

# Mississippi Beef Cattle Improvement Association

Mississippi Beef Cattle Improvement Association—Productivity and Quality



## Upcoming events:

- January 20—Mississippi BCIA Spring Bull Sale nomination deadline
- 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, Winona, MS
- April 8—Beef Cattle Boot Camp, Prairie, MS
- April 15—Beef Cattle Boot Camp, Poplarville, MS

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## Mississippi BCIA Bull Sale Nomination Reminder

Preparation continues for the Spring 2011 Mississippi BCIA Bull Sale to be held on March 3, 2011 at 12:00 noon at the Hinds Community College Sales Facility in Raymond, Mississippi. This sale will once again be held in conjunction with the Hinds Community College Bull Test Sale on the traditional Hinds Bull Test sale date.

Current bull sale information is posted on the BCIA website at [msucares.com/livestock/beef/mbcia/bcia\\_bullsale.html](http://msucares.com/livestock/beef/mbcia/bcia_bullsale.html). The Rules and Regulations and nomination form are available on this website.

**Mississippi BCIA  
Spring Bull Sale  
Nomination  
Deadline**

**January 20, 2011**

If you are interested in consigning bulls to this sale, please complete the nomination form and return it to Box 9815, Mississippi State, MS 39762 no later than **January 20, 2011**. Be sure to include the nomination

fee, a signed registration certificate, actual birth weight, and adjusted weaning and yearling weights and ratios for each bull. If you have any questions about the sale requirements or past results,

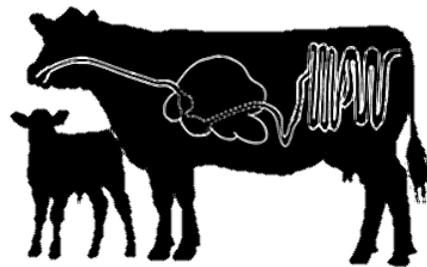
please call your local Extension Service office or contact Jane Parish at 662-325-7466 or [jparish@ads.msstate.edu](mailto:jparish@ads.msstate.edu).

## Applied Cattle Nutrition Workshop Set for March 15

The Mississippi State University Extension Service will offer an Applied Cattle Nutrition Workshop on Tuesday, March 15, 2011 from 9 AM to 4 PM on the Mississippi State University campus in Starkville. This workshop is designed to cover basic cattle nutrition concepts and then introduce computer software programs that can assist in practical nutritional management. Participants will utilize on-site computers for interactive software demonstrations and be provided with software to use on farm. The interactive software sessions will be broken out into separate beef and dairy groups.

The workshop brochure is online at: [msucares.com/livestock/beef/cattlenutrition.pdf](http://msucares.com/livestock/beef/cattlenutrition.pdf)

This brochure lists the complete schedule of topics with times. A workshop registration form is also included in the brochure. Registration is limited to the first 50 paid participants. The workshop registration fee is \$50 per person and covers course materials, refreshments, and lunch.

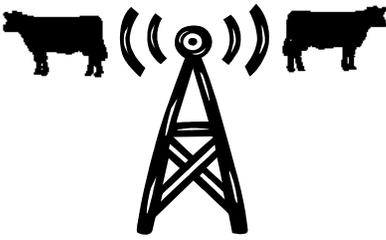


Both beef and dairy cattle producers can benefit from this workshop. Beef producers interested in attending or with questions about the workshop should contact either

Jane Parish  
Phone: (662) 325-7466  
E-mail: [jparish@ads.msstate.edu](mailto:jparish@ads.msstate.edu)

or

Daniel Rivera  
Phone: (601) 403-8777  
E-mail: [drivera@ext.msstate.edu](mailto:drivera@ext.msstate.edu)



Animal agriculture is featured weekly on Farm and Family Radio

## Beef Cattle Programs on Farm and Family Radio

Beef production recommendations and educational program announcements are a common feature on Farm and Family Radio produced by the Mississippi State University Extension Service. Farm and Family features interviews with Extension Service experts and other agricultural officials about timely topics related to Mississippi agriculture.

These shows are broadcast on many radio stations in Mississippi. Farm and Family current radio programs and archives are also available online at [msucares.com/news/radio/farmandfamily](http://msucares.com/news/radio/farmandfamily). Shows are available online in MP3 formats and as podcasts.

## MBCIA Annual Membership Meeting Ahead in February

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, cattle geneticist with the MSU Animal and Dairy Sciences Department, speaking on "MAFES Cattle Hair Shedding Genetics Research" This session will focus on recent research conducted in Mississippi and North Carolina

showing the potential for use of hair shedding scores as a selection tool to improve calf weaning weights. Dr. Smith was recently a feature speaker at the Beef Improvement Federation convention in Columbia, Missouri addressing this topic.

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 or visit the MCA website at [www.ms cattlemen.org](http://www.ms cattlemen.org).

### MBCIA Annual Membership Meeting

**Friday, February 11, 2011, 1:00 p.m.  
Trademart, State Fairgrounds, Jackson, MS**

## Use of Nutritional Supplements for Cows on U.S. Beef Cow-calf Operations

Feed is a major proportion of the total cost of beef cattle production. On most operations, the mainstay of a beef cow's diet is some type of grazed or harvested forage (e.g., hay/silage/pasture). Protein and energy supplements are often provided to beef cows to meet the increased nutritional demands of pregnancy and lactation, particularly when the forage is of low quality. Cows that are nursing calves require the highest levels of protein and energy.

The U.S. Department of Agriculture's National Animal Health Monitoring System (NAHMS) conducted the Beef 2007-08 study, which focused on beef cow-calf health and management practices in 24 States including Mississippi. These States

represented 79.6 percent of U.S. operations with beef cows and 87.8 percent of U.S. beef cows. As part of the Beef 2007-08 study, producers were asked about the use of three types of nutritional supplements for beef cows: protein, energy, and roughage.

### Protein Supplements

Protein is one of the most expensive ingredients in a feed ration. Many different types of protein supplements can be used effectively in beef cows. Several common supplements are: corn gluten feed, distillers grains, cottonseed meal, soybean meal, and urea. Urea is an inexpensive option for protein supplementation, but it must be used carefully since it is toxic if overfed. In addition,

*"...Supplements are often provided to cattle when forage quality or availability are low."*

## Nutritional Supplements (Cont.)

the efficient use of nonprotein nitrogen (urea) requires some readily available carbohydrate which may be lacking in some rations. Commercial products such as liquid supplements and protein blocks are also available for protein supplementation. These may include natural protein or non-protein nitrogen.

About three of four operations (74.7 percent) fed protein supplements to beef cows during the previous 12 months. These operations were asked about the number of days that protein supplements were given, and about the primary ingredient in the supplement. Nearly one-half of operations (48.8 percent) that fed protein supplements to beef cows during the previous 12 months fed the supplements for 91 to 180 days. About one-third of operations (29.5 percent) fed protein supplements for 181 or more days. The operation average number of days that beef cows were fed the supplement was 172.7 days (almost 6 months).

Plant protein (soybean meal, cottonseed meal, etc.) was the primary protein supplement ingredient used on 68.5 percent of operations and on the majority of operations in each region. Overall, 14.6 percent of operations used urea as the primary protein supplement, and 16.9 percent used "other" protein source for supplementation.

### Energy Supplements

Energy supplements are fed to supply additional calories to beef cows when forage does not provide an adequate amount of energy. Many common protein supplements can also serve as energy supplements. The energy requirements of adult beef cows vary over the production cycle. Lactation is usually the time of highest demand for both protein and energy.

About one-half of operations (51.0 percent) fed energy supplements to beef cows during the previous year. Nearly one-half of operations that fed energy supplements to beef cows during the previous year (45.3 percent) fed the supplements for 91 to 180 days, and almost one of four operations (24.8 percent) fed the energy supplements for 181 or more days. The operation average number of days that beef cows were fed the supplements was 162.2 days.

Corn contains a large amount of starch and has traditionally been an inexpensive choice for energy supplementation. Caution should be exercised when using corn as an energy supplement, however, because forage intake will decrease if too much corn is fed. Corn was the primary energy supplement ingredient used on 57.5 percent of operations that fed energy supplements. For the 42.5 percent of operations that used energy supplements other than corn, common supplements were molasses, commercial products (e.g., blocks, pellets, liquids), corn by-products (e.g., distillers grains), and oil seeds and meals (e.g., soybean or cottonseed).

### Roughage Supplements

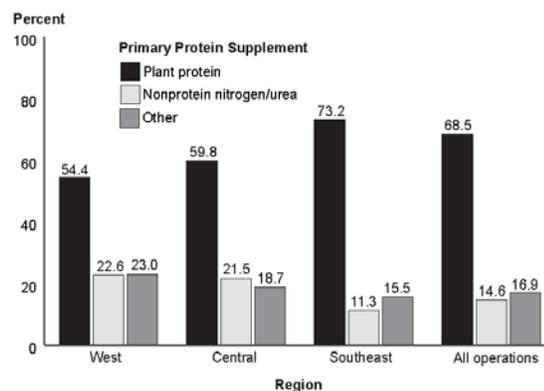
Supplemental roughage, such as harvested hay, is often provided for beef cows, particularly during winter months. Nearly all operations (97.1 percent) used roughage supplements during the previous 12 months. Most operations that fed roughage during the previous 12 months fed the supplement for 91 to 180 days (65.8 percent). Only 2.3 percent of operations that fed roughage supplements to beef cows fed the supplements for less than 31 days. The operation average number of days that beef cows were fed the supplement was 158.5 days.

### Summary

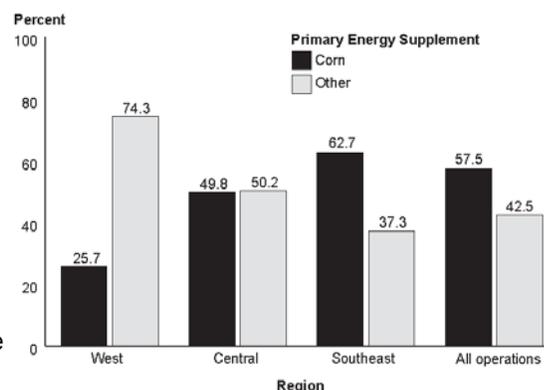
Resources, such as local extension agents, are available to assist beef producers in designing an optimum feeding program. Appropriate supplements for beef cows should be selected based on the stage of production and the quality of the forage. Optimization of feed rations and efficient use of supplements can result in greater profitability for the beef producer.

**Source:** USDA APHIS Info Sheet, May 2010.  
<http://www.aphis.usda.gov/vs/ceah/ncahs/nahms/beefcowcalf>

*"...Extension agents are available to assist producers in designing feeding programs."*



For Operations that Fed Protein Supplements to Beef Cows During the Previous Year, Percentage of Operations by Primary Ingredient in Protein Supplement and by Region



For Operations that Fed Energy Supplements to Beef Cows During the Previous Year, Percentage of Operations by Primary Ingredient in Energy Supplement and by Region

Mississippi Beef Cattle Improvement  
Association—Productivity and Quality

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

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Email: jparish@ads.msstate.edu



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

Mississippi State 

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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/](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

## Body Condition Score and Cattle Weight

Two animals with the same body condition score (BCS) may have dramatically different live weights. Similarly, cattle with the same live weight may have distinctly different body condition scores. Weight differences between condition scores vary depending on the score and where the animal is in the production cycle. These weight differences often range from 70 to 140 pounds. Percentage body fat associated with each distinct body condition score appears in Table 1.

**Table 1. Beef cattle body condition score and associated body fat percent and shrunk body weight**

Body Condition Score (BCS)	Body Fat, %	Shrunk body weight, percent of BCS 5
1	3.77	77
2	7.54	81
3	11.30	87
4	15.07	93
5	18.89	100
6	22.61	108
7	26.38	118
8	30.15	130
9	33.91	144

Source: NRC, 2000. Adapted from NRC Nutrient Requirements of Beef Cattle, 7<sup>th</sup> revised edition.

Using Table 1, the body weight change needed to move from one body condition score to another can be calculated. For example, a 1200-pound cow at a body condition score of 5 would need to weigh 108 percent of its current weight to achieve a body condition score of 6. This cow would need to gain 96 pounds ( $1200 \times 1.08 = 1296$ ,  $1296 - 1200 = 96$ ) to move up one body condition score. Table 2 gives an example of weight differences between condition scores for different body weights.

**Table 2. Weight changes needed to increase one BCS**

Body Condition Score (BCS)	Animal Weight, pounds	Weight Change Needed to Increase One BCS, pounds
3	870	60
	1044	72
	1218	84
4	930	70
	1116	84
	1302	98
5	1000	80
	1200	96
	1400	112
6	1080	100
	1296	120
	1512	140

Source: NRC, 2000. Adapted from NRC Nutrient Requirements of Beef Cattle, 7<sup>th</sup> revised edition.