Volume 15, Issue 1
January 2018

MISSISSIPPI BCIA

BEEF CATTLE IMPROVEMENT ASSOCIATION

- January 13—5th Annual Central MS Bred Heifer Sale—Raymond, MS
- January 15– Nominations due for Spring BCIA Sale
- February 1-8: Dixie Nationals Jr. Roundup—Jackson, MS
- February 28– MBCIA Annual Membership Meeting, Raymond, MS
- March 1– Hinds/MBCIA Spring Bull Sale, Raymond, MS
- March 15-17– Mississippi State University Artificial Insemination School, Animal and Dairy Sciences Department, Mississippi State, MS

Inside this issue:

Happy New Year!

I hope that you all had a great holiday season! Our first Christmas with our little boy was amazing. I hope he never loses his awe and wonder of all the beauty this world has to offer. My holiday break seemed to revolve around family and cattle. It began with a timed A.I. project at my dad's farm. From the time we started the sync protocol til the morning we A.I. bred the cattle, the state of Alabama experienced all four seasons! My take home from this was that 1) I am out of shape, 2) dad and I are both slower than we used to be, 3) don't plan to start breeding before daylight, and 4) have plenty of help. It was a long, wet morning at Rutherford Farms. Fingers crossed for a big conception rate!

We spent the next few days eating, unwrapping gifts, and visiting with friends and family. We kicked off the cold start to the New Year by breeding a few cows, turning bulls out, and preparing to market our spring-born yearlings.

Speaking of markets, have you signed up for Dr. Josh Maples' newsletter? Dr. Maples is the MSU Extension Livestock Economist who publishes a weekly newsletter on the Mississippi cattle markets and issues affecting the prices of calves and cows. To be added to this list email Dr. Maples at josh.maples@msstate.edu.

Don't forget about the 5th Annual Central MS Replacement Heifer Sale on January 13, 2018. Videos of all heifers are posted on our YouTube channel. **Breeders interested in nominating bulls to the Spring BCIA Bull Sale should submit nomination forms by 1/15/2018.**

Cobie Rutherford

5th ANNUAL
CENTRAL MISSISSIPPI REPLACEMENT HEIFER SALE

Sale Day Phone: (601) 857-3578

Saturday, January 13, 2018
1:00 p.m.

Hinds Community College Sale Barn
Seven Springs Road
Raymond, MS

120 Bred Heifers
Auctioneer: Kirk Davis

Greg Lott, 601-940-2675, Sale Chairman
Joe Johnson, 601-268-2587, S.E. MS Sale Barn
Mike Keene, 601-606-7382, MSU-Extension Service
Shelby Bearden, 601-942-0806, MSU-Extension Service
Cobie Rutherford, 662-325-4344, MSU-Extension Service

MISSISSIPPI STATE UNIVERSITY EXTENSION

Commercial Replacement Heifer Selection: Part I

By: Dr. Alison Van Eenennaam, UC Davis & Dr, Darrh Bullock, Univ of Kentucky
Accessed from http://articles.extension.org/pages/73404/commercial-replacement-heifer-selection

Traits that are of the most economic value to self-replacing herds are reproductive traits including age at first calving, reproductive success and reproductive longevity or stayability. These maternal traits are sex-limited, lowly heritable, and some are expressed quite late in life. This has precluded direct selection on these traits when selecting commercial replacement heifers, and impeded genetic progress. In fact, the antagonism between carcass traits and some maternal and calving traits may have led to negative progress (e.g. carcass weight is positively correlated with mature weight), as positive selection on the terminal traits can result in negative selection on the maternal traits. Improvements in reproductive performance can be up to 4-fold more important in terms of the bottom line than improvements in end-product traits in a conventional cow-calf operation selling market calves at weaning.

Given the economic importance of reproduction, commercial cow-calf producers raising their own replacement heifers should focus some of their selection emphasis on maternal traits. However, most commercial producers have no EPD information upon which to base their replacement heifer selection decisions.

Selection is frequently driven by size, as an indicator of age; smaller heifers are often the ones that are born late(r) in the calving season and are too immature to be cycling in time for the first potential breeding season. Commercial producers typically select on at least a visual estimate of a heifer's yearling weight, in addition to a visual evaluation of structural soundness. If increased size is due to age then this will put indirect selection on fertility traits of the dam (e.g. early calving), however if increased size is due to genetics for growth then it can lead to inadvertent selection for increased mature weight. Ideally animals born in the first 21 days of the breeding system would be selected, however commercial producers often do not record birth dates and so have to estimate the likely birthdate based on the size of the calf.

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 lowly heritable traits will be the most difficult to develop. That is because a very large amount of data (e.g., a large number of performance records) will be required to develop accurate DNA tests for lowly heritable traits. Additionally, such tests will also be the most difficult to evaluate as there is a shortage of cattle populations with sufficient phenotypic data to estimate the accuracy of new genomic tests for those traits.

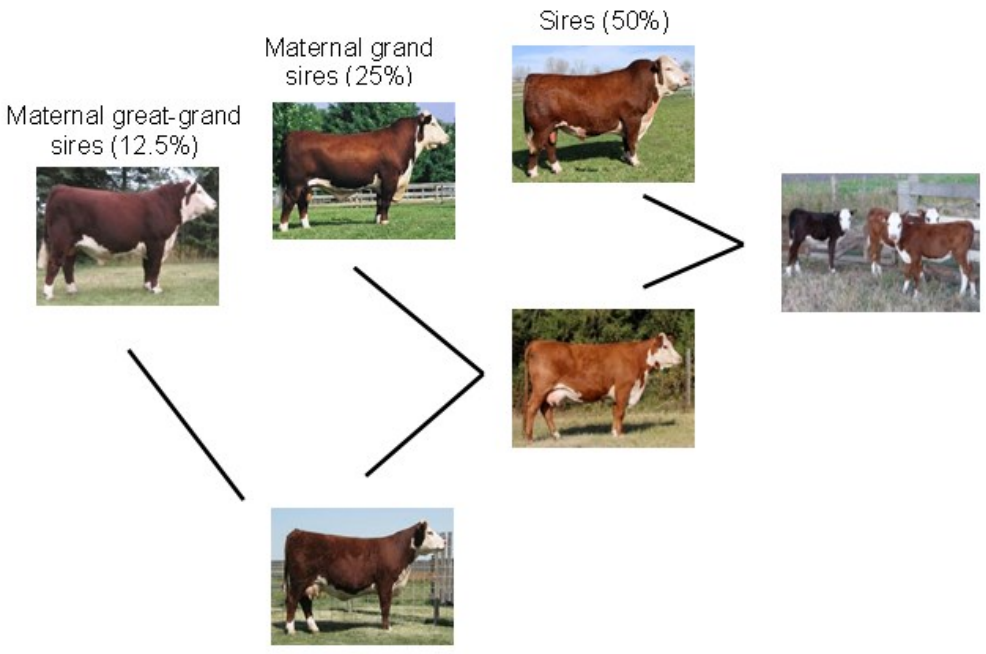

Figure 1. Genetic composition of the herd: 87.5% of genetic composition of calf crop is determined by the sires used over the last 3 generations.

It was shown early on that 50,000 SNP (50K) DNA tests developed using information from one breed have low predictive ability in other breeds. This is thought to be due to the fact that much of the accuracy of genomic breeding values results from the effect of large chromosome segments that segregate within closely related animals in one breed, but not across breeds.

Practically this means that each breed needs to develop their own database of phenotyped and genotyped animals. There are a number of breeds (Angus, Brangus, Charolais, Gelbvieh, Hereford, Limousin, Red Angus, Simmental, and Santa Gertrudis) that have done this by genotyping at least one thousand, and in some cases tens of thousands, of animals with EPDs and phenotypic records to develop DNA tests that are accurate for genomic prediction within those breeds. This genomic information is starting to be incorporated into National Cattle Evaluations and the resulting "genomic-enhanced EPD" have increased accuracies, especially on young animals. For more information see "How DNA Testing Will Affect the Accuracy of EPD Information" factsheet at eBEEF.org.

Sire Selection Drives Genetic Gain

When making selection decisions to improve fertility it is important to remember that genetic gain in herds is predominately driven by sire selection. Although it may seem intuitive to focus on female selection to drive fertility, bulls are where selection focus should lie. That is because sires have a larger number of offspring per year (approximately 25-35) than females who typically have a single calf per year. Figure 1 shows that 87.5% of genetic composition of the calf crop is determined by the sires used over the last 3 generations. There are some EPDs directly related to fertility including heifer pregnancy and stayability.

ELEVATING THE INDUSTRY: 50th Annual BIF Conference

June 20-23, 2018, at 7 p.m. CT

For 50 years the Beef Improvement Federation has hosted our annual research symposium and convention. The convention serves to facilitate discussion and provide education on current issues facing the beef industry. The 50th anniversary for the BIF Convention and Research Symposium will be held on June 20-23 at the Embassy Suites Convention Center Hotel in Loveland, Colorado.

We plan to coordinate travel as a group if possible of Mississippi producers. Please contact Cobie or Brandi if you're interested in more information.

WEBINAR OPPORTUNITY: FAKE NEWS: EPDs Don't Work

Thursday, January 18, 2018 at 7 p.m. CT

There is a lot of fake news out there, and the perception that EPDs don't work is one such piece of news. This webinar will look at the objective evidence supporting the fact that EPDs do work, and examine how their accuracy is impacted by pedigree, performance records, progeny data and genomic information. Alison Van Eenennam, PhD at the University of California - Davis and Matt Spangler, PhD at University of Nebraska - Lincoln will be leading the discussion. Dr. Alison Van Eenennaam is a genomics and biotechnology researcher and Cooperative Extension Specialist in the Department of Animal Science at University of California, Davis. Dr. Matt Spangler is currently an Associate Professor and Extension Beef Genetics Specialist at the University of Nebraska.

To register, visit :
www.beefusa.org/cattlemenswebinarseries.aspx.

January 2018 — Management Calendar

GENERAL
Continue the winter-feeding program. Watch body condition, and utilize winter-feeding groups according to cattle nutritional demands and feed and forage supplies. Lush winter grazing may work well for stockers, heifers, and fall pairs. Manage winter annual pastures to maintain at least four inches of stubble height to keep from limiting winter production. Keep proper freechoice minerals available for cattle at all times. High magnesium mineral supplements should be used for cows on lush winter pastures to prevent grass tetany. Vitamin A supplementation should be an important part of the nutritional program, particularly if frosted grass, weathered hay or by-products are the primary feedstuffs. Start gathering records for tax purposes, continuing good production and financial record keeping. Now is a good time to set yearly and long-term goals for the farm.

SPRING CALVING—January, February, March
Continue supplementation of pregnant females so that they will be in good condition at calving. Have calving supplies on hand including calving record books, ear tags, obstetric equipment, disinfectants, calf scales, and colostrum. Check expected calving dates, and observe bred cattle closely as calving approaches, giving heifers extra attention. Make sure calves receive colostrum during the first six hours of life. If calves do not nurse, administer colostrum with a bottle or stomach tube. Separate lactating cows from dry cows after calving to feed more efficiently. After calving, move pairs to clean pasture, and watch calves for scours. Consult with a veterinarian for advise on scours prevention and treatment. Tag, castrate, dehorn, and implant calves as appropriate. Always maintain good calving records including calf birth weights. Consult with a veterinarian to schedule prebreeding vaccinations or order vaccines. Gather information about bulls at central test stations and in purebred herds to locate potential herd sires. Check sale dates and review bull performance information. Line up breeding soundness evaluations, and make sure bulls are in good condition prior to the breeding season.

FALL CALVING—October, November, December
Fall calving season should be completed. Calculate fall calving percentage. Cow nutrient needs increase dramatically after calving, so use the best hay and feeds for lactating cows now. A forage analysis allows more precise matching of feed nutrients and cattle nutrient needs. Monitor breeding activities in herds exposed for fall calving, and be prepared to remove bulls after a controlled breeding season. If a high percentage of cows return to heat after 40 days of breeding, have bulls rechecked for breeding soundness, consult with a veterinarian on possible reproductive disease problems, and re-evaluate the nutritional program.

Contact Information:

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@MSUExtBeef

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 lifetime dues payable to Mississippi BCIA should be mailed to:

Mississippi Beef Cattle Improvement Association
Box 9815, Mississippi State, MS 39762