

# Mississippi Beef Cattle Improvement Association

Mississippi Beef Cattle Improvement Association—Productivity and Quality



## Upcoming events:

- **November 8—2007 Mississippi BCIA Fall Bull Sale**, 12:00 noon, Hinds Community College Bull Sale Facility, Raymond, MS
- November 27—Gulf Coast Beef Education Alliance, Beef Nutrition Series - Bull and Heifer Development and Computer Decision Tools, 6:00 P.M. to 8:00 P.M., distance education sites throughout MS, AL, LA and FL
- **January 10—Nomination Deadline, Mississippi BCIA Spring Bull Sale**
- January 31—Mississippi Farm Bureau Federation Winter Commodity Conference, Hilton Hotel, Jackson, MS
- February 1-2—Mississippi Cattlemen's Association Annual Convention and Trade Show, Jackson, MS

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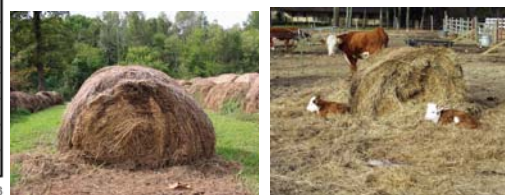
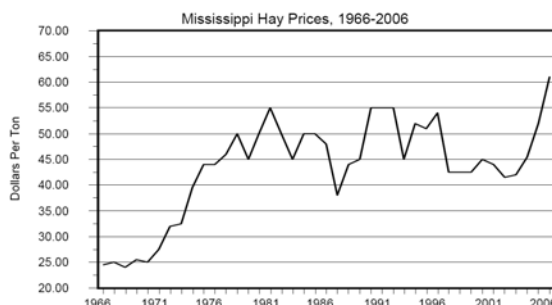
## Tips for Minimizing Hay Loss Available

With input costs on the rise (figure below) and nutrition-related costs accounting for a large proportion of beef cattle operational costs, minimizing hay losses is very impor-

tant. A useful publication outlining strategies for minimizing hay storage and feeding losses is available on the MSUcares beef cattle website:

<http://msucares.com/livestock/beef/minhaylosses.pdf>

Source: Mississippi Agricultural Statistics Service



## Commodity-Derived Feedstuff Selection Decisions

In Mississippi, beef cattle producers are fortunate to have productive, high-quality forage systems available to them. Yet achieving a year-round supply of adequate forage yields with acceptable nutrient composition is challenging. Commodity feeds serve as a nutritional option for beef cattle operations to supplement grazing and stored forage. In fact, a wide variety of commodity-derived feedstuffs exist that can be utilized in ruminant animal production systems. Whole cottonseed, cottonseed hulls, cottonseed meal, soybean meal, soybean hull pellets, corn gluten feed, hominy feed, dried distiller's grain, rice mill feed, and citrus pulp are examples of common feedstuffs in the region. Decisions on which commodity feeds to incorporate into a feeding program and at what levels to include each commodity feed should be based on several key considerations outlined in this article.

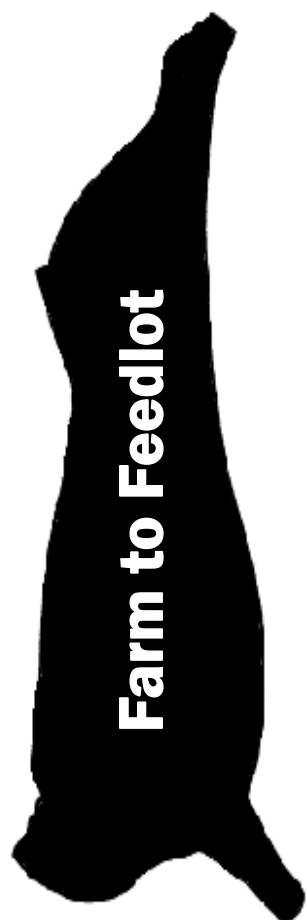
### Supply

Availability of specific commodity feeds varies throughout the region. Whether or not a constant supply of a certain feedstuff is available should be noted. Feeding program modifications will be necessary if stored

supplies of desired feedstuffs are depleted and cannot be replenished when needed. Developing working relationships with reliable suppliers can be invaluable when relying on commodity feeds in beef cattle nutritional programs. Seasonality of feedstuff supplies impacts both availability and price. It is not uncommon for trucks to wait for extended periods (often one-half day or more) in line to be loaded with commodity feeds during periods of tight supplies and/or high demand.

### Physical Characteristics

Handling capabilities and producer preferences for feedstuff handling may determine whether or not a particular feedstuff is a viable option for a particular beef cattle operation. Not all commodity feeds effectively flow through auger systems. The type of truck necessary for hauling a specific feedstuff will vary depending on whether or not auger transport is possible and the type of storage facilities to be loaded. Some feedstuffs are conducive to storage in upright bins, while other feedstuffs require storage areas such as commodity shed bays. The bulkiness and associated storage space required for a given volume of feedstuff will



## Farm to Feedlot Update

One of the Mississippi Farm to Feedlot feeders has announced that they will give the opportunity to have calves tested for genetic markers for certain production and carcass traits. The Tri County Steer Carcass Futurity (TCSCF) Cooperative has entered into a collaborative research project with Merial, owners of the IGENITY® technology. What does this mean for Farm to Feedlot consigners that use the TCSCF? It means that they will have the option of getting a IGENITY profile that provides insight into the genetic potential of their animals for economically important traits.

To qualify for the profile, the cattle must be from a known sire and of a known breed type. A blood sample will be drawn when they are processed for their Iowa delivery weight at the feedlot. The blood sample will then be sent to the IGENITY lab and processed for DNA markers. Some of the carcass traits analyzed by the IGENITY profile include:

- Tenderness
- Ribeye area
- Fat thickness
- Marbling
- Yield grade
- Hot carcass weight
- Quality grade

Other traits included in the profile are:

- Coat color
- Parentage in multiple-sire groups
- Horned verses polled (breed specific)
- BVD-PI status

One added benefit of working with IGENITY is the opportunity for consigners who used multiple sire breeding groups to include cattle in the program. The only requirement is that the producer supply DNA samples on all potential sires in order for the IGENITY parentage panel to determine the most likely sire for each calf. This will enable producers to link traits to individual sires and make breeding decisions accordingly.

Additionally, identifying animals that are persistently infected with bovine viral diarrhea (BVD) will indicate which dams should be also be tested for BVD-PI. Identifying and culling these cows will greatly reduce the chance of more "PI" calves being born. It will also improve the overall health and reproductive performance of the cow herd.

Clearly, this program adds one more benefit to the already fruitful relationship between the Mississippi Farm to Feedlot Program and the farmer feeders who make up the TCSCF. For more information on this, or any other MSU Extension program, feel free to contact the state Beef Cattle Specialists or your local Extension office.

## Field Day—White Sand Research Unit (Nov. 27th)

The White Sand Research Unit will be hosting a field day on November 27th beginning at 8:00 am. The White Sand Unit is located to the right off of Highway 26 traveling west from Poplarville, MS.

This years program will focus on production risk management with topics being presented by Extension personnel from Mississippi State University and the Louisiana State University AgCenter. The overall theme of the field day was chosen to address concerns over the rising cost of production and each stop on the program is intended to help producers make informed decisions on controlling input and optimizing return through more aggressive marketing strategies.

### Schedule of Events

Registration 8:00 – 9:00 am

Tour Stops (9:00 am – Noon)

Stop 1 ... Market Impacts on Input Costs

Stop 2 ... Addressing Beef Cattle Efficiency and Forage Management

Stop 3 ... Heifer Selection and Development

Lunch (Noon – 1:00 pm)

Feeder Cattle Marketing Discussion (1:00 pm – Adjourn)

This group discussion will address several aspects of cooperative feeder cattle marketing.



## Feedstuff Selection (Cont.)

vary from feedstuff to feedstuff. Particle size and other mixing characteristics can affect the flexibility of including a specific feedstuff as part of a mixed feed. On-farm feed delivery systems will also determine the viability of using various feedstuffs. For example, if feedstuffs are likely to cake in self-feeders, then alternative feedstuffs must be selected or alternative feeding methods must be implemented.

Storage life is an important consideration in feedstuff selection. Wet distiller's grain is an example of a feedstuff with a relatively short effective storage life. Mississippi's humid and often warm environment is not conducive to lengthy storage of feeds that rapidly mold or spoil. Producers should become aware of physical characteristics of feedstuffs such as high moisture content that increase risk of or accelerate the onset of quality losses, deterioration, or spoilage. The appropriateness of using various feedstuffs should balance the operational demand for the feedstuff and acceptable storage window of the feedstuff supply.

### Value

The value of individual commodity feeds can be expressed in terms of price per quantity of nutrients delivered. Nutrients of interest in beef cattle nutritional programs include total digestible nutrients (TDN) or alternative energy values (net energy system), crude protein (CP), fat (should not exceed 8% in the total diet), fiber (crude fiber, neutral detergent fiber, acid detergent fiber), and mineral levels (e.g., ratio of calcium to phosphorus, excessive levels of sulfur, etc.). Knowing the moisture content of a feedstuff and whether the nutrient levels are specified on an as-fed (as received, moisture content included) or dry matter basis is critical in assessing the feedstuff's value.

Economic replacement value calculation spreadsheets are available to assist in comparing feedstuffs for nutrient content and price. When ranking individual feedstuffs for value, give consideration to the nutrient contributions of each feedstuff. For instance, an inexpensive, high fiber feedstuff with low TDN and CP levels may rank above other feedstuffs for economic replacement value calculated based on TDN and CP levels per

unit price but may not contain adequate concentrations of TDN or CP for the class of cattle to be fed at expected intake levels. It may be useful to compare "energy supplements" to "energy supplements" and "protein supplements" to "protein supplements".

### Feeding Limitations and Restrictions

Nutrient levels can limit feeding levels of specific feedstuffs as stated earlier using the example of maximum recommended fat levels in the diet. Use of feedstuffs at feeding levels at which toxic or performance-reducing levels of minerals, chemicals, or other components within the feedstuffs are reached should be avoided. Other feeding situations in which feed intake limitations of specific feedstuffs should be imposed include the utilization of feedstuffs known to induce bloat, acidosis, or other nutritional disorders. A good approach when initiating changes in cattle diets is to slowly adapt cattle to dietary changes in small increments over several weeks. Diet composition and/or feed quantities should not be changed on consecutive days or in large steps.

Producers should always stay informed of current legal restrictions on feedstuff utilization. The federal ban on ruminant by-products in ruminant diets is a well-known legal restriction that directly impacts beef cattle operations. If the production of commodities from which by-product or co-product feedstuffs are derived involves chemical use that results in residues in the feedstuffs, then label-specified feeding restrictions should be followed.

Ruminant animals are capable of utilizing a wide variety of feedstuffs, and many commodity feedstuffs are available in the region. These feedstuffs offer the option of a broad range of feeding program possibilities for beef cattle operations. With nutritional costs representing significant proportions of both cow-calf and stocker cattle operating budgets, it is worthwhile to investigate commodity feeds as a source of supplemental nutrients for both effective and cost-effective feeding programs on traditional forage-based diets.

*"...Producers should always stay informed of current legal restrictions on feedstuff utilization."*



Feeding method is an important consideration in feedstuff selection

*Mississippi Beef Cattle Improvement  
Association—Productivity and Quality*

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Send questions or comments to Jane Parish or  
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Mississippi State University  
Extension Service



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**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 payable to  
Mississippi BCIA should be mailed to:

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

## BCIA Genetic Profit Tips – November 2007

### Selection Practices

#### Sire Selection

In order to make sustained contributions to the breeding program, bulls should be structurally and reproductively sound. Approximately 20% of all beef bulls have some degree of infertility. A thorough breeding soundness examination, performed by an experienced veterinarian or other competent personnel, can detect the majority of bulls having obvious fertility problems and should be performed annually on all bulls two to four weeks before the start of mating. Components of the breeding soundness examination include a physical examination, measurement of scrotal circumference, rectal palpation of internal organs, and examination of semen for progressive linear motility and normal morphology.

Sound feet and legs are essential in order for a bull to cover many acres of pasture, both for obtaining adequate nutrition and mating cows. Structural soundness is not an all-or-none phenomenon; rather it is expressed in various degrees. Bad feet, pigeon toes, excessively straight or sickle hocks, and loose or pendulous sheaths are examples of some of the more common structural problems of bulls. Because many structural problems become worse as bulls grow older and heavier, it is particularly important to critically evaluate young bulls.

Structural soundness of bulls that are candidates for selection should be evaluated in a systematic manner. Inspect each bull's feet, toes, heels, pasterns, knees, hocks, and sheath. When viewed from the front, the feet should point straight ahead, both when the bull is standing and walking. The feet should be large and round with a deep heel and with toes that are similarly sized. When viewed from the rear, the legs should be equally far apart at the hocks and pasterns and then toe out slightly from the pasterns to the ground. The bull should move freely with each hoof striking the ground evenly.

Many structural problems are partially heritable and should be particularly discriminated against when daughters will be kept for replacements. However, structural problems that do not compromise longevity or ability to service cows are of little consequence in the selection of terminal sires.

Evaluating bulls for structural soundness also provides an opportunity to gauge a bull's temperament or disposition, a moderately heritable trait. A bull with poor disposition may be dangerous or difficult to work, and his daughters may be difficult to manage as well.

Source: Beef Improvement Federation. 2002. *Guidelines for Uniform Beef Improvement Programs*, 8th ed.