

## **Cattle Business in Mississippi – April 2006**

### **“Beef Production Strategies” article**

## **Cow Culling Decisions**

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Deciding which cows to cull and which cows to keep in the breeding herd impacts future herd performance and profitability. There are many factors to consider when choosing which cows to put on the cull list. The challenge in choosing cows to cull is in identifying the cows that are making the operation money and the cows that are costing the operation money.

### **Pregnancy Status**

One of the greatest determinants of profitability in a cow-calf operation is reproductive rate. Open (non-pregnant) cows are a drain on resources. They consume feed, forage, and other resources without producing a marketable calf to contribute to expense payments. Cows that are open at the end of the breeding season should be at the top of the cull list. Cows that calve outside of a controlled calving season are also potential culls, particularly when feed and forage supplies are running short. Late calving cows should be scrutinized as well, because they have less opportunity to breed back to stay within a controlled breeding season.

### **Poor Performance**

Poor calf performance is usually the result of inferior genetics, poor dam milk production, calf illness, or a combination of these factors. Cow passing on inferior genetics to their calves for economically important performance traits and cows with unacceptably low milk production are potential culls. If poor calf performance is due in large part to calf sickness and not associated with the dam, then the dam may still have a productive future in the herd.

While herd genetic improvement is largely dependent on sire selection, the dam contributes half of the genetics to the calf. Culling cows with EPD values that do not compare favorably with breed or herd averages for economically important traits contributes to herd genetic improvement. Many breed associations publish breed averages and percentile ranking tables for EPDs for active dams.

### **Age**

The productive lifetime of a beef cow is variable. As long as teeth, udders, feet, and legs are sound, many older cows are often still able to perform well. Breed composition and production environment can play a role in longevity. Florida research on Brahman-influenced cows indicated that there was consistent rebreeding performance through about 8 years of age and a decline in reproductive performance after 10 years of age. An even steeper drop in reproductive performance occurred in cows beyond 12 years of age. That is not to say that individual cows will not be productive through an advanced age though. Ideally, cows should be culled for advancing age prior to a sharp decline in

reproductive or maternal performance. In addition, with an emphasis on herd genetic improvement, younger beef females are often genetically superior to older cows.

### **Mouth**

Teeth wear with normal use over time. Gritty feeds and forages accelerate tooth wear. Soil type can affect how long teeth remain sound, with sandy soils typically being harder on teeth. Cows can eventually wear their teeth down to a stage where grazing effectiveness is severely impacted. This results in poor body condition despite adequate available nutrients. “Smooth-mouthed” cows have teeth worn down to the gums. Cows may also lose teeth at any age from being knocked out by blunt force or from gum disease or infection resulting in a “broken-mouthed” condition. These cattle may dribble feed and have a hard time consuming adequate quantities of feed or forage. Lumpy jaw is another condition of the mouth that can negatively impact grazing ability. Annual inspection of the teeth and mouth during routine cattle working is recommended.

### **Udder**

Udder soundness affects milk production, milk consumption, and ultimately calf weaning weights. Proper udder attachment in a beef female is important for a long, efficient, productive life. A sound udder should be firmly attached with a strong, level floor and four properly formed teats proportional to body size. Weak udder suspension results in pendulous udders that are difficult for a sucking calf to nurse. Balloon or funnel-shaped teats are also difficult to nurse and may hurt calf milk consumption and weaning weight. Balloon teats are also sometimes an indication of past mastitis (a bacterial infection of the mammary tissue). The udder should be healthy and free of mastitis in all four quarters for good milk production.

### **Structural Soundness**

Structural soundness is important from the standpoint of functionality. Structural problems subject the joints to excessive wear and stress that can eventually hamper mobility. Cows that have difficulty moving around the pasture may be less active grazers. Cows need to be sound enough for effective grazing and successful pasture breeding. Condition and performance of structurally unsound or crippled cattle often goes downhill. Obvious structural defects can decrease the market appeal of an animal as well.

Lameness is a major reason for culling cattle. Lameness leads to decreased performance, decreased reproductive efficiency, weight loss, and increased treatment costs. A study of five large western feedlots showed that lameness accounted for approximately \$121 loss per lame animal. Many conditions can be the cause of lameness in cattle including foot rot, laminitis, joint injury, and fescue toxicosis.

### **Health Problems**

Cancer eye can impair a cow’s ability to raise her next calf. Culling is often the best option once an affected cow has weaned her calf. Another health issue that may determine if a cow should be culled from the herd is Johne’s disease. Johne’s disease is a chronic, incurable, contagious infection of the intestinal tract. Calves usually become infected when they nurse udders that are contaminated with infected fecal

material or when they are housed in contaminated pens or pastures. Johne's disease causes severe, explosive diarrhea and weight loss in adult cattle leading to enormous production losses in infected herds. Since there is not an effective treatment or cure for Johne's disease, the best way to keep infected cows from spreading it to others in the herd is to cull them. Blood or fecal culture tests may be performed to identify infected cattle.

Prolapse is another potential health concern that may necessitate culling. A vaginal prolapse occurs when vaginal tissue protrudes through the vulva where it is exposed to the outside environment, potential injury, and disease-causing agents. Uterine prolapse is a condition in which the uterus is pulled through the birth canal with the calf or afterbirth. Vaginal prolapse typically occurs during late gestation as calving approaches, while uterine prolapse usually occurs at or shortly after calving. Because vaginal prolapses (unlike uterine prolapses) are likely to reoccur and are known to have a genetic component, cows suffering from this condition should be marked for the cull list.

### **Disposition**

"High-headed" cattle are dangerous and should be prime candidates for culling. Culling for unacceptable disposition reduces the risk of injury to both cattle and people. Mississippi State University animal scientist, Dr. Rhonda Vann, has conducted several studies indicating that excitable calves often sacrifice growth performance and Quality Grade compared to calmer calves. Colorado State University studies have also shown that excitable cattle are more likely to produce dark cutter carcasses, which are subject to severe discounts. Because calves inherit a genetic component of temperament and also pick up habits from their dams during the suckling phase, bad attitudes can be propagated within the herd without selection pressure for acceptable disposition.

### **Culling Decisions**

Appropriate times to cull cows from the herd depend on the reasons behind the culling. In cases where cows have developed severe health problems, removal from the herd may need to be immediate. In situations where cows are being culled for low performance or other less urgent factors, it often makes sense to wait until after nursing calves are weaned. If market conditions are such that even cows weaning low-performing calves are generating a profit, it may be cost-effective to hold onto these cows in the near term and then market them before they become unprofitable. Production conditions can also influence the best time to remove cows from the herd. During drought or other conditions where forage and feed resources are limited, culling deeper into the herd is often appropriate.

Cull cow receipts generally account for 15 to 20 percent of gross income in beef cow-calf operations. Cull cow price levels and seasonal trends should be taken into consideration when deciding when to sell cull cows. When cull cows prices are trending upward, it is often advantageous to wait to market cows if the increasing values can cover added production expenses from holding over cull cows. It may also be advantageous to retain cull cows until weight and body condition can be added. Unlike feeder cattle prices, cull cow prices generally increase on a per pound basis with increasing cattle weights. If cull cow prices are trending downward, however, it may be

advisable to market cull cows in a timely manner before more money is invested in cow maintenance, particularly if this investment will not likely be recovered. In Mississippi, the traditional seasonal highs for cull cow prices usually occur in March, while the seasonal lows usually occur in November.

Cow culling strategies impact both calf quantity and quality and, when planned and implemented effectively, can greatly enhance the profitability of a cow-calf operation. Making informed culling decisions helps maintain a high level of herd performance. Even favorite cows should be subject to a systematic culling process. "Ole Bessy" may be a sweetheart, but ask yourself how much you are willing to pay to keep her. Contact your local county Extension office for more information on cow culling or related topics.

### **BIF 2006 Countdown – It is Finally Here!**

The Beef Improvement Federation annual meeting visits Mississippi for the first time in nearly forty years this month. An outstanding program is planned including the latest information on the 2005 National Beef Quality Audit, ultrasound use, feed efficiency, crossbreeding programs, retail targets, and many more topics relevant to the Mississippi beef industry. Program and registration information is available online at <http://msucare.com/livestock/beef/bif2006.html> or through your local county Extension office. Make plans now to attend BIF 2006 on April 18-21, 2006 in Choctaw, Mississippi. Although the early registration deadline has passed, **it is not too late to sign up for BIF 2006**. Registrations are still being accepted ahead of time or on-site. For more information call Extension Animal and Dairy Sciences at (662) 325-7466 or 325-3691 or your local Extension office.