

Cattle Business in Mississippi – May 2016
“Beef Production Strategies” article
Should Commercial Cattlemen Be Concerned with Marbling?

Cobie Rutherford – Extension Beef Cattle Associate, Mississippi State University

May is Beef Month in Mississippi! I get fired up just thinking about summer and all the goodness that comes from a hot grill and lean beef! Just this week, I ate a steak from a farm-raised steer that we had butchered. Now, I will admit that I am uncertain of his quality grade and yield grade, but based on my un-trained eye I would suspect that S29B was high select with a yield grade of 3 – acceptable, but marginally. As I cut into his perfectly cooked New York Strip, I thought about the genetic selection that had taken place and wondered if the mating of his sire and dam would create a positive eating experience. After all, on our farm, selection for marbling and carcass traits aren't at the top of our personal priorities.

From our spring 2014 calf crop, S29B was average at best. His adjusted 205 day weight was 505 lbs. His weaning weight ratio among his 33 contemporaries was 99. He was sired by our clean-up bull, a natural calf out of one of our donor cows. His sire is phenotypically ideal for our system. He offered outstanding pre-weaning growth and moderated out in his yearling and mature cow weight estimates. This particular herd sire ranks in the top 30% of the Angus breed for Weaning Weight and Ribeye Area, but ranks in the bottom 5% of the breed for Marbling. OUCH! S29B's dam is one of my favorite young cows. Thankfully, she ranks in the top 30% of the breed for her Marbling EPD and is the trait leader for our herd. Based on the laws of averages, S29B would have had a predicted Marbling EPD that was below breed average.

As a trait, marbling, or intramuscular fat, is an indicator for USDA Quality Grade. The Spring 2016 National Cattle Evaluation for Angus cattle reported Marbling to have an estimated heritability of 0.45. This means that 45% of the variation in this trait can be explained by genetics. In general, carcass traits are more highly heritable than production traits (growth), and reproduction traits. Whether we select for them or not carcass traits are highly influenced by genetics. With that said, we can help beef cattle reach their genetic potential for marbling by increasing days of feed. From years of scientific research, we know that cattle deposit fat (or store energy) from front to rear, top to bottom, and from the outside in. This means that most cattle will store fat in their briskets before they store fat in their udder (females) or cod (males). Likewise, external fat, or the fat between the skin and muscle will be stored before intramuscular fat. If choice-select is high enough and corn is cheap enough – feeding extra days for marbling accumulation can be profitable.

So, should commercial cattlemen be concerned with marbling? If you retain ownership – absolutely, yes. If you sell your cattle off the cow at weaning – it is probably not a trait that you'll want to put a lot of emphasis on, but if you chose to – make sure you use the market to your advantage. Tell the stockyard that you have been using high marbling genetics. Maybe even provide them with a copy of your sire's registration papers. Unlike frame score and muscling, marbling potential cannot be visualized.

As I reflect back up S29B's contemporaries, I am sure there are some that were barely Select. Looking forward, as his heifer mates are just now getting ready to be re-bred for their second calves, it is important for me to remember to incorporate Marbling into my selection criteria. During May, make a commitment to re-evaluate your breeding objectives. No matter what segment of the beef industry you are in, the choices you make will inevitably affect someone's

dinner plate. Even though traits such as Marbling might not be on your list of top breeding objectives, strive to find a sire that is at least breed average for the trait. We know Marbling is associated with quality and owe it to our consumers to have a consistent, high quality beef product.

I have my trusty “I Heart Beef” apron ready! I hope your summer grilling season gets off to a great start! Happy Beef Month everyone!

If you would like to contact me, my email address is cobie.rutherford@msstate.edu and phone is [662-325-4344](tel:662-325-4344).

For more information about beef cattle production, contact an office of the Mississippi State University Extension Service.