

The Latest Across the Plains

Timely Reminders

- ◆ Use at least two methods of fly control.
- ◆ Worm cows and bulls.
- ◆ Test bulls and make sure they have an adequate diet including mineral.
- ◆ Review your heat synchronization program and time-line.
- ◆ Put up shades.
- ◆ Make sure that waterers have enough space, recharge rate and are cleaned weekly.
- ◆ Review your implant program with us.
- ◆ Review diets with current feed costs.
- ◆ Optaflexx® is profitable to feed to conventional feedlot cattle the last 28 days prior to slaughter.
- ◆ Keep pens scraped.
- ◆ Implant suckling calves going to pasture.

Unused Feed

"If you think you understand antibiotic resistance then it has not been explained to you very well."

Save Money \$\$\$ Test Your Feeds

Tests are relatively inexpensive, usually costing less than \$18, for the information derived. Contact our office to set up an appointment to have us pull feed samples if we have not done so yet.

We want to hear from you...

Do you have a question you would like one of the nutritionists to address in depth in our newsletter? Just submit your question through our website www.GPLC-Inc.com and we will get to work on it.

Calendar of Events

- **May 1 - 2** Animal Ag Alliance, Arlington, VA
- **May 11** Mother's Day
- **May 21 - 23** Minnesota Dairy Health Conference, Bloomington, MI
- **May 22 - 23** California and Arizona Feeder Council Meeting, Coronado Island Marriott Resort, Coronado, CA

- **May 26** Memorial Day
- **May 29 - June 5** Young Cattlemen's Conference, Denver, Chicago, and Washington, D.C.
- **June 4 - 6** World Pork Expo, Des Moines, IA
- **June 11 - 14** The American Seed Trade Association Annual Convention, Indianapolis, IN
- **June 15** Father's Day
- **June 15 - 21** Florida Cattlemen's Association Convention, Marco Island, FL
- **June 18 - 20** Canada's Farm Progress Show, Regina, SK
- **June 18 - 21** Beef Improvement Federation Symposium, Cornhusker Marriot, Lincoln, NE
- **June 23 - 25** Oklahoma Cattlemen's Association Summer Ranch Tour, Oklahoma City, OK



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Parasite Control in Cattle

By Dan Larson, Ph.D., Nutritionist

Research data indicate controlling parasites may earn a \$201 return on deworming investment in the cow/calf herd. Internal parasite control in feedlot cattle will return more than \$10 for every \$1 invested in the drug (Merck Animal Health). There are very few, if any other, on farm applications that create that level of profit. A parasite control program can be very simple yet highly effective. Any effective parasite control strategy must have two components, one to address internal parasites (white wormers) and one to control external parasites (ivermectins). An effective deworming strategy requires at least 2 doses throughout the year in a cow/calf operation. Deworming is perhaps more simple in feedlot cattle coming into the drylot. Feedlot cattle treated with an internal dewormer upon feedlot entry should remain clean for the rest of the feeding period, provided they do not have access to grass.

Deworming the cow/calf herd is proven to increase calf weaning weight, and in more severe cases, improve pregnancy rates. The most common strategy employs two rounds of deworming, one round when the cows are brought in at first freeze and again approximately 5-6 weeks after turnout to pasture. At both time points, an external dewormer is essential to control lice. There are numerous ivermectin pour-on products available, both name brand and generic. The cost of external parasite control is variable, ranging from \$4/head for name brand ivermectins down to less than \$1/head for generic ivermectins. Consult your animal health supplier for a recommendation of the best external dewormer for your area. The selection of an appropriate internal dewormer is more complex. In areas of the country where stomach worms (round worms) and intestinal worms are of primary concern, internal (white) dewormer chemicals such as fenbendazole (Safe-Guard® feed through, Panacur® drench) and oxfendazole (Synanthic drench) are highly effective. However, in areas of the country where liver flukes are of concern, albendazole (Valbazen drench) and avermectins with clorsulon (Ivomec®, Dectomax®, Eprinex® injectable) are necessary to control flukes when administered at the correct point in the fluke's lifecycle, as well as other internal parasites. Internal parasite control will cost approximately \$3.75 to \$4.00/head, depending on the brand.

In order to adequately control parasites, we recommend cows are treated shortly after first freeze so the cows go into the winter season with a low parasite load and are less likely to reinfect pastures in early spring. Prior to turnout in the spring, cows should be treated with an external dewormer to control lice. We recommend retreating cows with an internal dewormer approximately 4-6 weeks after turning out to pasture. After the weather warms, it takes approximately 4-6 weeks for larvae to mature to the point where internal dewormers can effectively kill the parasite. The chief problem with most standard internal dewormers is they cause a one-time purge which allows the animal to become reinfected in a short period of time. Another challenge associated with pasture deworming is the application of treatment. Fenbendazole (Safe Guard®) is cleared for free choice

feeding through a pasture mineral. The strategy allows the animal to consume the drug free choice over a 3-7 period and is the only product with such a delivery method. It can also be delivered in cubes or blocks. A new product, an extended release eprinomectin (LongRange™, Merial), may provide a longer duration internal parasite control, as long as 150 days. This new eprinomectin delivery method will both allow the producer to inject the dewormer at the chute prior to turnout and provide a longer duration of protection than conventional dewormers.

As stated earlier, deworming feedlot cattle is more simple and easier to apply. All incoming feedlot cattle should receive an internal dewormer shortly after arrival. Newly arrived feedlot cattle should also be treated with an external dewormer. Feedlot cattle should be retreated at re-implant time to provide additional lice and mange control. Research has proven that controlling parasites not only improves feed efficiency but also enhances the immune response to vaccination. These responses are both likely due to the parasite utilizing energy that would otherwise be available to the calf.

Regardless of the product or class of animal, parasite control is a key element to improving profitability. Keep in mind a combination of external and internal parasite control methods is integral to the success of a parasite control strategy. The resistance of parasites to pour-ons has been noted and it may be important to rotate parasite control products to maintain efficacy. Please visit with your nutritionist and veterinarian to develop the most effective strategy for your operation that will best enhance your productivity.

Castration Decisions

By Zeb Prawl, M.S., Nutritionist

With the majority of the spring calf crop on the ground by now, a cow/calf producer has already made management decisions regarding the future profitability of those baby calves. One of them includes castration of bull calves. To castrate or not to castrate, that is the question at birth for many.

A common belief of most cow owners is that a bull calf will outgrow its steer mates if left intact at birth versus being castrated at birth. This is true for young calves (less than 3 months of age) that do not receive a suckling growth implant at time of castration. However, numerous research studies have shown that a bull calf castrated and then given a suckling implant before weaning will grow as well as its intact counterpart. Castrating baby calves at birth is ideal because it is the time in their lives that they will incur the least amount of pain and stress associated with the process. If those calves are later given an implant at branding time along with other pre-weaning treatments, they will be as heavy as their bull counterparts come weaning. Because of this known research, timing of castration is clearly in favor of the younger the calf. It is imperative that bull calves be castrated not only in a timely manner, but also in a safe and humane manner so animal performance is least negatively affected. Doing so early in life also leads to less behavioral problems with these animals and helps produce a more desirable



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carcass at a younger age. Just make sure you are taking advantage of proven production management tools to maintain weight gains. This advantage is illustrated by work from South Dakota State University by Bruns and Pritchard. At 2 months of age, calves were assigned to one of two groups. The first group was castrated and implanted at two months of age. The second group was left intact. Both groups were weaned at five months of age with no difference in weaning weight. Calves were then started on feed, and then the second group later was banded. During the next 29 days on feed, the banded calves had their gain reduced by 46% compared to previously surgically castrated calves. This occurred while maintaining the same intake levels as the previously castrated calves. Thus the banded calves saw their feed:gain ratio almost double, making them grossly inefficient. This would result in a significantly higher cost of gain in any situation.

What is much more debated these days is the method of castration. All methods of castration will cause a certain amount of pain and stress, ultimately affecting calf performance. There are two general methods of castration that are predominately used in the U.S., surgical and bloodless.

Surgical methods are variable, but all involve the incision or opening of the scrotum and physical extraction of the testicles. The spermatid cords, which connect the testicles to the body, are of most concern to producers because this is where blood loss is most prevalent. Cords that are not properly severed and left dangling can act as "ropes" for bacteria to climb up on and into the animal. Because of the potential for excessive bleeding or possible infections, many producers opt for a bloodless method.

Bloodless castration uses small rubber rings or elastic bands to clamp off blood flow to the scrotum in a procedure termed "banding". While these methods keep bleeding potential to a minimum, there still is risk for infection, and in some cases, a general failure of the procedure to get the job done if a testicle is left above the band. With the procedure, it is recommended that a tetanus vaccination be given ahead of castration. Care must be taken to also make sure that both testicles are clearly in the scrotum and the band is properly placed tight above them, against the body wall of the animal.

The pain caused by castration can potentially cause poor calf performance due to decreased feed and water intake. In addition to the pain, suppression of immune function can also result in increased incidence of morbidity. Generally, surgical castration provides the most immediate pain for the animal, followed by little to no pain for the long term. Conversely, banding will elicit less immediate pain, but will be associated with longer durations of chronic pain, sometimes lasting as long as 4 weeks after the banding process takes place, as documented by blood cortisol levels. A relatively new but non-researched method uses both banding and then slicing the scrotum open to expose the testicles. This method seems sure to elicit multiple pain responses, making this particularly stressful for a newly arrived calf in the feedyard.

To further illustrate the difference between surgically and bloodless castration methods, Dr. Frank Brazle, KSU, run a study in 1992 with purchased calves where they compared previously castrated calves to surgically castrated and banded calves

upon arrival. Gains were 2.12, 1.90, and 1.70 lb/day, respectively, for given treatments during a growing phase. This all happened while morbidity, mortality and cost associated with medical treatment were similar among treatments.

More recently, work done in Florida by Warnock and others compared 5 different methods of castration, including:

1. Control – were castrated surgically prior to weaning at an average age of 52 days.
2. Intact Bulls
3. Castrated using a Calicrate Bander
4. Castrated using a Henderson Castrating Tool
5. Castrated surgically.

Data was analyzed over the initial 14 days after castration and then from day 0-84 of the entire experiment. Average daily gains, dry matter intake, feed efficiency and daily water intakes were all statistically similar among treatments. However, if you closely evaluate the numbers, you will see trends in growth of the cattle that favor surgical castration compared to banding when it comes to animal growth.

Table 1.

Effect of castration technique on measures of performance and intake in beef calves

Item	Treatments ¹						
	CON	BULL	BAN	HEN	SUR	S.E. ²	P-value
Average daily gain, lb/day							
d 0 to 14	1.60 ^a	1.10 ^{ab}	.033 ^b	0.53 ^b	0.57 ^b	0.33	0.06
d 0 to 84	1.98	2.21	1.76	1.98	1.98	0.13	0.42
Daily feed intake, lb/day							
d 0 to 14	13.6	12.5	12.8	12.1	13.9	1.2	0.80
d 0 to 84 ³	20.9	20.9	20.0	20.9	21.1	0.95	0.92
Daily water intake, gal/day							
d 0 to 14	10.67	8.74	9.61	9.16	9.66	0.87	0.61
d 0 to 84 ³	8.63	8.37	7.74	8.37	8.13	0.48	0.71
Gain: Feed							
d 0 to 14	0.10	0.06	-0.06	0.03	0.02	0.05	0.29
d 0 to 84	0.10	0.10	0.09	0.09	0.09	0.005	0.39

¹CON = calves castrated pre-trial; BULL = intact male calves; BAN = calves banded on day 0; HEN = calves surgically castrated with Henderson castration tool on day 0; SUR = calves surgically castrated with emasculators on day 0.

²Standard Error

³Data reported as average daily intake by week

^{a, b} Means within same row with different superscripts differ P<0.05

Warnock, Hersom, Thrift, Dec. 2013. AN291, Department of Animal Sciences, UF/IFAS Extension.

Use whatever method fits your operation best for castrating your bull calves. But make no mistake on the timing, Sooner is better! Be certain you employ the proper implant regimen and you will have calves that are just as heavy and are much more marketable. That in itself can pay you back with the differences in calf prices these days.





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