linked to hair shedding. This might play a role in pounds of weaned calves, and the researchers will continue to look into this, as well.

Updated summaries of this project and all other Angus Foundation-funded research is available at www.angusfoundation.org.



Editor's Note: *Katie Allen was the director of marketing and public relations for the Angus Foundation.*