

Mississippi Beef Cattle Improvement Association

Mississippi Beef Cattle Improvement Association—Productivity and Quality



Upcoming events:

- September 1—Mississippi BCIA Fall Bull Sale nomination deadline
- September 25—Brahman and Hereford F-1 Field Day, Smith Co Ag Complex, Raleigh, MS, 9:00 A. M.
- October 1—Gain on Forage Bull Test nomination deadline
- October 19—Hinds CC Bull Test begins, Raymond, MS
- November 4-6—MSU Artificial Insemination School, Mississippi State, MS
- November 9—MAFES White Sand Unit Beef Cattle Field Day, Poplarville, MS
- November 11—Mississippi BCIA Fall Bull Sale, Raymond, MS, 12:00 noon
- November 17—Mississippi Forage Conference, Starkville, MS
- January 20—Mississippi BCIA Spring Bull Sale nomination deadline
- March 3—Hinds CC Bull Test Sale and Mississippi BCIA Spring Bull Sale, Hinds Community College Bull Sale Facility, Raymond, MS

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Homeplace Producers Feeder Calf Board Sale Results

The third Homeplace Producers board sale was held on August 2, 2010 at the Southeast Mississippi Livestock Auction in Hattiesburg. Over 4,000 head of cattle were represented in 52 loads varying in weight, type, and management. The sale generated approximately **\$2.9 million** in total receipts. The cattle will be loaded at several different Mississippi locations through late October.

Beyond price per pound advantages by marketing through this sale, revenue was also increased in other ways. Shrink (weight loss) for most loads was set at 2%. By controlling shrink prior to pay weight determination, fewer dollars will be lost compared to some other marketing strategies. Additionally, commission for the sale was set at 2%. In some cases, this is a significant cost savings and results in yet another increase in revenue. Each group of consigners had the choice to use their local marketing agent so long as they agreed to represent the cattle under the same terms.

Excerpt from USDA-MS Market News

"The third annual Mississippi Home-Place Producers Feeder Cattle Board Sale was held at Southeast Livestock Exchange in Hattiesburg, MS on Monday, August 02, 2010. The sale was held in cooperation with producers and agencies including the MS State University Extension Service, MS Cattlemen's Association, MS Farm Bureau Federation, MS Department of Agriculture and the MS Beef Cattle Improvement Association. Cattle were all pre-conditioned and will be weaned at least 45 days prior to shipping with a number of lots being PI tested. Cattle were sold with primarily a 2 percent shrink. On the mixed lots, heifers sold 6 cents back of the steers. Overall demand was very good and trading active."

Feeder Steers: Bulk Medium and Large 1 and 2: 4 pot-loads 800 lbs 107.60; 1 pot-load 835 lbs 103.20.

Feeder Heifers: Bulk Medium and Large 1 and 2: 3 pot-loads 640 lbs 108.50; 1 pot-load 675 lbs 106.20; 4 pot-loads 700 lbs 105.40-106.00; 2 pot-loads 720 lbs 103.40.

Mixed Feeder Steers and Heifers: Bulk Medium and Large 1 and 2: 1 pot-load 625 lbs/600 lbs 109.20; 1 pot-load 670 lbs/625 lbs 105.25; 1 pot-load 725 lbs/700 lbs 108.75.

Here are those data (cattle scheduled for current delivery only and not including split loads) in comparison to the weekly prices at 12 other MS markets for the week of August 2-6, 2010:

	Wt. Range	Range (\$ / CWT)	
		Homeplace Sale	MS Average
Steers	600-700	108.75-114.00	98.00-117.00
	700-800	109.25-110.00	none reported
	800-900	99.25	none reported
Heifers	600-700	106.25-106.75	89.00-106.00
	700-800	99.75-105.00	88.00-96.00

All cattle are Medium and Large 1-2, current delivery.

In comparison to 7 other video feeder calf sales marketing Southeastern U.S. cattle during the same week, all heifer load prices and most steer load prices from the Homeplace sale fell within the range of prices for loads of the same calf sex and delivery time. Additionally, the low end of the price ranges for the Homeplace sale compared very favorably to those of the other video sales and were higher than all these other sales in several categories.

For more information on this sale visit: msucare.com/livestock/beef/feeder_calf.html

MAFES Research: Hair Shedding Genetics



Hair shedding rate affects animal productivity

Introduction

The principal method for heat dissipation in cattle is evaporation cooling. A bovine animal's success in cooling itself is directly influenced by many factors including humidity, wind speed and physiological factors like respiration rate and activity of sweat glands. As the ambient temperature and humidity exceed the animal's thermal neutral zone, effectiveness of evaporative cooling through sweating and respiration decreases. When humidity is high, water from sweat or even sweat vapor gets trapped in spaces between the hair follicles causing the animal to expend more energy in thermoregulation by increasing its respiration rate and increasing the amount it sweats.

Cattle with dark, thick, wooly coats are at an extreme disadvantage in hot, humid climates and are at an increased risk of heat stress and dehydration. In the Southeastern region of the U.S., where the climate is subtropical, it has been observed that cows that fail to shed in a timely manner tend to show more signs of heat stress when compared to their slick-coated contemporaries.

Signs of heat stress include decreased mobility, decreased appetite, and poorer general health. A common perception among producers within this region is that cows which shed late in the season are inferior dams with poor performing calves.

Study Objectives

The objective of this study was to (1) adapt a reasonable method to assess hair coat shedding within purebred Angus cattle, (2) determine how much hair coat shedding variation exists among Angus cows and (3) estimate its effects on adjusted 205-day weaning weight (d205wt) and cow's body condition score (BCS).

Study Methods

Registered Angus cows (532 head) were used over a 3-year period in four different locations for this study. The first location was in Reidsville, NC, where the North Carolina State University Angus herd is main-

tained at the Upper Piedmont Research Station on wild-type endophyte-infected tall fescue pastures. Approximately half of the animals were observed in this location. The remaining cows were distributed over three other locations in Mississippi including Mississippi State, Winona, and Okolona, MS. The cows grazed pastures consisting primarily of mixed warm-season grasses, annual ryegrass, and non-toxic endophyte-infected tall fescue. All cows were between 2 and 13 years of age with a calving season in NC in late autumn and calving seasons in MS was in the early autumn or late winter/early spring.

In 2007, 2008, and 2009, beginning the last week in March for 5 months at approximately 30-day intervals, two trained technicians scored cows on a scale from 1 to 5. A score of 1 represented a slick, summer coat, and 5 represented a thick, winter coat. A score of 3 was halfway shed, while a score of 4 was a cow that started shedding but was not quite half way to a summer coat. A score of 2 was more than halfway shed but not shed slick yet.

Description of Hair Coat Shedding Scores

Score	Definition
5	Full winter coat
4	Coat exhibits initial shedding
3	Coat is halfway shed
2	Coat is mostly shed
1	Slick, short summer coat

Cows were then grouped into 5 categories based on the month the cow began to shed her winter coat. A cow was considered to have begun shedding its winter coat when she received a score of 3 or less. Cows that never received a score of 3 or less during the 5 months of observation were few in number and were grouped with cows that shed in July. These categories will be referred to as month of first shedding (MFS).

All cows within the analysis weaned a calf at approximately 6 months of age. Weaning weights were recorded and submitted to the American Angus Association. An adjusted weaning weight (d205wt) was then calculated by the association adjusting for age of dam, and age of calf to 205 days.

"...Cows which shed their hair coats by the end of May weaned heavier calves than cows who took longer to shed their hair coats."

Hair Shedding (Cont.)

Results

Two technicians collected all shedding scores within each location. It was found that technicians were essentially in agreement in their scoring of the cows.

Cows that shed earlier in the year did not differ in their BCS but had calves that were heavier at weaning.

Adjusted weaning weights associated with the month the dam begins shedding

Month Shedding Begins	d205wt (lbs)
March	597
April	589
May	587
June	578
July	551

Calves from cows that began to shed by the end of May had d205wt at 24 lbs heavier than their contemporaries that were out of cows that began to shed after May. On average, cows which shed their hair coats by the end of May wean heavier calves than cows who take longer to shed their hair coats.

Adjusted weaning weights associated with cows that shed by the end of or after May

Shedding Date	d205wt (lbs)
Shed by May	589
Shed after May	565

Scoring cattle on a scale of 1 to 5 starting in March provided phenotypic data which adequately described the variation that exists among hair coat shedding in Angus cattle located in the Southeastern region of the U.S. Some variation did occur among technicians when scores were 3 or less and between 4 and 5.

Labor costs and time would prohibit monthly shedding scores to take place in most production settings. However, one score taken at a strategic time is sufficient for capturing the variation that occurs in hair coat shedding. By the end of May, in this study, animals should be scored to predict calf weaning performance. This time may vary depending on the location, humidity, and overall environment of the herd in question. Weaning weight is an economically impor-

tant trait. Angus producers have increased the weaning weights of their calves over the past 40 years. This study shows that there is a high genetic correlation between weaning weight and hair coat shedding. It would seem reasonable that animals will continue to improve in hair coat shedding through selection. Although this does seem plausible, most drive for selection within the Angus breed occurs in cooler, less humid environments. There may be a genotype by environment interaction that is not evident in the more temperate regions where most of the selection occurs. This study provides evidence that certain sires will produce better calves in hot, humid, and otherwise less than ideal environments, but definite conclusions cannot be made until more data are collected in cooler environments with some of the same sire families represented.

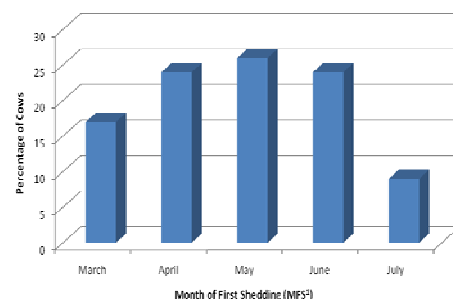
It is possible that early hair coat shedding does not necessarily cause heavier d205wt. However, there is evidence that even if early hair coat shedding is not the cause, it is a good indicator of heavier weaning weights. Hair coat shedding has a greater heritability than weaning weight; therefore, by including it in an index, producers could potentially increase their response to selection of d205wt in sub-tropical climates.

Continued research will help to completely understand how shedding and productive traits like calf weaning weight are associated. This research does provide evidence that cows that shed late in the season wean lighter calves. Hair coat shedding is a heritable trait and could be altered by selection. Producers within the Southeastern U.S. that have observed late hair coat shedding within their herds can select for hair coat shedding earlier in the season. This should result in higher weaning weights, making the cow herd more productive.

Recommendation

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

“...Contact Dr. Trent Smith at 662-325-3691 or ts289@ads.msstate.edu for more information about this study.”



First month in which a cow received a score of 3 or less using the 1 to 5 scoring system

Mississippi Beef Cattle Improvement Association—Productivity and Quality

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Jane Parish

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Visit MBCIA online at
<http://msucares.com/livestock/beef/mbcia/>

MBCIA 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 life-time dues payable to Mississippi BCIA should be mailed to:

Mississippi Beef Cattle Improvement Association
Jane Parish, Extension Beef Cattle Specialist
Box 9815, Mississippi State, MS 39762

Providing Assistance During Calving

Several common situations encountered when delivering a calf are described below and illustrated to the right.

Normal delivery

The calf's forelegs and head protrude first about 70 percent of the time. The hind legs and tail come first about 30 percent of the time. Always make sure the tail is protruding with the hind legs in this situation.

Calf too big (not illustrated)

Most frequently encountered in heifers, but it can also occur in cows. Applying excessive force to attempt delivery of a calf that is too big is detrimental to the health of the heifer and the calf and wastes precious time. Call a veterinarian as soon as you determine that the calf is too big. The calf can be saved if assistance is provided promptly. Even if the calf cannot be saved, a veterinarian can dismember the calf or perform a C-section to save the heifer.

Breech (hindquarters first with both hind legs retained)

Both hind legs and the tail must be straightened out and placed correctly within the birth canal for delivery to proceed.

Head turned to the side

The neck must be straightened out and the head placed on top of the forelegs for delivery to proceed.

Retained foreleg(s)

Occasionally one or both forelegs are retained. If both forelegs are retained, then only the head will be in the birth canal. The forelegs must be straightened out and delivered simultaneously with the head resting on top of the forelegs.

Head underneath both forelegs

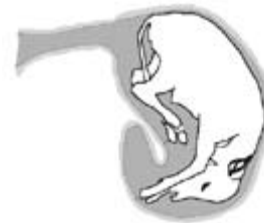
The head must be placed on top of the forelegs, and then delivery can proceed.



Normal delivery with front feet first



Normal delivery with back feet first



Breech



Head turned to side



Retained foreleg(s)



Head underneath both forelegs