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## Agriculture News and Update JUNE 2021



# NOBLE COUNTY EXTENSION

### Cattle Branding Time

*Brian Freking*

Spring processing calves is here, therefore, consider sitting down with your veterinarian to learn of the most recent vaccines and procedures that will give the best economical return. One area that has changed in recent years is giving modified live respiratory vaccine at branding. Research has shown that it can aid in summer respiratory problems but perhaps more significant is the initiation of the “memory” cells to give a better response to the second injection at preconditioning or weaning. Again, visit with your veterinarian as giving modify live vaccine can pose a concern when given to calves nursing pregnant cows. No matter which vaccination program is outlined, it is of little value unless the vaccine is handled and administered properly.

Recently mixed modified live vaccines are very sensitive to sunlight. It is preferred to have a cooler with syringe barrel size holes cut in the top or side to place the syringes in when not in use. Place a few cold packs in the cooler so the vaccine is not only in the dark but kept cool also. Vaccine location recommends everyone now administer in front of the shoulder and whenever possible inject subcutaneous as suggested for Beef Quality Assurances. It is recommended to record serial number(s) of vaccine given and might be done easiest by using a smart phone to capture it as an image.

Methods of castration has been discussed for many years and often the method preferred comes from a line of tradition. The most important thing is to get it done at a young age – before 3 months of age. If castrated early the methods and procedures used seems to be



similar in stress and effectiveness. Yet, the National Animal Health Monitoring System (NAHMS) found that only 75 percent of the calves are castrated before marketing and of those only 75 percent were castrated before 3 months of age. Admittedly, there are some parts of the country where the calves are barely seen before gathering so castration early is the farthest thing from their mind.

Discussions are held on surgical versus banding and research data varies as the “best and lowest stress.” Basically, if done at early age banding seems to be slightly less stressful as measured by cortisol levels however if castrated later – at weaning or later – then initially cortisol levels are higher when castrated surgically however the cortisol levels in the banded calves peak later and some evidence shows the banded calves have some pain up to 4-5 weeks after castration. Gains of the late castrated calves comparing the two methods vary but tend to favor the knife cut cattle 30-60 days later. It is recommended to give a vaccination for tetanus before or at least when banding cattle. There seems to be more of a trend to band calves when tagging at birth which is fine however it is a little too early to implant with growth hormones. An interesting fact is that only 20 percent of the calves going to market are implanted, according to NAHMS, and yet these calves are 20 pounds heavier than nonimplanted herd mates. Unless in an “all natural” program implanting at branding will give a good return on your investment with implants.

When knife castrating some slit the side of the scrotum while others cut off the bottom of the scrotum. Research comparing the two methods is non-existent but most veterinarians say it is simply preference. The important thing is to make either incision large enough to allow good drainage. If cutting off the bottom of the scrotum, most recommend removing the bottom one-third. Some situations were noted where a small portion of the bottom of the scrotum was removed and 20-30 percent of the calves became severely swollen and several died due to infection. In young calves several pull the testicles without cutting the cord but the general preference is to pinch off the cord as high as one can to the body. For larger calves the use of an emasculator with the crimper to sever the cord to reduce bleeding is recommended.



Subcutaneous (SQ)

Branding damages less valuable hide if placed on the hip and then preferably low on the leg or high on the hip. Cortisol levels indicate that branding creates more stress than castration so maybe the smaller the burn the better.

It is important to use good cattle handling procedures at all times. All of these procedures mentioned have shown indications of some pain response and yet cattlemen realize they are a necessity for good cattle management. Good BQA processing has value maybe we don't always receive what we think we should but consider the heifers that you keep and how you would want them to be treated or place a value on known vaccination programs.

## Extension Experience – Insights into Oklahoma Agriculture

The Northwest Area Extension Staff would like to announce the creation of our new podcast *Extension Experience*. The *Extension Experience* podcast is brought to you by Josh Bushong, Trent Milacek, and Dana Zook. Each week they provide perspective on Agriculture topics and offer insight from our experience working with Extension Educators and Producers across Oklahoma.

The *Extension Experience* podcast is available on Spotify, Google Podcasts, and Apple Podcast platforms. You can also access the episodes on spotlight, <http://spotlight.okstate.edu/experience/>.

We hope you consider listening to Extension Experience.

## Dehorning: Updated Recommendations

Dr. Rosslyn Biggs

In late 2019, the American Association of Bovine Practitioners (AABP) updated their guidance for dehorning practices. The major changes separate dehorning recommendations from those for castration and additional pain mitigation strategies to improve animal welfare.

The 2017 USDA National Animal Health Monitoring Beef Cow-Calf Study, released earlier this year, reports that only 7.8% of US beef cattle are horned. This study shows a significant downward trend from previous reports. This trend is undoubtedly due to genetic selection, as the vast majority of beef cattle producers have embraced the opportunity to incorporate polled genetics. This trend will also likely continue in many dairy breeds as genomics and selection create options in that segment.

Producers with horned cattle may find that a dehorning plan improves efficiencies and animal welfare. A successful plan involves the use of a written protocol, skilled personnel, as well as adequate restraint and appropriate pain management.

The use of a written protocol, developed with a veterinarian, will establish the best age and dehorning technique, minimize stress and promote healing. A well-designed protocol addresses: calf age, personnel training, animal restraint, and pain management. The protocol should be reviewed yearly.

It is recommended that dehorning takes place as early as practically possible. There are two common forms of horn removal, disbudding, and mechanical removal of the horns. Disbudding involves the removal or destruction of the horn-producing corium in young calves. This can occur as early as 24 hours of life. Care must be taken to prevent calf injury. Disbudding is preferable over dehorning, but is not often practical for beef producers. Dehorning prior to three months of age is recommended, but again, producers should follow the plan established by their veterinarian.

The chances of a successful dehorning improve when the protocol is executed by trained personnel. The use of appropriate, well designed training for personnel also improves safety and animal welfare. In addition to insuring personnel understand safe techniques, training prepares personnel to address wound management to avoid infection, flies and pain for older calves and those with prominent horns.

Another way to improve dehorning practices, involves the consideration of both physical and chemical restraint. Recommended restraint techniques maintain both human and animal safety and minimize stress. Facilities should be in good working order and safely secure the head of the calf. Chemical restraint may be considered in conjunction with physical restraint. Sedatives should be used only on the order of a veterinarian. Although some sedatives may offer pain control, many do not, and pain management should be employed to improve animal welfare following the procedure.

Dehorning is inherently painful. The AABP now considers pain management strategies basic standard of care for all disbudding and dehorning procedures. Local anesthesia can provide immediate relief for up to

five hours following the procedure. Longer term pain control can be achieved using non-steroidal anti-inflammatory drugs (NSAIDs).

It is important to recognize that there is no NSAID currently labeled for pain relief after dehorning. The NSAID chosen must be prescribed by a licensed veterinarian for this extra-label drug use. The Animal Medicinal Drug Use Clarification Act (AMDUCA) requires the use of an extra-label drug only with a valid Veterinary-Client-Patient-Relationship, documented drug selection process, records maintenance and observance of AMDUCA defined withholding times.

Dehorning processes, and ultimately the producers return on investment, can be improved by implementation of these techniques and regular communication with your veterinarian.

### ***PRIVATE APPLICATOR CERTIFICATION UPDATE***

Private Applicator packets will no longer contain the exam, answer sheet, envelope or license application form. Study material packets are available for a \$20.00.

All Private Applicator exams will be proctored and through [www.PSIExams.com](http://www.PSIExams.com). For specific questions, contact the Oklahoma Direct line at 1-855-579-4643. Feel Free to contact Chad Webb in the Noble Co. OSU Extension Office at 580-336-4621 or by email at [chad.webb@okstate.edu](mailto:chad.webb@okstate.edu) with your questions.

### **Horn Flies**

Barry Whitworth, DVM Area Food/Animal Quality and Health Specialist for Eastern Oklahoma  
Justin Talley Ph.D. Oklahoma State University Extension Livestock Entomologist

The scientific name for horn flies is *Haematobia irritans*. As the name implies, the flies are very irritating to cattle. Physiological changes occur in cattle with horn fly infestations such as increase in heart rates, increase in respiration rates, increase in rectal temperatures, and increase in water consumption. If the flies are not controlled, the cattle waste energy licking their backs, twitching their flanks, switching their tails, and stomping their feet. Spending all this energy on combating this pest and less time eating results in weight loss and lower milk production. The economic loss to producers can be very high. The horn fly is a costly parasite to the cattle industry with estimates of \$1 billion in lost production. In addition to lost production cost, producers spend an additional \$60 million in horn fly control.

The life cycle of the horn fly is simple. Horn flies, which are about ½ the size of a house fly, spend most of their time on cattle. Horn flies are distinguishable from other flies because they congregate with their heads pointed down. They are usually seen in groups on the backs and shoulders of cattle. They migrate to the belly when it is hot. The flies may take up to 40 blood meals a day. The female fly must have a blood meal to reproduce. The only time the female leaves the cow is to lay eggs in a fresh manure pile. The eggs will hatch, and the larvae will live on the material in the manure pile. In a few days the larvae move into the soil to pupate and emerge as adults. The life cycle from egg to adult takes 2 to 4 weeks. For a more detailed description of the horn fly life cycle go to <http://livestockbugs.okstate.edu/horn-flies>.

One of the most common methods of controlling horn flies is the use of insecticides. The insecticide comes in many forms such as an organophosphate, pyrethroid, pyrazole, and macrocyclic lactone which can be applied in a spray, pour-on, dust bag, back rubber, insecticide tags, breakable capsules from a modified

paint gun, or oiler. Insecticide impregnated ear tags are a commonly used method to control horn flies. Since the tags will protect for a limited amount of time, producers should not place the tags in the animal until flies become a problem. Ear tags should not be left in the animal year-round. It is important to remove the tags by fall to reduce resistance problems. Since resistance is a problem with fly tags, producers need to rotate classes of insecticides every year. Recent research has shown that once pyrethroid resistance is established in horn fly populations then it remains in the subsequent populations for up to 3 years without any pyrethroid use. For more information about rotating fly tags go to <http://livestockbugs.okstate.edu/horn-flies/insecticide-ear-tags>. When using any insecticide, dairy producers should read and follow label directions especially since not all products may be used in dairy cattle.

Other control methods of fly control are larvicides, non-insecticidal, and biological. Larvicides such as Insect Growth Regulators (IRG) are fed to cows in a feed or mineral supplement. The IGR passes through the animal and kills the immature horn fly. An example of a non-insecticidal control method is the use of an insect trap. They work when a cow walks through the trap and the fly attaches to a sticky strip. Another type of a trap that was specifically designed for dairies and horn flies is the CowVac which sucks the horn flies off the animals which is good for those dairies in a certified organic program ([https://spalding-labs.com/products/fly\\_control\\_products/cow\\_vac/default.aspx](https://spalding-labs.com/products/fly_control_products/cow_vac/default.aspx)). Traps can destroy large numbers of horn flies quickly. Biological methods of control use some type of predator insect such as dung beetles which eat the immature stages of the fly such as eggs. Producers should never forget how important sanitation is in controlling horn flies. Simply breaking up fecal piles will help because this allows the manure to dry out. Dry manure is not a favorable environment for development of the immature horn fly. The best horn fly control programs will take an integrated pest management (IPM) approach using a variety of control methods for long-term success.

Horn flies are irritating to beef and dairy cattle and a costly nuisance for cattle producers. For this reason, a strategy to control horn flies needs to be developed for the cattle operation. Producers need to keep in mind that one control method will not be enough to keep horn flies away. Producers will need to use a variety of control methods to successfully manage horn flies for the long term. If a producer would like more information about horn fly control, they need to visit with their local veterinarian or Oklahoma State University Cooperative Extension Agriculture Educator.

### **Think Safety When Working Animals**

Earl H. Ward, Area Livestock Specialist

If you ever worked in agriculture before then there is a great chance that you have been injured or know someone who has. Without a doubt, machinery is the number one cause of injuries or death in one of the most dangerous occupations, production agriculture. The second cause of injuries would have to be working with animals. I have definitely had my bumps, scrapes, and cuts, but luckily I have never been seriously hurt.

A study done by OSU's Biosystems and Agriculture Engineering Department in 1997 looked at 150 cattle handling injury cases on 100 Oklahoma cow-calf operations. Much to no surprise, more than 50% of those

injuries were due to human error. I have had my own human error injury when I didn't give enough space to a high-headed bovine while working on a ranch in Montana. She reminded me of my mistake as she was giving me a "boost" up and over the fence.

Another big cause of injuries on the farm or ranch is equipment and facilities which made up about 25% of the injuries in the study. I have worked in some of the nicest facilities that a person could ask for and I have also worked in some of the worst makeshift contraptions that would blow your mind. I remember working cattle in a corral system that was made from old wooden pallets and hackberry trees. I don't condone facilities like that because it may work completely fine if your animals are gentle enough to not put too much pressure on the elasticity of the fence. The cattle we worked that day were not gentle enough. Just like any task, having the correct tools makes the job safer and effective and our equipment and facilities are our biggest tools.

Here are just a few tips to avoid injuries or even death on the farm.

- 1) **THINK!!** Since most of the accidents happen because of human error, then perhaps we should listen to the voice in our heads that is saying "this is not a good idea." We hear every year of someone dying in a grain bin or getting mauled by a bull. Many of those situations can be avoided by slowing down and thinking.
- 2) **Evaluate the Equipment and Facilities.** Before the job begins, take time to look over and inspect the equipment and facilities that you will be using. Repair any fencing, gates, or safety equipment as needed. Perhaps an investment in your facilities is a requirement. In my experience the number one response from people who have finally upgraded their working pens is "I wish I had done this years ago."
- 3) **Know Your Surroundings.** Many injuries reported came from being struck by or against an object, which were generally when animals were involved. When working animals always keep an eye on what is behind you. Be mindful of where the unsafe places are while working animals. I have known many people getting hurt from standing behind a gate that was struck by an animal.
- 4) **Understanding Animals.** We have all worked cattle with people who don't quite understand animal behavior. If you haven't, then you are probably the person I am talking about. To avoid injuries from animals or even to animals we must understand an animal's behavior. An animal's fight or flight zone is different for every animal and knowing when to apply "pressure" and when to release that pressure can only be learned by doing. Granted animals with a bad disposition are not animals that should be kept in the herd, but it is not only wild animals that causes injuries. Animals that are too comfortable with humans cause many injuries as well. Horses, show cattle, and dairy cows are perfect examples of this.
- 5) **Slow is Fast.** While I was working on a Montana ranch as a young gung-ho kid, one of the best lessons I learned from the ranch manager was "slow is fast." Instead of whooping and hollering to get cattle to move faster, stay quiet and let your body position push the animals. This not only keeps the animals in a calmer, lower stressed state, but it also will help to avoid accidents from animals that get too excited. What you will find is that since everyone (cattle and helpers) were calmer that the time it took to work the herd went faster and with potentially less mishaps.

If you are interested in reading more on this subject, please see:

OSU Factsheet: Cattle Handling Safety in Working Facilities. BAE-1738.

<https://extension.okstate.edu/fact-sheets/cattle-handling-safety-in-working-facilities.html>

Tennessee Extension Factsheet. Working Cattle with Safety in Mind.

<https://extension.tennessee.edu/publications/Documents/W332.pdf>

USDA. A Review of Farm Accident Data Sources and Research: Review of Recently Published and Current Research. [https://nasdonline.org/static\\_content/documents/1241/d001045.pdf](https://nasdonline.org/static_content/documents/1241/d001045.pdf)

I had to laugh at one report I read where it stated from a Pennsylvania study that the largest percentage of farm injuries occurred in barns (30%), fields (16%), barnyards (14%), and farm buildings (12%). Well no joke...that's everywhere we are!!! Make me wonder where the other 28% of injuries are happening.

## **Farm Management Resources from Your Smartphone**

Brent Ladd, Extension Assistant, Agricultural Economics

The Oklahoma Cooperative Extension Service has curated farm management resources covering a variety of financial, production, marketing, and risk management topics. These resources are easy to access and can help producers hone their farm financial management skills. Resources include videos, publications, software tools and webinars on agricultural financial management topics and selected production topics.

Another example of these resources is the Farm Records video. This video shows producers goals for record keeping and uses of farm records in farm management. It explains some of the benefits that keeping good records offer. This video also shows producers more OSU Extension fact sheets on record keeping. To find this video and additional resources on farm records, visit:

<https://extension.okstate.edu/programs/farm-management-and-finance/e-farm-management-training/farm-records/index.html>.

More information on this and other farm management resources may be accessed three ways: 1) contact your nearest Extension Educator 2) visit the e-farm management website

(<https://extension.okstate.edu/programs/farm-management-and-finance/e-farm-management-training/index.html>) or 3) visit the OSU Ag Econ YouTube Channel

(<https://www.youtube.com/user/OkStateAgEcon>).

### **MASTER CATTLEMAN PROGRAM:**

If you are interested in the OSU Master Cattleman Program, please contact Chad Webb in the Noble Co. OSU Extension Office. With enough interest, the program will "potentially" begin this fall. I will be glad to explain the 14-week series to you, so please, feel free to contact me at PH# 580-336-4621 or by email at [chad.webb@okstate.edu](mailto:chad.webb@okstate.edu).



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EXTENSION**