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Students honored

Each year BIF honors students with the Baker Scholarship Award, a $1,000 travel scholarship given in memory of Frank H. Baker. Applicants were asked to write an essay, and all submitted essays were judged by a panel of animal science faculty.

The late Frank H. Baker played a key leadership role in helping establish BIF in 1968. In his honor, each year since 1994 two deserving graduate students have been recognized with the Frank Baker Memorial Scholarship Award.

►From left, Cassady presents Frank Baker Memorial Scholarship awards to Megan Rolf, University of Missouri; and Brian Brigham, Colorado State University. Also pictured is Robert Williams, AICA.

This year's recipients of the Frank Baker scholarship are Megan Rolf of MU and Brian Brigham of CSU. Rolf's essay was entitled "Genomic Selection: Delivering on the Promise" and delved into the topic of incorporating genomic information into genetic selection tools. Brigham's essay, entitled "Selection Tools for Optimal Genetic and Economic Improvement," discussed the daunting task of using today's host of EPDs in genetic selection and the opportunity to simplify selection through the use of selection indices and decision support models.

Both essays are available in the conference proceedings and are posted to the awards page at *www.BIFconference.com.*

Hair-Coat Shedding in Angus Cattle

At the 2011 BIF symposium, Joe Cassady provided an update on the hair-coat shedding study being funded in large part by the Angus Foundation.

*by **Katie Gazda,** editorial intern*

Joe Cassady, associate professor of animal science at North Carolina State University (NCSU), kicked off the Live Animal, Carcass and End Point Committee's technical breakout June 2 with a summary of the hair-shedding study currently under way at NCSU in cooperation with Trent Smith and Jane Parish at Mississippi State University (MSU).

"Certainly there are differences in hair-coat type. There are short-haired cattle. There are long-haired cattle," he began. "Whether an animal is a short-haired animal or a long-haired animal, they are still going to take on a winter coat, and they are still going to shed that winter coat 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

The Wallace Scholarship Fund was established in 2008 by Select Sires, BIF, the Ohio Cattlemen's Association and fund contributors to honor the life of Roy Wallace and his contributions to beef cattle improvement by offering student scholarships. This year's winner of the Roy A. Wallace Scholarship Undergraduate Award was Cassandra Kniebel of K-State. Jessica Bussard, University of Kentucky, received the graduate award.

For more information about the award winners, visit the Awards page at *www.BIFconference.com,* Angus Productions Inc.'s event coverage site made possible through the cooperation of BIF and sponsorship of BioZyme Inc., through its significant gift to the Angus Foundation.

►**Above:** From left, BIF Executive Director Joe Cassady presents Roy A. Wallace Scholarship awards to Cassandra Kniebel, undergraduate, Kansas State University; and Jessica Bussard, graduate, University of Kentucky. Also pictured is Aaron Arnett of Select Sires.

►Hair-coat score 1

►Hair-coat score 3

►Hair-coat score 5

PHOTOS COURTESY NCSU

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."

"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."

— Joe Cassady

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.