



### Time for Summer Crops

Josh Bushong, Area Extension Crops Specialist

With recent rainfall this past week and soon to be open wheat fields, I've had multiple discussions with farmers looking at options for this summer. Soybean, grain sorghum, feed, and sesame usually get mentioned the most. Hopefully drought, heat, and relentless winds will hold off until these crops can be established.

While driving throughout north central Oklahoma last week, I noticed significant acres of wheat that will not be taken to grain. I saw anywhere from 5 to 10 percent being grazed out closer to Enid, but as high as 30 or more percent going west to Woodward County. A few wheat fields were already laid down for hay and I assume more will soon be too. There were also a few wheat fields already chemically burned down in preparation of a summer crop.

Some soybean planting has already started and once the ground dries out enough to hold a planter up many more acres will follow. Mid to late May planted soybeans have shown to be relatively consistent for many in the region the past five or so years. We received 2 to 4 inches in north central and half an inch to 2 inches a little further west. Soil temperatures were rising prior to the rains and should be back to 60 degrees after this next wave of heat forecasted.

With the blessing of a rain and warm temperatures, unfortunately also come the weeds. Inadequate weed control is one of the most yield-limiting factors, as some research has shown losses as high as 79%. Certain herbicide programs may seem expensive but can still be economical if yields are protected. From soybean emergence to the V3 growth stage (third trifoliolate) is the most critical period to limit weed competition to protect yield potential.

Certain herbicides are still in short supply and hard to obtain. As always, we recommend relying on residual herbicides instead of solely relying on traits that allow the postemergence applications of glyphosate, glufosinate, 2,4-D (Enlist) or dicamba (Xtend). ALS herbicides (such as Classic, FirstRate, and Pursuit) have good activity on many broadleaf weeds but can be weak on pigweeds and waterhemp. PPO herbicides (such as Cadet, Cobra, Reflex, Resource, and UltraBlazer) have activity on many problem broadleaf weeds and have also been a good option if some weeds are suspect of ALS resistance. Assure II, Fusilade DX, Poast and Select are some good options if grass control is needed.

Recent field trials by OSU have shown that pairing preemergent herbicides with postemergent herbicides resulted in higher yields (about 10-15 more bushels) and fewer weeds. These trials looked at planting date and postemerge application timings with and without a premerge. Later planted soybeans generally benefited more from the pairing of a premerge and postemerge.

To save yield potential, it is best to start clean and stay weed-free for the first few weeks of crop growth. Soybean producers must first decide which herbicide traits is best for their operation, develop a herbicide plan, and also make a backup plan if herbicide applications are delayed or fail satisfactory control. Weed control strategies need to consider future crop rotations and should also be a long-term investment in managing herbicide resistant weeds. Going cheap now may become much more expensive later.

To find out more information, contact your local OSU County Extension Office to visit with your Ag Extension Educator and review the Oklahoma Cooperative Extension Service factsheet PSS-2794, Meshing Soybean Weed Management with Agronomic Practices in Oklahoma and CR-2781, Components and Ratios of Pre-mix Herbicides for Use in Soybean.

## A Bucket of Considerations for the Summer Beef Herd

**Dana Zook, Area Extension Livestock Specialist**

As I write this, my thoughts are swirling based on several inquiries I have had about maintaining cows through the current dry period. Every producer has experienced the increased costs of inputs whether it's for feed, chemicals, or any other supplies essential to running a livestock operation. I fear the reality of high inputs is here to stay but I think there is a challenge here. The challenge is to look at our operations in a different light. What changes, even small, could improve the livestock operation? Yes, we should critically evaluate our costs but instead of shortchanging the beef herd, let's look at things that can be applied to improve productivity. The topics I have listed below are not new. I have written about them many times, but I feel strongly these are small changes that can make a big impact.



- 1.) **Create a Relationship with your local Veterinarian.** Besides their essential advice during emergencies, vets can make a huge impact on your operation to prevent sickness and disease by working with producers to devise a herd health plan. Think pinkeye, foot rot, and summer respiratory issues – vets can work

with you to prevent and/or create an effective treatment plan. Note, a relationship with a vet should be more than the yearly call at 1AM to pull a calf. If you currently have a consulting vet, proceed to number 2.

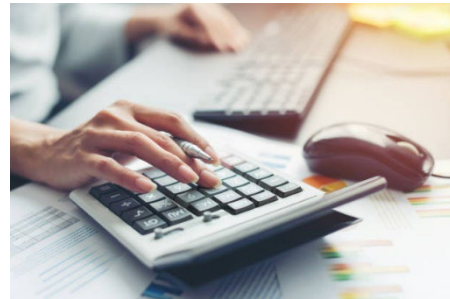
- 2.) **Evaluate the Benefit of Deworming the Cow Herd.** Although not outwardly apparent, gastrointestinal parasites (worms) can cause a variety of clinical signs, such as weight loss, diarrhea and death. It's the less obvious signs of decreased weaning weights and lower reproductive rates that can quietly erode profitability on an operation. Anthelmintic products, commonly called dewormers, have helped to limit the clinical impacts on beef cattle. However, parasite resistance is increasing to these products. Keep in mind, a pour-on is no longer considered an effective dewormer. Consult your veterinarian to see if a targeted deworming plan would be a good choice for your operation.
- 3.) **Consider Fly Control.** No fly will impact the herd more significantly than horn flies. At a threshold of 200-300 flies per animal, these insects cause stress on cows, reducing milk production in beef cows which can lead to reduced weight gain in calves. Many producers wonder if fly control is worth the cost. A 2017 collaborative research study between Kansas State and OSU determined stocker cattle with an insecticidal ear tag gained 0.21 more pounds per day compared to calves without fly control. At those gains, a cost of \$2.00-\$4.00 per tag would be a very cheap form of management. I recommend fly tags compared to a pour-on or spray just because once it's in the ear, no more applications are needed for 90 days. Keep in mind, proper chemical rotation in all fly control products is more important than when the tag or product is applied.
- 4.) **Gauge the Weight Gain Benefit of Implants.** In the recent Cow-Calf Corner Newsletter, OSU's Dr. Paul Beck said "Implanting preweaning is one of the most cost-effective ways to increase production for the cow calf producer". Cattle can be implanted after 45 days of age and research shows that calves in the "suckling phase" will increase weight gain by 0.10-0.12 pounds per day. Older calves in the stocker phase could respond with 0.20+ pounds per day. A local price of \$1.27 for a Synovex C Implant will more than pay for itself in any operation. Producers should refer to product labels for approved timing of implants. Yes, "all-natural" is a thing these days. But, unless you are filing paperwork with a 3<sup>rd</sup> party to verify your calves all-natural, it's likely you are not receiving a premium for calves without an implant.

These are just a few inputs that will cost a bit of money, but the long-term return can be significant to beef operations. Contact your local OSU extension educator or local veterinarian for guidance on the chemical rotation of fly control products, implant use, deworming practices or any other form of management for the beef operation.

# Adopt a Double Crop?

**Trent Milacek, Extension Area Ag Econ Specialist**

Recent comments by the Biden Administration have called for a larger U.S. crop to curb inflation and combat rising food costs. Preliminary suggestions include offering crop insurance on double-crop acres where they have been previously unavailable.



Farmers who are not familiar with double-cropping systems should understand that it can be a very risky proposition. Considering the moisture situation most of the state currently resides in, there is reason for concern that hot temperatures and untimely rainfall would hamper positive profits.

If double-cropping is a viable crop practice in your area, is it still a good idea? Rising input costs have decimated gains received from higher crop prices. In my budget calculations, a producer can nearly double previous crop production costs for the current year and expect to receive high crop prices only if the crop is hedged and can be produced.

Grain Sorghum suffers from its reliance on nitrogen. Soybeans, being a legume, allow them to harness nitrogen from the atmosphere that is virtually free after a farmer invests in relatively low-cost inoculant for the seed. Grain Sorghum will require 1-1.1lbs. of nitrogen per bushel of expected production. This could cost as much as 1.2/lb. or over a 400% increase compared to previous years.

I do advocate for producers to weigh the pros and cons of such an endeavor. Crop prices are very high and can be hedged. Crop inputs can be managed, and operating lines will need to be increased. Caution must be given to risk exposure and the number of acres that can be effectively managed. Running out of operating funds to purchase chemical for the crop could result in crop failure later in the season.

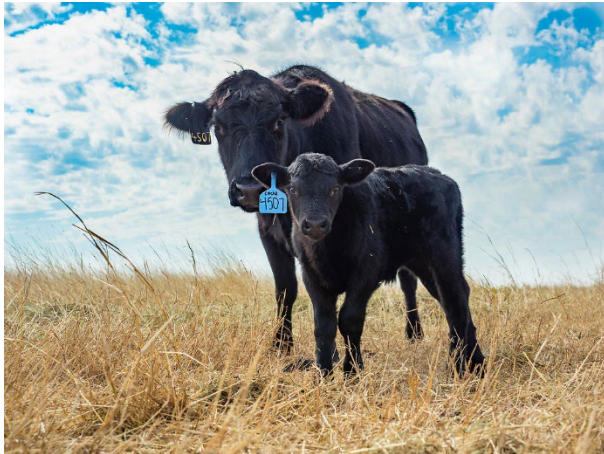
Crop inputs have been difficult to secure but not impossible. Producers should make these arrangements ahead of time in order to avoid missing timely application windows. Weather forecasts that are long range and of low accuracy indicate that a hotter and dryer summer could be upon us. It certainly has been a warm and dry spring resulting in a below average expected wheat yield. Consider if there will be left-over inputs from the current wheat crop and verify by using soil tests.

The future will be brighter if we manage our risks. Know your crop insurance coverage ahead of time and only plant the acres you can afford the crop inputs for. Summer crops change daily, and pests can wipe out a promising crop in as much time. Remain vigilant and be a good manager by determining your operation's strengths to leverage a successful summer.

# Should Nursing Calves be Implanted?

## Does it Pay?

**Britt Hicks, Ph.D., Area Extension Livestock Specialist**



We are approaching the time that spring-born calves are routinely brought up for branding and the first round of shots. With the increased costs of beef production, technologies that improve the efficiency of production are increasingly valuable. One management input that is very often overlooked is the use of growth-promoting implants preweaning. However, research over the last 50+ years has clearly demonstrated the efficacy and cost effectiveness of growth-promoting implants in beef cattle. A 1997 review of research

trials that evaluated the effectiveness of implanting nursing beef calves showed that implanting steer calves with zeranol (Ralgro, 23 trials reviewed) or estradiol-progesterone implants (13 trials reviewed) increased average daily gains by approximately 0.1 lb./day from the time of implant insertion to weaning. In this review, the gain response in heifers was slightly greater (0.12 to 0.14 lb./day). Hence, implanting suckling calves typically increases weaning weights by approximately 15 to 25 pounds.

A 2007-08 USDA survey of U.S. beef cow operations (2,872 cow/calf operations from 24 states) found that only 9.8% of operations implanted some of their beef calves prior to weaning and only 3% of implant heifers are intended to be developed as replacement females. In this survey, only 3.6% of cow herds with less than 50 cows (representing 79% of beef farms and 29% of beef cows) use implants, while 11% of herds with 50 to 100 cows, 16% with 100 to 200 cows, and 18% with greater than 200 cows use implants. In a more recent study, using data from more than 5 million beef calves sold through Superior Livestock Video Auctions from 1995 through 2009, the percentages of lots of beef calves that were implanted decreased from 64.3% in 1995 to 26.5% in 2009.

Some producers have opted not to implant calves prior to weaning in an effort to enter the “natural” market and receive a premium price at sale compared with implanted calves. However, there is little evidence that implanting preweaning reduces prices of calves. A 2015 study quantified the effect of implant status on the sale price of beef calves marketed through a livestock video auction service from 2010 through 2013. In this study, implant status had no effect on sale price in any of the 4 years of the study. In the three of the four years (2010, 2011, and 2012), not implanting numerically reduced sale price by \$0.09 to 0.17/cwt.

Even though, the use of implant technology has declined in cow-calf operations, research has clearly illustrated that the response to growth-promoting implants appears to be as efficacious as it was over 30 years ago. Yet, beef cattle genetics have changed dramatically during this time period. This is illustrated by the fact that the mature body weight of beef cows has increased by 200 to 250 lb. over the last 25 years and that calves have greater potential for growth. Thus, 2017 Oklahoma State University research revisited the issue of implanting suckling calves to determine if the response to growth implants has changed over time. The objectives of this experiment were to determine (1) the effect of a Ralgro implant (Merck Animal Health) administered at 30 to 90 days of age on suckling-phase growth rate and weaning weight and (2) the effect of re-implanting with a Revalor-G implant (Merck Animal Health) at weaning on post-weaning performance. In this experiment, a total of 194 suckling steer calves weighing 245 lb. at branding (approximately 30 to 90 days of age) from 3 locations were used. At each location, steer calves were randomly assigned to two experimental treatments: implanted with Ralgro at branding and Revalor-G at weaning or not implanted. At one of the locations after weaning, the steers (40 head) were preconditioned for a 44-day period and then grazed winter wheat forage for 98 days. Steers from the other two locations were combined and preconditioned for 49 days and then sold.

In this study, average daily gain (ADG) was increased by 0.13 lb./day in Ralgro implanted calves during the suckling period. This increase is similar to the 23-study average (0.10 lb./day) reported in the 1997 review. As a result, implanting resulted in a 17 lb. increase in actual weaning weight compared to non-implanted steers (564 vs. 547 lb.).

At one of the locations, ADG was not different between the 2 treatments during the preconditioning phase. However, in a wheat stocker phase at this location, implanting increased ADG by 17.5% over non-implanted steers (3.55 vs. 3.02 lb./day) which accounted for nearly 49 lb. of additional weight gain over the wheat-grazing stocker period. Final pay weight was increased by 68 lb. by implanting. In the preconditioning period for the other two locations, implanting increased ADG by 35.7% (0.84 vs. 0.62 lb./day).

Research illustrates that implanting calves before weaning is cost effective and will increase weaning weights of both steers and heifers with very little impact on reproduction rates of replacement heifers. The growth response is similar to research results previously reviewed (1997). Even though, the use of implant technology has declined in cow-calf operations, growth-promoting **implants appear to be as efficacious as they were over 30 years ago.** The cost of an implant is about \$1 to \$1.50 per head. Yet, weaning weight is typically increased by 15 to 25 pounds.

A few points to consider for implanting nursing calves include:

- Several different implants are available. Read the label instruction to determine the appropriate implant to use.
- Implants are not approved for calves less than 30-45 days old. Read the label for the specific implant.

- Do not implant bull calves. Some producers leave bull calves intact until weaning thinking that natural hormones produced in the testicles increase gains and weaning weight of the calves. However, numerous research trials have shown that implanted steer calves gain at a rate equal to, or greater than, bull calves. Castrating bulls at younger ages (near birth), as opposed to when they are older, reduces overall stress on the calf. The stress and hormonal effects of castration at weaning can reduce post-weaning gain potential and the calf's ability to withstand diseases typically associated with weaning and marketing. Studies suggest that there is no lifetime performance advantage to waiting to castrate calves until weaning, but there is a high probability of receiving lower prices when marketing intact calves through conventional channels (about \$5 to \$10 per cwt lower prices).
- Most studies have demonstrated that implanting had no negative effect on future reproductive performance of heifer calves when a single implant was administered according to label instructions at 2 to 3 months of age. However, re-implanting replacement heifers increases the risk of reduced pregnancy rate.

## **When is the Right Time to Castrate Bulls?**

**Jeff Robe, Oklahoma Quality Beef Network Coordinator**

The practice of castrating animals goes back to ancient times. Egyptian farmers found castrating bovine bulls made the animal much easier to handle. It's doubtful the Egyptians were concerned about the value-added components of their animals. But today, adding value to market cattle is the name of the game and castration is a key component to any preconditioning program that can greatly influence market price premiums or discounts, especially in older bull calves.

Castrating bull calves has become common practice in U.S. beef herds. In 2017, the USDA-APHIS NAHMS Beef Cow Calf study indicated that 62% of commercial cow-calf herds used castration methods in their management practices. Castration has provided economic benefits to both the cow-calf producer and feedlot operators through increased market prices and meat quality. Castration also decreases unwanted pregnancy and increases the safety of workers and other animals.

There is a perceived notion that intact bulls have an advantage in body weight gains during the preweaning period and post greater weaning weights than calves castrated at or near birth. However, numerous studies have shown the weaning weights are similar for bulls and steers (approx. 600 lbs.). Advantages in calf weight gain due to testosterone production are presumably realized at a time following average weaning dates closer to puberty.

The timing of castration can influence weight gain and stress management. Studies examining how timing of castration effects average daily gains (ADG) in cattle castrated either in early life (birth to 2 mo.) or those castrated at weaning or postweaning (6-10 mo.) demonstrated higher ADG during the post-weaning period in the early castrated calves (approx. 0.30 lbs./day greater) than those castrated at or after. The period calves experience weight loss post-castration increases with age as does risk of disease susceptibility. The stress experienced is also related to the time of castration as the level of discomfort and trauma increases with the size of testicles. Calves castrated at 5 ½ months of age or later experienced a greater duration of stress than those castrated at birth or at branding.

Bull calves entering the stocker or feedlot segments of the industry have numerous health and performance factors associated with late life castration such as increased risk or morbidity and mortality, sick treatments and decreased ADG. Therefore, price discounts for bull calves being sold at market can be substantial when compared to steers marketed in the same weight class. Lighter weight bulls (300-400 lbs.) are viewed as less risky, and discounts are generally minimal if any. As the weight of a bull increases, so does the risk. Discounts can average \$6-12/cwt or \$30-60 per head.

A herd management practice that dates to ancient times and still used today has clearly proven beneficial. Utilizing the practice and with a timing that makes sense may be the difference between dollars made or dollars lost.

Castration is an important part of adding value to your calves through preconditioning. For more details and to enroll in the OQBN program go to [www.oqbn.okstate.edu](http://www.oqbn.okstate.edu)

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## **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.

