



M I S S I S S I P P I

BCIA

BEEF CATTLE IMPROVEMENT ASSOCIATION

Upcoming events:

- January 20—MBCIA Spring Bull and Heifer Sale Nomination Deadline
- March 4- MBCIA Annual Membership and Educational Meeting and Supper, Raymond, MS
- March 5- Hinds Bull Test and MBCIA Spring Bull and Heifer Sale, Raymond, MS
- March 12-14- MSU-ES Cattle Artificial Insemination School, Mississippi State, MS
- April 7 - Cattlemens Exchange Feeder Calf Board Sale, Winona
- April 10- Beef Cattle Boot Camp, Prairie
- April 17-Beef Cattle Boot Camp, Poplarville
- May 2- South Farm Field Day

MBCIA Fall 2014 Bull and Heifer Sale Results

The Mississippi Beef Cattle Improvement Association held its Annual Fall Bull and Heifer Sale on November 13, 2014. The MBCIA sale featured 18 performance-backed bulls and 40 bred commercial heifers from breeders across the state. Thank you to all of the consignors and buyers for supporting the Fall 2014 Mississippi BCIA Bull and Heifer Sale. Appreciation is also extended to Hinds Community College for hosting the sale and the Mississippi State University Extension Service Center for Technology Outreach Distance Education Team for facilitating online cattle video previews and distance bidding.

The top-selling lot was Gray Chive 345, an Angus bull that sold for \$4,700. Gray Chive 345 was consigned by Gaines Angus Farm of Brandon, Mississippi, and sold to Carey Calhoun of Brookhaven, Mississippi. Other breeders marketing bulls in the MBCIA sale included Barry Farms, J&A Farm, Longview Farms, Inc., Monogram Farms, Mississippi State University Beef Unit, Phil Slay Farms, Ryals Bros., and Sloan Farm. Heifer consignors included Mississippi State University Beef Unit and M&M Farms. The top-selling pen of bred heifers sold for \$2,750 each, and were consigned by M&M Farms.

Sale receipts on 18 bulls totaled \$65,300

for a sale average price of \$3,841. In addition, the 40 bred heifers sold for total gross receipts of \$97,200 and an average of \$2,430 per heifer. The combined bull and heifer sale gross proceeds were \$162,500.

The objective of the Mississippi BCIA Bull Sale program is to encourage production and identification of genetically superior bulls by purebred breeders and to encourage the purchase and use of these bulls by commercial producers. Bulls offered through this sale have passed a breeding soundness exam, met minimum growth and scrotal circumference requirements, and are backed with extensive performance information. Heifers offered in these sales have met the requirements for the Miss Premium Heifer Program..

The MBCIA Fall Bull and Heifer Sale is held annually on the second Thursday in November, and the Spring Bull Sale is held in conjunction with the Hinds Community College Bull Test sale on the first Thursday in March.

**Heifer Average
Price: \$2,430**



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	All breeds	Angus	Charolais	Hereford	SimAngus
Number of bulls sold	18	13	2	2	1
Gross receipts	\$65,300	\$46,550	\$8,500	\$7,300	\$2,950
Average price	\$3,841	\$3,879	\$4,250	\$3,650	\$2,950
High selling lot price	\$4,700	\$4,700	\$4,500	\$3,900	\$2,950

“The value of increasing the accuracy of commercial replacement heifer genetic evaluations is less than that for bulls since bulls produce more descendants from which to derive returns for accelerated genetic improvement.”



Commercial replacement heifers are a valuable resource, and selection. Should be done using resources available

Commercial Heifer Selection Using Genomics

by Alison Van Eenennaam, UC Davis

Traits that are of the most economic value to self-replacing herds are reproductive traits including age at first calving, reproductive success and replacement rate. These maternal traits are sex-limited, lowly heritable, and some are expressed quite late in life. This has precluded replacement heifer selection on these traits, and frustrated genetic progress. In fact, the antagonism between terminal and some maternal and calving traits may have led to negative progress, as positive selection on the terminal traits can result in negative selection on the maternal traits. It has been suggested that US cow-calf producers should have a relative economic emphasis of 47% on reproduction, 24% on growth, and 30% on carcass traits.

Given the economic importance of reproduction, cow-calf producers raising their own replacement heifers should focus some of their selection emphasis on maternal traits. However, many commercial producers have no EPD information upon which to base their replacement heifer selection decisions, and DNA testing offers an appealing approach to provide previously-absent selection criteria. Theoretically, DNA tests are ideally suited for traits where there is no other tool available for selection. Ironically, research shows that DNA tests for low heritability traits will be the most difficult to develop. That is because a very large number of “training” records will be required to obtain accurate DNA tests for low heritability traits. Additionally, such tests will also be the most difficult to validate as there is a shortage of cattle populations with sufficient phenotypic data to estimate the accuracy of new genetic tests for those traits.

The value of using DNA information in making replacement heifer selection decisions will depend upon the information available at the time of selection, the accuracy (r) or % of genetic variation (r^2) explained by the test, and the selection intensity (i.e. proportion of available heifers are selected). The latter is dependent upon the calving and replacement rates.

The maternal trait with the highest relative

economic value in that index was weaning rate (i.e. number of calves weaned). I then modeled hypothetical intermediate and high accuracy DNA tests trained on records from 1000 or 2500 animals, respectively. The breakeven cost of testing replacement heifers was \$22.59 and \$33.22 per test for the intermediate and high accuracy DNA test, respectively. Of this ~ 25% (< \$10) of this value would be captured by the commercial producer, with the majority of the value being realized by the processing sector as a result of improvements in meat yield and quality. The value of increasing the accuracy of commercial replacement heifer genetic evaluations is less than that for bulls since bulls produce more descendants from which to derive returns for accelerated genetic improvement.

Several pieces of information are required to determine the value of using DNA tests to inform replacement heifer decisions. The first is the proportion of genetic variation explained (r^2) by the test for your selection criteria, and for the breed of cattle you are selecting. Independent estimates of this proportion are not available for all breeds and tests on the market.

To date, data suggest that tests trained and developed for use in one breed are unlikely to work well in a different breed, or in an admixed/crossbred population. Tests for maternal and reproductive traits will need to be developed for breeds other than Angus. Reproductive traits are a major profit driver of self-replacing herds and DNA tests have the potential to provide previously-absent selection criteria for commercial replacement heifer selection. Such tests will need to be accurate for maternal traits and inexpensive because the genetic gain in commercial animals is passed onto fewer descendants from which to recoup testing costs. In the future it is envisioned that a single DNA test may be used for multiple purposes (e.g. parentage, identification of carriers of genetic defects, marker-assisted management) which may increase the overall value derived from DNA testing commercial heifers.

Reprinted from: <http://www.nbcec.org/topics/CommercialHeiferSelection.pdf>

The Economics of Grazing Cool-Season Annual Forages

Producers throughout the Southeast feed hay and other stored feedstuffs during the fall, winter, and early spring due to limited forage availability and lower forage quality. Feeding during this time period could last for 90 to 180 days based on management programs and weather conditions.

Regardless of why and how long we choose to feed cattle, most cattle producers will agree this is a very costly activity and greatly reduces the profitability of the cowherd. Feed costs are generally the greatest expense for most cattle producers. Thus, alternative winter feeding programs need to be continuously looked at to reduce the cost of winter feeding while meeting your herd's nutritional needs.

Cool-season annual forages are one of those alternatives that can provide producers with a cost-effective alternative to reduce their hay, supplement, and stored feed costs while potentially extending the grazing season by three or more months.

Cool-season annual forages can be an important part of annual forage production as they allow us to utilize dormant warm-season pastures. These acres that would normally be non-productive during the winter can become productive acres during the winter and early spring months. Although cool-season annual forages are costly to establish, (\$100-\$300/acre) depending on planting method and fertilization, their nutritive values are high in total digestible nutrients (TDN) and crude protein (CP). The high nutritive value of cool-season forages can provide cattle producer with a less costly substitute for supplementing their herd's nutritional needs.

Livestock producers in the Southeast planting cool-season annual forages will have different levels of production per acre, different levels of forage utilization, and different production costs per acre. Table 1 provides the \$/ton of dry matter consumed for various levels of production, utilization, and costs per acre. The cost per ton of dry matter consumed can range from \$26 to \$462 per ton consumed by cattle.

The first column in Table 1 describes the level of cool-season forage production per acre (DM lbs./Acre) and could range from 2,000 to 12,000 DM pounds per acre depending on soil productivity, planting date, management, and weather. Utilization or consumption of forage, as shown in the

second column is very important because regardless of the feedstuff used, (cool-season annuals, hay, stockpiled forage, or commodities) the \$/ton should be evaluated on the amount consumed or utilized, not the amount produced. In Table 1, increasing the pounds of forage production per acre, along with controlling your production costs per acre will provide producers with the cheapest \$/ton of dry matter forage consumed.

Cattle producers can use the information in Table 1 to compare with the total cost of alternative feedstuffs. When making this comparison you must be sure to include all the costs associated with other feedstuffs which would include: the cost to purchase or raise, transport, store, feed, and the percent of waste. You will likely be surprised by how much supplemental feeds really cost us per ton consumed by the cow. Most of the scenarios in Table 1 above with a cost per ton of dry matter consumed of less than \$150 will be cheaper than almost any comparable feedstuff. You may want to put a pencil to it and take a look at comparing feedstuffs in this manner.

Obviously, the economics of cool-season annual forages depends on your individual situation. Remember that all the costs have to be considered whether you are feeding harvested supplemented feeds or producing and grazing cool-season forages. Cool-season annual forages are a viable economic option for producers who can control their costs while getting adequate production (yield) and utilization (consumption). Simple cowboy economics tells us that it's cheaper to let the cows harvest the forage.

Reprinted from: <http://www.secattleadvisor.com/2014/10/21/the-economics-of-grazing-cool-season-annual-forages/>

“Cool-season annual forages are one of those alternatives that can provide producers with a cost-effective alternative to reduce their hay, supplement, and stored feed costs...”

Table 1. Cool-Season Annual Forage Cost Per DM Ton Consumed For Various Levels of Forage Production and Production Cost Per Acre

Forage Production DM lbs./ Acre	Utilization* DM lbs. /Acre	Cool-Season Annual Forage Production Cost Per Acre				
		\$100	\$150	\$200	\$250	\$300
		\$/Ton DM Consumed				
2,000	1,300	\$153.85	\$230.77	\$307.69	\$384.62	\$461.54
4,000	2,600	\$76.92	\$115.38	\$153.85	\$192.31	\$230.77
6,000	3,900	\$51.28	\$76.92	\$102.56	\$128.21	\$153.85
8,000	5,200	\$38.46	\$57.69	\$76.92	\$96.15	\$115.38
10,000	6,500	\$30.77	\$46.15	\$61.54	\$76.92	\$92.31
12,000	7,800	\$25.64	\$38.46	\$51.28	\$64.10	\$76.92

*Forage utilization was assumed to be 65 percent of the available total forage production (column one × 0.65)

Mississippi Beef Cattle Improvement Association—Productivity and Quality

Mississippi Beef Cattle Improvement Assn.
 Box 9815
 Mississippi State, MS 39762
 Phone: 662-325-7465
 Fax: 662-325-8873
 Email: bkarisch@ads.msstate.edu

Send questions or comments to Brandi Karisch, Extension Beef Cattle Specialist, Mississippi State University Extension Service

Brandi Karisch



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

MISSISSIPPI
BCIA
BEEF CATTLE IMPROVEMENT ASSOCIATION

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:

DID YOU KNOW?

Beef production, at 2.17 billion pounds, was 6 percent below the previous year. Cattle slaughter totaled 2.64 million head, down 9 percent from October 2013. The average live weight was up 28 pounds from the previous year, at 1,355 pounds.

<http://usda.mannlib.cornell.edu/usda/current/LiveSlau/LiveSlau-11-20-2014.pdf>

MBCIA Seeking Bull Nominations for Spring Sale

The Mississippi Beef Cattle Improvement Association (BCIA) Bull Sale program encourages production and identification of genetically superior cattle by purebred breeders and purchase and use of these cattle by purebred and commercial producers. The MBCIA promotes the advantages of purchasing breed-leading genetics and environmentally-adapted cattle locally.

Starting in 2008, Mississippi BCIA hosted a Spring bull sale on the first Thursday in March in conjunction with the Hinds Community College Bull Test Sale. The Hinds Bull Test/ Spring Mississippi BCIA Bull Sale partnership has been a great success. The Mississippi BCIA is pleased to continue to offer this spring bull marketing opportunity with its 7th annual sale.

Preparation is now underway for the Spring 2015 Mississippi BCIA Bull Sale to be held on March 5, 2015 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.

Mississippi beef breeders are encouraged to nominate quality bulls that meet all the requirements for the sale. Rules and Regulations for the BCIA Bull Sale along with a nomination form and other current bull sale information is posted on the BCIA website at: msucares.com/livestock/beef/mbcia/bcia_bullsale.html

For sale information contact:
 Brandi Karisch
 bkarisch@ads.msstate.edu
 (662) 325-7465

JANUARY 20

**Spring Bull Sale
 Nomination Deadline**