

## **Cattle Business in Mississippi – October 2006** **“Stocker Cents” article**

### **Revisiting Castration**

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In a survey from several years ago, it was revealed that only about 30-40% of Mississippi cow/calf producers castrate their bull calves. This percentage is similar to surveys published from other southeastern states. With relatively few calves being castrated on the farm of origin, it is little wonder that we see such a high percentage of bull calves arriving at stocker and backgrounding operations in the state. This makes castration one of the most common management procedures performed on calves in order to increase their value.

While castration may be routine, it is certainly not without complications. If not done properly, you may see an increase in the number of infections, pulls, decreased feeding performance, and even death loss. Even without complications, calves castrated at arrival can be expected to gain nearly 0.5 lbs per day less, suffer from a 20% increase in sickness, and may run as high as two percent more death loss compared to calves that are already steers. This performance difference means that bulls need to be discounted \$5.00 to \$8.00 per cwt., depending upon their size.

To Band or Cut? In most cases when we are receiving lightweight calves, knife castration would appear to be the better option. When looking at studies that compare these two methods, the results were surprisingly consistent. Calves that were knife castrated at arrival, showed a better average daily gain (0.15 - 0.25 lbs.) over the next 30 to 75 days compared to banded calves.

In several of these trials, calves that were banded had a higher pull rate, but feed efficiency and death loss typically did not differ between castration methods.

Often times we think that banding would lead to better performance since there would appear to be less stress and there is not an open wound that needs to heal over. However, this is not necessarily the case. Studies have looked at the levels of a stress hormone (cortisol) in banded and knife castrated calves.

When castrated with a knife, cortisol levels spike at a very high level but then return to normal after two to four days. In calves that have been banded, cortisol levels typically don't spike as high, but they remain elevated for a much longer period of time. This may account for some of the performance differences that we see.

Now having said this, there are instances where banding clearly has an advantage over knife castration. Those of you that are buying heavy “cutter” bulls that have an increased chance of bleeding may certainly benefit from banding over open castration. When we get into very muddy pen conditions and can't get the cattle a dry place to lie

down, banding may be a superior method of castration. We will also have some operations that will band in the heat of summer.

This is because the calves tend to congregate under the shade and this area becomes wet, muddy, and will have a high concentration of flies. All this may lead to a higher number of infections if knife castration is used. So while we all like to have a rule that we hang our hat on, keep in mind that there are always exceptions.

I believe that in most instances, castration should be done at initial processing. There obviously is debate on this thought as well, but I want to get all of the initial stress on the calves out of the way, up front. That way, once the pen has gotten over their typical outbreak of respiratory disease (typically two to three weeks after arrival), the calves have healed from castration and are ready to move forward.

We don't want to have to come back and castrate the calves and stress them all over again. In these situations, delayed castration will only stretch out our pulls and labor costs over a longer period of time. If we have specific information about a group of calves that would lead us to believe that they run a much higher risk of morbidity, then perhaps in that case delayed castration may make sense.

Or if we are overcrowded and facing extremely wet conditions in the receiving area, then perhaps a 30-day delay in castration may be warranted. However, I don't think delaying castration should be a part of your normal receiving protocol.

### **Clean Equipment and Proper Technique**

Regardless of the method employed, a good, clean technique is critical to a successful outcome for the calf. This can get overlooked in those situations where you have a large number of calves to do and a short amount of daylight to get them done.

Normally, if we see an increase in the number of castration infections, it is due to not keeping our hands and equipment as clean as they need to be. Being able to place your equipment in a bucket of disinfectant and water between calves and keeping your hands reasonably clean will go a long way in preventing infections following knife castrations.

There are several banders on the market and they each have differences in how you apply the band. Even though we hate to stop and ask for directions when driving and we never read the package insert in the vaccine we buy, do take some time and study the explanation that comes with your equipment. It will cover where to place the band and how much tension to apply.

Since the band sets up an area of low oxygen tension where it is applied, it is recommended that you use a vaccine that contains a tetanus antigen. You can get this in combination with your "blackleg" vaccine. Proper technique will also limit the number of complications you will have to deal with.

Castration is one of those routine management procedures that is often overlooked until problems arise. This is a stressful event for the calf and we need to make sure we are doing this procedure correctly. The method of castration employed will depend upon your facilities, labor, and personal preference.

However if you decide to castrate these calves, take the time to do it correctly and keep yourself and your equipment clean. That way we can get that calf off to a good start and keep him growing through the entire feeding period.