



## EXTENSION

### Pasture Management

**Josh Bushong, Area Extension Agronomist**

It's time to start getting hay and pastures setup to make good forage. Bermudagrass is a great example to seeing a response from increased fertility and use of pesticides. While tonnage can be increased with added fertility to native grass pastures, often it can be hard to justify economically since the total season production is usually less than introduced species.

When deciding on how much fertilizer to apply, it is always recommended to base the application rates off a soil sample and a yield goal. A \$10 soil sample through the OSU Soil, Water, and Forage Analytical Laboratory collected every few years will almost always pay for itself. A yield goal will typically range between three to eight tons per acre in north central Oklahoma, depending on rainfall and soil type. Unfortunately, it is harder to determine yield goals under grazing.

In grazed pastures, forages are growing and being removed concurrently making it impossible to estimate forage production and yield goals. Less fertilization is expected in grazed pastures since some nutrients are returned to the soil. The general guideline is that grazing to produce 500 pounds of beef per acre will remove about 18 pounds of nitrogen, 9 pounds of phosphorus, and 1 pound of potassium. This 500 pounds of beef requires approximately a production of 4 tons of forage per acre.

In comparison, a hay pasture with a 4-ton yield goal, will need 200 pounds of actual N per acre; while a grazed pasture that supports one cow for four months, will only need 50 pounds of actual N per acre.

Research has shown no benefit to split applications of nitrogen (N) when total application rates are below 200 pounds of actual N per acre. If application rates are greater than 200 pounds of N, then split applications can be economical. If applying N to farms with coarse, sandy soil types, it is recommended to limit application rates to 100 pounds of N as it is mobile in the soil and can be leached out of the system.

As for weed control, it is all about proper identification and application timing. There are many pasture herbicides on the market and the price differences can range widely. Knowing exactly which weeds are of significance in a particular pasture will determine which herbicide options are appropriate and at what application timing are recommended.

Many annual broadleaf weeds can be controlled with less expensive herbicides, such as products containing 2,4-D or dicamba, if applied when weeds are only a few inches in diameter or tall. Situations where more expensive herbicide products are warranted include; if there are brush or woody weeds present, winter weeds are abundant and summer weeds have yet to emerge, or if the target weed species is perennials.

Weed management is often more justifiable in haying operations. Heavy infestations of weeds in a grazing pasture are often a symptom of excessive grazing. Proper use of stocking rates and achieving adequate fertility in introduced pastures are the most economical weed management options for grazing pastures. While weeds can be unpleasant to the eye, many times weed infestations are below application thresholds.

From OSU field trials comparing doing nothing to only applying an herbicide, only fertilizing, or fertilizing with an herbicide application, we can generally predict forage production outcomes if inputs are removed. If broadleaf weeds are present, addition of fertilizer will increase total forage production, but mainly just from the weeds and not from the grass. If only an herbicide is applied, the total forage tonnage was the same as doing nothing. Every pound of weeds removed only increased grass production by one pound (1:1 ratio). To increase total grass production both fertilizer and an herbicide will need to be applied.

Contact your local extension office for more pasture management information to assist in weed identification, to submit a soil sample, or to determine the best management practices for your operation.



## Controlling Horn Flies Starts Now!

**Dana Zook, NW Area Livestock Specialist**

Spring is my favorite season and I have enjoyed the warm temperatures in the past few weeks. Unfortunately, insects will also take advantage of an early spring. One such insect that has the most significant impact on beef production is the horn fly. Horn flies increase stress in beef cattle due to their painful bites. Elevated stress causes reduced milk production, efficiency, and rate of weight gain. A 2017 collaborative research study between Kansas State and Oklahoma State determined stocker cattle with an insecticidal ear tag gained 0.21 more pounds per day compared to their counterparts with no horn fly control. This weight gain resulted in a \$12 net profit over the cost of the ear tag during a 90-day summer grazing period.

**How do you identify horn flies?** Horn flies are the most common fly species associated with cattle. If you own cattle, you likely have horn flies. They are a small black fly that feeds on the back, side, belly, and legs of cattle. During the summer months, a generation of horn flies can complete their life cycle in as little as 14 days. Economic losses begin to occur when fly populations reach 150-200 insects per animal. Without means of control, horn fly populations commonly exceed 300 flies per animal.

**What are the options of control?** Fly control will vary from one operation to the next due to facility set-up and the availability of cattle handling facilities. Very simple control methods such as dust bags or back rubber/oilers can be utilized but placement of these systems is crucial so that every animal makes direct contact with the fly control agent. If cattle are accustomed to gathering for a feed truck, spraying is a good option. Pour-on products are also popular, but cattle will need to be moved through a chute or alley monthly for accurate product application.

Depending on the brand, sprays and pour-ons will provide 7-21 days of control and will need to be repeated throughout the season. Keep in mind that rainfall events can reduce the duration of effectiveness for spray and pour-on products. Each product varies in terms of application rate, so as always, be sure to read and follow label instructions.

Ear tags are another proven horn fly control method; however, cattle will also need to be gathered and worked through a chute or head gate system in late spring or early summer. For some producers, application of ear tags may coordinate well with timing of spring vaccination and castration measures. Most fly tag labels suggest 4-5 months of efficacy; however, Oklahoma researchers have found that the chemical of most ear tags is effective in our state for approximately 90 days. For example, if cows are tagged in April, producers may have to utilize another form of fly control in late August through September. Tubs and feed products containing an insect growth regulator (IGR) are also a convenient option to control horn flies. This product is effective because horn flies naturally utilize fresh manure pats to lay their eggs. Insect growth regulators work within the manure to prevent fly larvae from maturing to adult flies. The products should be placed in early March to get a jump on horn fly development. Local OSU demonstrations found that these products may work best when used in tandem with other horn fly control methods.

Rotation is important with all horn fly controls due to the potential development of resistance. Due to the short lifespan of horn flies (as little 14 days) many generations of flies are produced in one season, potentially allowing chemical resistance to develop quickly. To avoid this, rotate products from different chemical classes each year. Keep in mind, that just because a product has a different name does not necessarily mean it contains chemicals from different chemical classes.

If you have concerns about horn flies on your cattle or have questions regarding rotation of fly control products, please contact your local county OSU extension educator for more information.



## **Breeding Soundness Exams Crucial for Bulls Following Wildfire**

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**Dana Zook, NW OK Area Extension Livestock Specialist**

This is the time of year beef producers are prepping for breeding season. Getting bulls scheduled for breeding soundness exams (BSE) should be on the list of all beef producers. Beef producers with bulls impacted by wildfire should place even more emphasis on this important yearly exam.

Think of a bull BSE as a risk management practice for the breeding season. Bulls are a very valuable component of the herd. They are a substantial cost while also providing significant impact to future genetics of the cow herd. Bull BSEs are recommended prior to every breeding season to ensure they are sound, fertile, and healthy.

Producers may wonder what type of exam is conducted to evaluate breeding soundness. A BSE is a procedure performed by a veterinarian that ensures a bull has met a minimal set of standards that reflect his reproductive potential. The exam has three components: 1.) a physical exam is performed to ensure that the bull is in good health, 2.) a reproductive exam evaluates the health of the reproductive organs and 3.) semen is evaluated for motility and normality. Once the exam is completed, the bull will be classified as a “satisfactory potential breeder”, “unsatisfactory potential breeder”, or “deferred”. If classification is deferred, then a producer should work with their veterinarian to set up a time to reevaluate the bull. It is very important to understand that a BSE is an evaluation on the day the test was performed only. The testicle started producing the sperm at the time of evaluation 60 days prior.

While BSE is encouraged for all bulls, producers with herds directly impacted by the recent wildfire season should consider taking extra precautions depending on their situation. Any comingling of herds during evacuation or response presents a potential biosecurity risk. A BSE following wildfire can include an evaluation and consultation about exposure to disease. Producers and their veterinarians might consider testing for certain diseases such as Trichomoniasis, Bovine Viral Diarrhea Virus, Bovine Leukemia Virus, etc. Vaccination may also be suggested to get bulls up to date before breeding season begins.

In addition, bulls impacted by wildfire may have sustained injuries that limit their ability to breed a cow. Producers should be aware that not all injuries are outwardly apparent. The physical and reproductive tract examination conducted by a veterinarian will help determine if any injuries were sustained that could prevent their breeding potential.

It's a reality that producers who lost grass during the fire are limited to feeding hay and supplement until pastures recover. Understandably, this nutrition may be limited to what the herd requires during this phase of production. This could affect the upcoming breeding season; however, producers should keep in mind that even a slight uptrend of nutrition will positively impact the breeding status of both bulls and cows. Your veterinarian can provide consultation on the nutritional status and body condition concerns in this situation.

One important step in breeding season readiness is a BSE for all bulls. This investment is one small, but crucial step, to reduce the number of open cows at pregnancy checking time. If you have any questions about bull BSE's or wildfire recovery, consult your local county OSU Extension educator or consulting veterinarian.



## **Extension Experience – Insights into Oklahoma Agriculture**

The West 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 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/podcast/>

We hope you consider listening to *Extension Experience*.

# Extension Experience

## PODCAST

INSIGHTS INTO OKLAHOMA AGRICULTURE



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