



Soybean Weed Management

Josh Bushong, Area Extension Agronomy Specialist

Weed control in soybean production can be a challenge, especially with certain broadleaf weeds. Planning an herbicide program for the season is the first step. I've had multiple reports that particular herbicide products are in short supply. The herbicide plan should be based on residual products either preplant and/or early post plant applications. Solely relying on herbicide traits for post emergence applications can restrict options if applications get delayed or if herbicide resistance becomes more widespread.

In addition to the herbicide traits that allow the postemergence applications of glyphosate, glufosinate, or dicamba there are still other options to consider. 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.

Only relying on postmerge ("over-the-top" or "in-season") herbicide products limits options and will tend to lead to herbicide resistance sooner. Options are limited especially if applications are delayed due to weather events or breakdowns as weeds become rank and less controllable. A more robust management plan includes preemerge products with residual activity. This may not be as cheap as some of the postemerge products but will provide more modes of actions, act as a safety net in case of delayed post applications, and ultimately should provide much less weed competition early on in the season.

Preemerge products can be applied preplant, prior to crop emergence, and some can be tank mixed with early postemerge products. Preemerge products just need to be applied to the soil before germination of the weeds. In no-till production, some products can remain in the previous crop residue and control can be reduced. Some products need to be incorporated into the soil with rain or irrigation to become active. Preemerge and some postemerge products can provide residual soil activity.

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 postemergence application timings with and without a preemergence. Later planted soybeans generally benefited more from the pairing of a preemergence and postemergence.

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 an 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.

Applicators have options if they still need to acquire their annual EPA mandated dicamba training for 2021. One option is to contact their local county extension office to set up a time to watch the training video. The other option is to participate in one of the three available online training sessions provided by the chemical companies. ODAFF has approved these trainings, but with some stipulations. The Bayer training is only applicable for Xtendimax applications, the BASF is only applicable for Engenia applications, but the Syngenta training is good for all three (Tavium, Xtendimax, and Engenia).

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 PSS-2195, What if Engenia FeXapan or Xtendimax are Not an Option for Soybean Weed Control.

When is the Best Time (Age) to Castrate Bull Calves?

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

Beef Quality Assurance Guidelines recommend that bull calves that are not herd sire prospects be castrated as early in life as possible (preferably, between birth and four months of age). Some cattlemen believe that delayed castration improves growth in nursing calves due to a “testosterone effect” in intact bull calves. However, bull calves do not have significantly high levels of testosterone until they reach about 8 to 9 months of age. In addition, several studies suggest that there is no lifetime performance advantage to waiting to castrate calves until weaning. In fact, most research show that late castration (at weaning) decreases feedlot arrival gains and increases morbidity (sickness).

In a 2003, Kansas State University research determined the effect of castration age and growth implants (Synovex C) on weaning and preconditioning weights. Calves were

early castrated at 90 days of age with no implant, early castrated and implanted, or late castrated at weaning (226 days of age). Steers that were early castrated and implanted had weaning weights similar to those of bull calves, and both of these groups weighed 15 lb more than the early castrated non-implanted steers. However, 28 days after weaning the early castrated implanted steers weighed 20 lb more than the early castrated non-implanted or late castrated steers. These results indicate that early castration paired with growth promoting implants may yield more total pounds than either early or late castration alone when using a backgrounding program.

In a 2006 Oklahoma State University study, 2 to 3 month old bull calves were left intact or were castrated (surgically or banded) and all calves were implanted with Ralgro. At weaning (7 to 8 months), intact bulls were castrated (banded) and all calves were re-implanted with Ralgro. Weaning weights did not differ between intact bulls and castrated bulls. However, during a 50-day period following weaning bulls that were castrated at weaning gained 11.3% slower (0.12 lb/day less) than bulls that had been castrated at 2 to 3 months of age.

In 2011, University of Florida research investigated whether timing of castration in nursing calves affected calf performance and weaning weight. In this study, calves were either surgically castrated early (average age of 36 days) or late (average age of 131 days). Actual weaning weight (456 vs. 452 lb) and adjusted 205-day weaning weight (512 vs. 504 lb) were all similar between early and late castrate treatments, respectively. These researchers concluded that this data indicates that producers have some degree of flexibility in determining when to implement castration. The data also showed that castration at or near birth did not have a detrimental effect on calf performance or weaning weight.

Research conducted at the University of California, Davis (2017) assessed the effect of age on healing and pain sensitivity after surgical castration of beef calves. In this study, beef calves were surgically castrated at 3 days of age (range of 0 to 8 days) or 73 days of age (range of 69 to 80 days). The results of this study showed that calves castrated soon after birth experienced more tissue swelling and showed more signs of pain, but their incisions healed sooner (39 vs. 61 days) and their weight gain 77 days after castration was greater (1.54 vs. 0.66 lb/day), when compared to animals castrated around 73 days of age.

Research from Nebraska (2005) has shown that as age of castration increases, weight loss resulting from the procedure increases. In addition, reviews of marketing data show that bull calves marketed through conventional channels have historically suffered a price discount of ~5% compared to steer calves (~\$6.00 to \$11.00/cwt discounts) since surgical castration of calves after arrival at a feedlot decreases daily gains and increases morbidity.

Collectively, these 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. When considering how age at castration affects animal welfare, the consensus is that the younger the calf is at time of castration, the less impact castration has on its welfare and performance.

Proactive Marketing Using Crop Insurance

Trent Milacek, Extension Area Ag Econ Specialist

Wheat prices have experienced a steady rally this spring as we head towards harvest. Current prices are substantially better than any marketing opportunities in the last 5-years and farmers are taking notice. There are many ways to take advantage of these prices preharvest including futures contracts, put options and forward contracting. This article will focus on the latter.

Recent cash wheat prices above \$6.75/bu. will allow most farmers to make money with an average crop yield. The price trendline, which begins on April 7th, provided some support at \$7.00/bu. but markets did trade lower. If markets trade further down, a recent bottom near \$6.70/bu. gives a floor. I suspect many farmers contracted back in February and March if they were aggressive with marketing. Recent price action is likely to shake loose any remaining unhedged grain in the region. There will always be those who do not wish to sell preharvest, but here is an option for those bushels that are on the fringe. Volatility is very high at the moment and is making it difficult to predict profitability at harvest.

Forward contracting involves signing a contract to deliver a predetermined number of bushels at a specific delivery point. The price received changes daily with markets and allows a producer to take advantage of a favorable price before they have physical bushels in the elevator to sell. This can be advantageous if a producer has a crop currently growing and believes prices will go down.

Consider your insurance guarantee, if you have a 70% revenue policy and an APH of 32 bu./acre, your current guarantee is 22.4 bu./acre or \$109.76/acre. If you did not elect Harvest Price Exclusion (HPE), it is likely that your guaranteed revenue will increase as the harvest price will be much higher than \$4.90/bu. if prices hold. Therefore, even if you have a crop failure, your insurance will guarantee that you will receive \$109.76/acre. If your contract price was \$6.75/bu. for instance, you can contract 14 bu./acre without the fear of being unable to deliver on those bushels.

There will be other costs and risks associated with this transaction such as the crop insurance premium and unknown basis risk. This is why it is a good idea to leave a buffer between contracted bushels and the insurance guarantee. In the previous

example, contracting 14 bu./acre at \$6.75/bu. ensures a revenue of \$94.50/acre. Our guarantee is \$109.76/acre leaving a \$15/acre buffer for those unknown costs and risks.

In the event of a crop failure, you may have to purchase those undeliverable bushels on the open market to cover your contract. If prices go up, the revenue crop insurance guarantee will also increase because the harvest price will be higher than the initial \$4.90/bu. compensating for the more expensive bushels. If prices go down or stay the same as the initial price, revenue crop insurance provides \$109.76/acre which will be enough to cover our conservative forward contracting by using the crop insurance revenue guarantee. This is an innovative way to flex your insurance coverage and to secure these high prices without paying put option premiums or using futures contracts.

There are many ways to market grain and the risk protection products producers already utilize can be a great benefit in these strategies. If you would like more information, please contact your local extension office.

Oklahoma State University, U.S. Department of Agriculture, State and local governments cooperating. Oklahoma Cooperative Extension Services offers its programs to all eligible persons regardless of race, color, national origin, gender, age, religion, disability, or status as a veteran and is an equal opportunity employer.

Being “In the Know” about Cow Weights

Dana Zook, Extension Area Livestock Specialist

Many people have heard the phrase “information is power”. On the farm or ranch, technology has allowed producers to collect more information giving insight into areas where the operation could be improved. Within beef production, powerful information comes in the form of cow body weight.

Most cattle producers understand that weighing cows is ideal, but limitations of equipment can keep producers from taking weights each year. I personally grew up on an operation where vaccinations were given to cows and calves in an alley and most treatments were done by our local veterinarian. Our herd wasn't large enough to justify a full working chute and scale, but we did the best with what we had. While taking cow weight does add some difficulty, it can shine light on other aspects of beef production. Let's look at a couple of ways cow weights can improve the overall efficiency of an operation

Nutritionally, knowledge of cow weight improves feeding accuracy. If we know a cow's weight, then we have an idea of how much she will eat. This is crucial when cows are being full fed concentrate feeds or silage, but it also helps during winter supplementation of cubes or cake. In addition, weights paired with a body condition

score (BCS) and knowledge of the stage of production take us from a snapshot to a full-scale view of individual cow nutrient needs. Improved reproductive status can also be targeted with the knowledge of cow weight and body condition. Questions like “How much weight do these cows need to gain by calving season?” and “How many pounds of cake does this group need?” are more easily answered when we know individual body weights.

It is well known that forage resources are the foundation for any beef enterprise. Cow weights can help producers determine how well their cow herd is matched to their forage resource. Recommended stocking rates are based on animal units (AU) from which body weight plays a key role. Most animal unit equivalents (AUE) are based on a 1,000 pound cow and adjustments should be made to account for larger animals. Maintaining larger cows takes more pounds of daily forage and more acres of land. The assumption that cow herds average body weight is 1200 pounds is out of date. Currently, many beef breeds now tip the scales at 1300 to 1400 pounds. If additional weight is not accounted for, producers may realize that additional nutrients (hay and supplements) are required to maintain cow condition throughout the year.

Body weight provides the basis, in most cases, for accurate diagnosis, prevention, and treatment of any animal. Animal health specialists and veterinarians will be the first to say that cow weight is essential in appropriately selecting both preventative and treatment protocols. Most antimicrobials and other drugs are labeled according to body weight. Underdosing medications such as anthelmintics (dewormers) and antibiotics leads to parasite resistance and bacteria. Additionally, insufficient doses of medications to address pain and inflammation can lengthen recovery times and negatively impact animal welfare. Overdosing may lead to toxicities and more importantly wastes money.

So, what can you do if you don't have a scale on your operation? Producers can catch the weights of cull cows when they are sold, get weights on any cows that visit the vet, or take a trailer weight when moving cows to pasture. All these things will give you a better idea of cow weights in your herd. Every producer will do look at this subject differently, but knowledge is power. With the constant pressure of increasing input prices, there has never been a more important time to improve efficiency in beef production.

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.

