MISSISSIPPI
BCIA
BEEF CATTLE IMPROVEMENT ASSOCIATION

- October 26-28 - Mississippi State University Artificial Insemination School, MSU

- October 26— Cattlemen's College, Brookhaven

- October 27 — Cattlemen's College, Batesville

- November 3—Fall BCIA Educational and Board Meeting, Raymond

- November 4—Fall BCIA Bull and Heifer Sale, Raymond

- November 9—BQA Training—Jones County

- December 1-3– Mississippi Beef Expo, Jackson

- December 7-8—Grass Fed Beef Conference, Purvis

Inside this issue:

Raymond is the Place to be on 11/4!

What a relief! The 2017 Fall Mississippi BCIA sale catalogs are hot off the press! Putting together a catalog in a short time frame is definitely a team effort—it has been all hands on deck. With State Fair, research projects, and county cattlemen meetings, it is always a happy day to see the catalogs go out.

If you haven't heard, the 2017 Fall BCIA Bull Sale will be held on Saturday November 4, 2017 at the

He sells as Lot 3!

Supreme Champion Bull
Kiani 291 Brilliance 474
10-15-2015 - Reg# 18436440

Hinds Community College Arena in Raymond. There are 4 breeds of bulls represented. Ethan Hodges and FWH Farms consigned Lim-Flex and Limousin bulls, Gary & Robbie Powell, Kiani Angus, Monogram Farm, Thames Angus Farm, and Vista Farms Cattle Co. LLC consigned Angus bulls. Finally, Punkin Ridge Herefords consigned 2 Hereford bulls. There are 27 bred heifers. From our very own MS BCIA President,

Danny Martin come 20 of his highly regarded M&M Farms heifers. The most recent Mississippian to be inducted into the BIF Commercial Producer Hall of Honor, Jacob Megehee, has consigned 6 elite Brangus type heifers. Once again, there will be a nice selection of open Angus heifers. Vista Farms from Alabama has consigned 20 extremely well-bred heifers. These heifers are ready to breed to the bull of your choice!

A special sale feature is Lot 3 consigned by Kiani Angus! This bull was recently named Supreme Champion bull at the Mississippi State Fair! If you have any questions about the cattle, give us a call! Spread the word and make sure to be in Raymond on 11/4!

Hair shedding scores: A tool to select heat tolerant cattle
By: Dr. Jared Decker & Dr. Jane Parish

Summary: Hair shedding scores are an easy and effective way to measure cattle's ability to cope with heat stress. In this fact sheet, learn the how, when, and why of hair shedding scores.

Responsible beef breeding requires matching cattle genetics to production environment. This is necessary for at least three reasons: Profitability, animal well-being and improved environmental impact.

Cattle that are well-suited to their environment are more profitable. Not only are well-adapted cattle more productive, but they also require fewer inputs and interventions. It is estimated that cattle suffering from fescue toxicosis and heat stress alone cost the beef industry over a billion dollars a year.

Cattle that are adapted to their environment suffer less stress. This improves the animal's well-being, which is important to cattle producers, beef consumers, and society. One of the greatest environmental challenges for beef producers in many parts of the U.S. is heat stress. This is especially true in the Southeast where relatively high humidity levels intensify hot temperatures in which cattle must cope to remain comfortable and productive.

Cattle whose genetics better match their environment are more effective at utilizing resources. Typical indications of cattle whose genetics do not match their environment are decreased calf weaning weights and/or failure to rebreed. Cattle whose genetics fit their production environment can increase productivity per unit of land. By efficiently using resources, cattle have a smaller impact on the environment.

Cattle raised in a profitable, socially-acceptable, and environmentally-favorable manner are sustainable. Therefore, selecting cattle that appropriately cope with heat stress is a major piece of sustainable beef production.

What tools are available to breed cattle adapted to heat stress?

One time-tested solution to produce cattle adapted to heat is to introduce *Bos indicus* ("eared" cattle e.g., Brahman, Nelore) or *Bos indicus* hybrid cattle (e.g., Brangus, Beefmaster, Santa Gertrudis, Braford, Simbrah) into a herd. Brahman-influenced cattle have advantages (anatomical and physiological) that make them better equipped to deal with heat stress. Decisions on whether or not, and to what extent, to utilize Brahman-influenced cattle in breeding programs must also consider performance levels and marketability of these cattle.

An alternative approach is to select *Bos taurus* cattle (British and Continental breeds) that are better adapted to heat stress. The amount of the winter coat shed by a set date during spring or summer is an effective predictor of a cow's ability to cope with heat stress. Earlier shedding can be an indication of improved productivity and adaptation to the production environment. Hair shedding may have a direct effect on heat loss or it is possibly an indicator of another process (e.g., nutrition or immune status). Regardless, calves from cows that shed their winter coat weigh more at weaning, with some estimates as large as 24-pounds (http://dx.doi.org/10.1016/j.livsci.2011.02.009). Cattle with enhanced ability to shed hair may also have improved thermoregulatory capacity and potentially tolerate fescue toxicosis better (http://dx.doi.org/10.2527/ssasas2017.080). Initial research comparing the effects of hair coat shedding and hair coat color on heat stress signs in beef heifers suggests that hair shedding may have a greater influence on heat stress realization than hair coat color (http://dx.doi.org/10.2527/ssasas2017.068).

Early research into hair shedding indicated large portions of the variation was due to genetic differences (high heritability estimate, $h^2 = .63$). In this early research, a strong genetic relationship between hair shedding and growth rate was observed in British cattle (but not detected in Brahman cattle). More recent estimates of hair shedding score heritability are more moderate ($h^2 = .35$). In mild and temperate environments, no relationship between hair shedding and growth is observed; however, in hot and humid environments, cows that shed earlier have calves with heavier weaning calves.

Hair shedding scores

Hair shedding scores are simply a visual appraisal of the extent of hair shedding by a trained observer and are reported on a 1 to 5 scale (Figure 1). Half scores, such as 3.5, are not reported. A score of 5 indicates an animal that retains its complete winter coat and exhibits no evidence of shedding. At the other end of the scoring scale, a score of 1 is given when cattle have completely shed their winter coat and exhibit a slick, "summer" hair coat.

Whereas, scores of 1 or 5 are readily apparent to even a casual observer, intermediate scores from 2 to 4 must be determined according to the following standards. A score of 3 is representative of cattle that have shed approximately 50% of their winter hair coat; this is essentially the halfway point in the hair shedding process. A score of 4 indicates an animal that has begun shedding but is less than 50% shed and closer to 25% shed. A score of 2 is assigned when an animal is approximately 75% shed; these cattle are mostly shed but are not yet completely shed of their winter hair coats.

Cattle tend to shed hair from the front to the back and from their topline to their belly, but there is individual animal variation in this pattern. Typically, the last spots to shed are an animal's

lower quarter above its hock and its underline. It is only necessary to collect hair shedding scores once in late spring or early summer. The date to evaluate cattle for shedding progress will vary by geographic location and environmental conditions. Mid-May has been identified as an ideal hair shedding evaluation period for cattle in the Southeastern U.S. As a rule of thumb, the more hot and humid the climate is, the earlier in the spring scores should be collected.

Hair shedding scores are easy to collect. Scores can be collected as cattle pass through the chute or when they are out on pasture. There is no need to restrain cattle for scoring. Shedding data collection is made easier by maintaining accurate lists of which cattle are in which pastures and using data recording sheets. With preparation and planning, cattle on pasture can be scored in a matter of seconds. Even after looking for cows who tend to hide in the middle of the herd, the rate of scoring averages to one cow per minute. As another approach, hair shedding score data collection can be scheduled to coincide with routine cattle handling so long as it occurs during an appropriate timeframe for the location.

Although a hair shedding genetic prediction (i.e., Hair Shedding EPD) would be the preferred method to select for increased hair shedding, these predictions are not yet available. Producers can still make improvements, although at a slower rate, using selection on actual hair shedding scores. The heritability of hair shedding has been estimated to be approximately 0.35, meaning that 35% of the variation in hair shedding is due to genetic differences. In order to develop new genetic predictions (EPD), large quantities of data are necessary. Producers interested in improving hair shedding and adaptation to heat stress should begin collecting hair shedding scores now. Seedstock producers, in particular, are encouraged to work closely with their respective breed associations to collect and report hair shedding scores to help develop future genetic prediction tools for this trait.

Beef producers in hot or humid environments should consider adding hair-shedding scores to their box of selection tools. Earlier shedding cattle are better adapted to these challenging environments. Cattle that deal with the heat and humidity stress better will be more productive. Ultimately, that helps improve the most important trait of all, profitability.

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Hair Shedding Scores

Hair Score	Definition	Example
5	Full winter coat (0% shed)	
4	Coat exhibits initial shedding (~25% shed)	
3	Coat is halfway shed (50% shed)	
2	Coat is mostly shed (~75% shed)	
1	Slick, short summer coat (100% shed)	

Figure 1. Hair Shedding Scores. Photographs courtesy of Dr. Trent Smith, Mississippi State University.

Make Plans to Attend the First Annual Grass Fed Beef Conference on December 7-8 in Purvis, MS

On Thursday and Friday December 7 and 8, producers will have the opportunity to learn more of the ropes about producing grass fed beef. The first annual event is packed full of great opportunities for learning and networking. Topics to be covered include beef production systems, growing forages, nutrition, growth and development, retail cuts, marketing, and perspectives from other producers. In addition, we'll tour forage plots a the White Sands

Experiment Station located just down the road in Poplarville. Registration to attend this event includes meals and training materials, and is only $35! For more information on this event please visit extension.msstate.edu/beef.

This event is supported by a Southern SARE Professional Development Program Grant, and is in partnership with Alabama Cooperative Extension.

October 2017 — Management Calendar

GENERAL

Summer pasture quality rapidly declines from now til frost. Graze permanent summer pastures closely, and plant winter forages where appropriate. Watch nutrition closely when grazing stalks and stubble and be prepared to supplement. Do not feed urea on soybean stubble. Remove cattle from sorghum crops after the first frost because of the risk of prussic acid poisoning. Keep proper free-choice minerals and clean water available for cattle at all times. Continue monitoring supplemental feed prices. Corn and by-product feeds such as cottonseed are often less expensive in the fall. Test the quality of stored forages if not already done. Watch body condition, and group the herd into winter-feeding groups such as mature cows with average condition, thin mature cows, and first-calf heifers. Match forage and feeding programs to the nutritional needs of each group. Keep up with lime and fertilizer needs. Maintain a complete herd health program in consultation with a veterinarian including internal and external parasite control and vaccinations. Remove any remaining fly tags.

SPRING CALVING—January, February, March

Pregnancy check herd females identifying and culling less productive or problem cattle. Finish weaning late calves using weaning strategies that minimize calf stress. Implement calf preconditioning, marketing, or retained ownership plans as appropriate considering seasonal price risks and breakevens on calves. Weigh calves and calculate adjusted weaning weights and ratios. Seedstock producers should send weaning records to breed associations for processing. Assess weaning percentage (calves weaned/cows exposed to breeding) and cow efficiency (calf weight/cow weight). Identify and cull bulls that have sired calf groups that are well below the herd average for growth performance and carcass traits. Implement a nutritional program to get thin cows in proper body condition before next calving. Use weaning weights to put a heifer selection and development program in action to reach target breeding weights (65% of expected mature weight) by the start of the next breeding season. Heifers will likely need to grow at a rate of 1 to 1.5 lbs. per day.

FALL CALVING—October, November, December

Keep calving supplies on hand, including calf identification tags and obstetric equipment. Move fall-calving heifers and cows close to handling facilities and observe cattle frequently. After calving, plan to move cow-calf pairs to clean pasture. Tag, castrate, dehorn, and implant calves as appropriate. Consult with a veterinarian for scheduling pre-breeding vaccination needs. Plan for herd sire needs by evaluating bulls and arranging breeding soundness exams.

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MISSISSIPPI STATE UNIVERSITY™ EXTENSION

Membership Application

Name:_____

Address:_____

City:_____

County:_____ State:_____ Zip:_____

Phone:_____ Email:_____

(Check one) Seedstock:____ Commercial:____

Cattle breed(s):_____

Completed applications and $5 annual dues or $100 lifetime dues payable to Mississippi BCIA should be mailed to:

Mississippi Beef Cattle Improvement Association
Box 9815, Mississippi State, MS 39762