

# Mississippi Beef Cattle Improvement Association

Mississippi Beef Cattle Improvement Association—Productivity and Quality



### Upcoming events:

- February 11- MBCIA Annual Membership Meeting, Jackson, MS
- March 3—Hinds CC Bull Test Sale and Mississippi BCIA Spring Bull Sale, Hinds Community College Bull Sale Facility, Raymond, MS
- March 15—Applied Cattle Nutrition Workshop, MSU
- March 17-19—MSU Artificial Insemination School, Mississippi State, MS
- April 5 - Cattlemen’s Exchange Feeder Calf Board Sale, Winaona, MS
- April 8—Beef Cattle Boot Camp, Prairie, MS
- April 15—Beef Cattle Boot Camp, Poplarville, MS
- June 1-4—Beef Improvement Federation annual meeting, Bozeman, MT

### Inside this issue:

Fetal Losses due to Preg Check	2
Board Sale Preparation	2
Velpar® Label Change	2
BVDV on U.S. Cow-calf Operations	3
MBCIA Membership Application	4
Future of DNA-based Technology	4

## Mississippi BCIA Annual Membership Meeting Reminder

Mississippi BCIA will hold its annual membership meeting on Friday, February 11, 2011 at the Trademart on the state fairgrounds in Jackson, MS in conjunction with the Mississippi Cattlemen’s Association annual convention.

The BCIA session will start at 1:00 p.m. It will feature Dr. Trent Smith, beef cattle geneticist with the MSU Animal and Dairy Sci-

ences Department, speaking on “Cattle Hair Shedding Genetics and Production Impacts.” This session will feature current research results from Mississippi and North Carolina.

Educational presentations at the MCA convention will begin at 1:00 p.m. on Friday, February 11 and continue through Saturday, February 12. For the complete schedule of

events, call the Mississippi Cattlemen’s Association at (601) 354-8951.

**MBCIA Annual Membership Meeting**

**Friday, February 11, 2011, 1:00 p.m.**

**Trademart, State Fairgrounds, Jackson, MS**

## Hinds Bull Test & MBCIA Bull Sales Next Month

Producers looking for bulls for the upcoming spring breeding season should make plans to attend the Hinds Community College Bull Test Sale and MBCIA Spring Bull Sale. The 2 sales will be held back to back at the Hinds Bull Sale Facility in Raymond, MS starting at noon on Thursday, March 3, 2011.

Sale catalogs are currently being finalized and will become available in mid-February. The sales feature bulls backed with extensive performance information and screened for soundness. These bulls were developed in Mississippi and are adapted to local production conditions. They represent some of the top pedigrees and EPDs in their breeds.

Bids will be accepted from 2 distance bidding sites in Verona, MS and Batesville, MS as well as at the sale site. Details are included in the catalogs.

**Mississippi’s Home for Performance Backed Bulls**



**Hinds CC Bull Test Sale**  
Kenny Baner (601) 857-3351

**MBCIA Spring Bull Sale**  
Jane Parish (662) 325-7466

[msucares.com/livestock/beef/mbcia](http://msucares.com/livestock/beef/mbcia)

---

**Hinds Community College Bull Test Sale**  
**Mississippi BCIA Spring Bull Sale**

Thursday, March 3, 2011  
12:00 Noon

Hinds Community College Sale Arena  
Raymond, Mississippi




## Fetal Losses due to Pregnancy Diagnosis



Stage of pregnancy, technician experience, and method used in pregnancy determination affect fetal losses

Pregnancy diagnosis is widely practiced in cattle production systems. Ultrasonography is an alternative technique to rectal palpation for pregnancy diagnosis. Fetal losses caused by rectal palpation are well documented. But reported losses from ultrasonography for pregnancy diagnosis are often confounded by normal embryonic losses during early gestation. Losses caused by inexperienced technicians have been reported previously, but limited information is available on technicians that are in the learning process.

Study objectives were to compare fetal losses from pregnancy diagnosis during early gestation for 1) stage of gestation at the time of diagnosis (<53 or ≥53 days), 2) method of diagnosis (ultrasonography or rectal palpation), and 3) different skill levels of the technicians (novice or experienced). Beef heifers (n = 2,190) exposed to natural service for 27 days, followed by diagnosis of pregnancy between 42 and 74 days of gestation were used to evaluate these objectives.

- Overall loss was 1.55%. Risk of loss was greater in heifers <53 days pregnant compared with heifers ≥53 days (3.46 vs. 1.26%; a 2.74-fold increase) at the time of evaluation.
- Greater fetal loss occurred with rectal palpation than with ultrasonography (2.68 vs. 1.29%; a 2.08-fold increase).
- Heifers evaluated by inexperienced technicians had a 2.07% fetal loss, whereas heifers evaluated by experienced technicians had only a 1.06% loss (a 1.95-fold difference).
- Cattle producers and veterinarians should recognize the importance of stage of pregnancy, level of technician experience, and method of diagnosis used to reduce losses attributable to pregnancy diagnosis.

Source: *Professional Animal Scientist* July 2010 vol. 26 no. 4 341-346.

## Plan Ahead for Board Sale Participation

Develop a board sale prep checklist. One or more neighboring farms should target putting together truckload lots of calves similar in:

- ✓ Age (calving season)
- ✓ Weaning date
- ✓ Weight

- ✓ Breed composition
- ✓ Health program
- ✓ Nutritional program
- ✓ Other value-added attributes
  - Age/Source/Process verification
  - PI negative test

## Velpar® Label Change Affects Grazing

Finally, DuPont™ has printed the newly revised Velpar® label to state livestock can be grazed immediately following applications of up to 4.5 pints Velpar L per acre or 1.5 lbs Velpar DF per acre.

Hay, however, cannot be cut within 38 days after applications up to 4.5 pints Velpar® L per acre or 1.5 lbs Velpar® DF per acre. If application rates are above 4.5 pints L or 1.5 lbs DF per acre, livestock cannot be grazed or hay cut within 60 days after the application.

This label modification once again makes Velpar® applications feasible for smutgrass control in bermudagrass and bahiagrass pastures and hayfields.

Source:

Dr. John Byrd

MSU Extension Weed Specialist

662/325-4537 office

662/418-4537 mobile

jbyrd@pss.msstate.edu

---

*“...Velpar® applications are once again feasible for smutgrass control in bermudagrass and bahiagrass pastures and hayfields.”*

## NAHMS Study—BVDV on U.S. Cow-calf Operations

The cattle industry has made significant efforts in recent years to control Bovine Viral Diarrhea Virus (BVDV) in cattle. These efforts have been facilitated by a more complete understanding of the epidemiology of BVDV in cattle and wildlife populations, enhanced availability of diagnostics for detecting animals persistently infected with BVDV, and a better idea of the economic impact BVDV has on cattle herds. These advancements have made it clear that in some groups of cattle the impacts of BVDV can be substantial. Furthermore, the knowledge gained in the epidemiology of BVDV and the improvement in diagnostics tools have made the control of BVDV feasible.

Based on the NAHMS 2007-08 Beef Cow-calf study, only 12.3 percent of cow-calf operations had not heard of BVDV, and 64.0 percent of operations knew some basics or were fairly knowledgeable about the virus. These results are likely a reflection of the substantial coverage the agriculture media has devoted to BVDV in the past few years. While producers are generally aware of BVDV, relatively few (4.2 percent) had done any testing of calves for persistent infection with the virus in the past 3 years. Larger operations (200 or more beef cows) were much more likely than smaller operations to have tested calves for persistent infection with BVDV in the past 3 years (15.6 percent of operations). The low overall rate of testing might indicate that most producers do not believe their herd is at risk. Producers might also believe that the cost-benefit ratio for controlling the disease is prohibitive.

Information on the economic impacts BVDV has on a herd is relatively new; therefore, it is possible that the majority of producers had not yet received the information by the time of the interview or that they had not had time to fully assimilate it. This premise might be supported by the finding that 46.6 percent of cow-calf operations did not know if removing calves that tested positive for persistent infection with BVDV would affect the value of the remaining calves in the herd. Larger operations were more inclined than smaller operations to believe that removing persistently infected calves would increase the value of the remaining calves.

Among operations that vaccinated any cattle for any diseases, 80.7 percent vaccinated at least some calves at 22 days of age through weaning and 61.2 percent vaccinated weaned replacement heifers before breeding. While some of these herd owners might believe that by vaccinating these animals they are effectively controlling the development of animals persistently infected with BVDV, the high-level use of vaccines could also be a reflection of the widespread belief by producers that BVDV can have significant animal health impacts; overall, 66.7 percent of producers believed that BVDV was a significant problem for the U.S. beef industry.

The ear-notch testing done during the Beef 2007-08 study confirmed, as have other studies, that animals persistently infected with BVDV are relatively infrequent within a herd and that most operations might not even have any persistently infected calves in any particular calf crop. Of the 205 cow-calf operations that submitted ear-notch samples for BVDV testing, only 8.8 percent had one or more persistently infected animals identified. Among the 44,150 ear-notch samples collected and tested, only 53 (0.12 percent) were positive for the BVDV antigen.

**While it is tempting to ignore such a small fraction of the total calf crop, these animals have a tremendous capacity to transmit the infection to other animals in the herd or to other groups of cattle in which they come in contact.** Although such transmission rarely results in the creation of another animal persistently infected with BVDV, it can and does result in disease related to acute infection with BVDV, such as respiratory disease or reproductive disease. **A number of feedlots have noted the substantial impact of animals persistently infected with BVDV on in-contact cattle and have instituted screening programs to remove them at arrival. In some cases it appears that groups of calves that test negative for persistent infection with BVDV sell at a higher price than comparable groups that have not been tested.**

Source: NAHMS Beef 2007-08

*“...The presence of BVDV in a herd may cause decreased fertility in breeding cows, abortions, congenital malformations in calves, and the birth of calves persistently infected with BVDV. Signs of disease may also include increased rates of diarrhea and pneumonia in suckling or weaned calves.”*



Persistently infected calves

- Shed large quantities of virus which can be transmitted to other members of the herd;
- Usually perform poorly, but not always;
- Usually have increased sickness and death loss; and
- Occasionally perform well enough to be incorporated into the breeding herd.

*Mississippi Beef Cattle Improvement Association—Productivity and Quality*

Mississippi Beef Cattle Improvement Assn.  
Box 9815  
Mississippi State, MS 39762

Phone: 662-325-7466  
Fax: 662-325-8873  
Email: jparish@ads.msstate.edu



Send questions or comments to Jane Parish,  
Extension Beef Cattle Specialist,  
Mississippi State University Extension Service

*Jane Parish*



Mississippi State University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation or group affiliation, age, disability, or veteran status.

**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*

## The Future of DNA-based Technologies

**Table 1.** Possible progression of DNA testing technologies over the next decade.

2003	2008	2013	2020
Single marker/single trait tests	Multimarker tests become available for a small number of traits	Panels with 100-1000s of markers for multiple traits	Testing costs are low
Actual genotyping results reported	Results reported in a variety of formats although move towards reporting numeric scores	Results consistently reported in unit of the trait	Large SNP panel used by worldwide beef cattle community for a large number of traits
Low accuracy	Tests account for <10% additive genetic variation	DNA information starting to be routinely incorporated into genetic evaluation	Seamless submission of genotype data into national genetic evaluation schema
Limited adoption	No tie in between results and national genetic evaluation	DNA-based evaluations begin to improve accuracy of EPDs	EPDs available on many economically relevant traits
Technology oversold	No way to determine appropriate emphasis to place on test result	Larger numbers of genotyped populations start to become available for validation	DNA information greatly increases the accuracy of genetic evaluations
	Technology not in form producers could easily use		Industry routinely uses DNA information for herd management, and breeding decisions

DNA-based technologies are developing at a rapid pace. It is likely that these technologies will play a progressively important role in beef production and marketing in the future. DNA-based tests can be used for various purposes; for example selection and breeding decisions, feedlot sorting, pedigree verification, and as a marketing tool. Estimates of DNA test performance (e.g. proportion of genetic variation accounted for by a DNA test panel) and accuracy in representative populations will be required to evaluate their use for selection, and also for incorporation of DNA data into the existing genetic evaluation infrastructure. Whole genome selection has

the potential to improve traits that are currently intractable (feedlot health, feed efficiency, palatability). As a result of experiments with the 50,000+ SNP chip in cattle, it is likely that the number and accuracy of DNA-based marker tests will increase in the coming years, and eventually “DNA-adjusted EPDs” will become a reality. In the meantime, however, the increased economic returns from using DNA-marker tests and ultimately incorporating them into the national cattle evaluations must outweigh the costs (DNA sampling, genotyping, phenotyping) associated with obtaining the additional genetic information.

Source: National Beef Cattle Evaluation Consortium. Sire Selection Manual. 2nd edition. 2010.