



Private Applicator and Wheat Updates

Josh Bushong, Area Extension Agronomy Specialist

The Oklahoma Department of Agriculture, Food, and Forestry (ODAFF) is still offering a temporary exception for take-home exams for those needing to become a Private Applicator. ODAFF has officially set a submission deadline of June 1st to send in the take-home Private Applicator exam. Private applicators can contact OSU University Mailing directly to order the test packet by calling 405-744-9037. The second option would be to contact your local Oklahoma Cooperative Extension Services (OCES) office.

As far as a wheat update, the crop was been growing rapidly in the region. We may have hit first hollow stem a little late, but I believe the crop has rapidly progressed and it will mature out more on schedule with past years. This may hinder yields for some fields if stands were thin or planted late. Due to the hastened pace of vertical growth, additional tiller development was minimum for many. Overall there is great yield potential throughout the region.

There are reports of mites throughout the region. Brown wheat mites are easiest to find in the afternoon on warm days. Wheat may show symptoms of being scorched or bronzed and withered. Treatment thresholds for an acaricide application in 25-50 per leaf on 6-9 inch plants. Heavy rainfall can reduce mite numbers significantly. Crop rotation is a good management option going forward. Winter grain mite and wheat curl mite should be an issue this late in the season.

Multiple reports of aphids are starting to come in, mostly greenbug and bird cherry-oat. Using the "Glance-N-Go" method (factsheet or phone app) is a great to for scouting for greenbugs. Bird cherry-oat aphids typically don't cause much visible damage to the wheat plant, but high numbers can reduce forage and grain yields. If populations exceed an average 25-30 per tiller prior to the wheat heading a 5% yield loss could occur and if populations average 50 or more a 10% yield loss could occur.

As far as wheat diseases, there has been several reports in the region of multiple "leaf spotter" diseases. These include tan spot, septoria tritici blotch, and stagonospora nodorum blotch. These typically are found in the lower canopy and can result in loss or yellowing of leaves. Tan spot in particular is often found in heavy residue in no-till fields. There are a few reports of stripe rust being found, but in isolated areas. So far, very little leaf rust has been found but is predicted to spread as more moisture falls and

temperature increase. Leaf rust needs free moisture on the leaf for 6 hours and warm temperature in order to infect the leaf.

I am currently being asked if fungicide applications are warranted for the leaf spotting diseases and if applications should be delayed to wait on full emergence of the flag leaf. There are some variety differences of susceptibility. Varieties like Joe, Chrome, Wizard, Garrison, and Ruby Lee typically provide more tolerance to tan spot. These diseases typically stay low in the canopy, but I did observe last year where they moved up to the flag leaf. It will be more economical to postpone fungicide applications to better protect the flagleaf for a longer duration, as long as these other diseases stay low in the canopy.

Some fungicides are systemic (move around plant after application) and some are systemic but only move to new growth in the plant. A product containing Tebuconazole typically protects the plant for 2 weeks and partial protection the third week. It can also protect the flagleaf even if it has not emerged yet. So depending on disease pressure from the leaf spotters and growth stage of the wheat it will depend on when an economical fungicide application should be applied.

As always, contact your local OCES office for more information.

Bull Management During the Breeding Season

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

The spring breeding season is drawing near and producers need to properly manage both their cows and bulls. Herd reproduction and fertility are important for profitability to occur. A successful breeding season hinges on nutrition, vaccination, sire selection, breeding soundness exams, and management protocols to control the length of the breeding season.

The first step in preparing the herd for the breeding season is to assess the nutritional status of both cows and bulls. Body condition scoring (BCS) is a practical management tool to allow beef producers to distinguish differences in nutritional needs of animals in the herd. A cow should calve at a BCS of 5 to 6 and be bred at a BCS of 5 to 6. If a cow calves at a BCS less than 5 it will take her longer to return to estrus and thus, take longer to get her rebred.

A BCS of 5 to 6 for bulls is also recommended before the breeding season starts since bulls being too fat or too thin can impact fertility. If changes need to be made to the diet to achieve this BCS they should occur gradually. Ration changes prior to the breeding season can have effects on reproductive performance because mature sperm is produced over a 60-day period before ejaculation. During the breeding season producers should assess the BCS of the bull. It is not unusual for a bull to lose 100 to

200 lb during the breeding season. If the bull becomes too thin the producer should consider replacing him because his ability to breed cows will be reduced. After the breeding season adequate nutrition is needed to help the bull regain the weight lost.

It is recommended that breeding soundness exams be conducted on all bulls a few weeks before the breeding season even if they were recently purchased as "satisfactory breeders" as a good insurance policy. In addition to breeding soundness exams, pre-breeding vaccinations is an important practice. A visit with your veterinarian about appropriate vaccinations, deworming, and other health considerations is recommended.

Even if bulls have a proper BCS, have had adequate exercise, and have been with the other herd bulls to determine social dominance, ranchers need to continually observe and manage bulls. Young bulls have great potential to bring genetic improvement to your herd, however they will experience an acclimation period prior to breeding any females. In order to start calving on your selected date, it may be important to turn young bulls out a few days early, so they can get adjusted to their environment and be ready to breed cows when you would like them to start. Managing young bulls will be more challenging because they are still growing. Since they have higher nutrient requirements, they will likely lose condition faster than mature bulls.

Social dominance in pastures can also be a concern. Yearling bulls and older, mature bulls should be in separate pastures. If they are together, the yearlings cannot compete with the older bulls thus, resulting in limited genetic improvement, as well as possible injury to the younger bulls. If older bulls have been used more than two breeding seasons, they have a tendency to become territorial and may spend more time fighting and defending their territory than servicing cows. This is a situation where observation is key because bulls may not be getting the cows bred or could be injured or causing injuries. If you are observing animals closely, bulls that are either injured or lack desire can be removed.

Another important issue to address is how many bulls to put in each pasture. A rule of thumb is one cow per month of age of the bull up to 3 years old. Therefore, the true "yearling" would only be exposed to 12 or 13 females. If he is a year and a half old (18 months), then he should be able to breed 15 – 18 cows. By the time the bull is two years of age, he should be able to breed 24 or 25 cows. However, research indicates this number could be increased to as many as 50 cows per bull without a negative impact on conception rate. In determining the proper bull power, several factors should be considered including the topography and size of the pasture, feed condition, age and condition of the bulls.

Producers need to continually observe and manage both bulls and cows during the breeding season. Overlooking critical warning signs could result in reduced pregnancy rates. Assess the BCS of the bulls. It is not unusual for a bull to lose 10 to 15% of their body weight during the breeding season. If the bull becomes too thin the producer

should consider replacing him because his ability to breed cows will be reduced. Observe bulls to ensure they are actively checking cows and breeding normally. Watch for injuries. Multiple cows coming back into heat after being bred or a high number of cows showing heat late in the breeding season are also important warning signs.

In conclusion, a successful breeding season is not only dependent on the BCS of the cows but also on the success of the bulls. Bulls have more influence on the success of the breeding season and the herd's future genetics because a cow produces one calf a year, while a bull can potentially sire 25 to 50 calves annually. Breeding success is vitally important to the profitability of the beef operation. Through good management practices breeding efficiency can be obtained. It is important to remember that both the cow and the bull are vital parts to the breeding equation.

New OSU Extension Resource for Backyard Chicken Owners

Dana Zook, Extension Area Livestock Specialist

I am one of those weird people who likes every season of the year. Yes, winter gets long, and summer is HOT here in Oklahoma but there are things to enjoy every season of the year. Since I love to garden, springtime brings me a great deal of joy. Winter has seemed to last an eternity this year and I welcome the opportunity to pull a few stray henbit weeds from the edge of my garden, add mulch to my flower beds, and plant lettuce and broccoli seeds with my kids.

In extension, the spring season means an influx of poultry inquiries. Farm stores stock a larger supply of chicks and people are generally interested in starting small flocks more in the spring than in any other season. If you have been following my articles these last couple years or have caught any portion of the news, you know that backyard chickens have seen a surge in popularity in the last decade. In fact, a 2014 UC Davis survey of small flock poultry owners across the US revealed 70% of the respondents had fewer than 10 chickens and had kept birds for less than 5 years. This study reveals that interest in backyard poultry has been building for some time. The Covid-19 pandemic contributed to an additional surge in interest and more people than ever are starting their own small flocks.

Why are people suddenly interested in chickens and other poultry? In my opinion, backyard chickens are part of a host of hobbies and interests that take people back to the basics. For some people chickens and gardening elude to a simpler lifestyle, lending more focus to family and the home. I put raising chickens in the same category as baking bread, canning, sewing, and gardening. These are tasks very common to our family members of generations past and have a nostalgic factor that some people may have found comforting, especially during the difficulties of the past year.

In response to this surge of interest, OSU extension has developed an online course focused on backyard and small flock poultry. This self-paced interactive course is much more than a zoom presentation providing activities, video content, and quizzes focused on husbandry, health, and management of poultry. It's a great overview of the issues that both new and seasoned poultry owners can expect to face as they select and care for their flocks. A link to the tool can be found on the new OSU Backyard Poultry Website <https://extension.okstate.edu/programs/backyard-poultry/index.html>. The course is \$20 and takes about 3 hours to complete. People who complete the course will receive a certificate of completion. Some municipalities are using this certificate as a requirement to get a license for backyard poultry.

So get out there and enjoy the spring weather! If you can, find a hobby you enjoy that embraces the season. If your spring plans include poultry, check out the new website and training course or contact your local county OSU extension educator for more information.

How Do You Make a Choice?

Trent Milacek, Extension Area Ag Econ Specialist

Many farmers are confused. How do you make a choice in terms of planting decisions and crop selection for the coming year? Personalities in media are convinced soybeans are a great answer to years of low prices. Agronomists will argue that producers need to stick to the rotation. As an economist, all I can offer is a look at the numbers.

I won't attempt to bore you with all of the background as this article does not intend to dive deep into budgeting. I believe simplicity is key when it comes to record keeping and budgeting because if something is simple, you are more likely to do it.

Summer crop producers have several crop options to plant in Oklahoma. I'll focus on corn, sorghum, sesame, cotton and soybeans. Comparative analysis requires that one be fair in the assessment in order to get useful data. I have tried to be as neutral as possible when calculating fertilizer and land costs. As input costs like fertilizer increase, legumes will benefit from their relatively "free" nitrogen and so on.

Corn will always have more struggles in dryland areas. Oklahoma will never see huge yields unless we are under a pivot. Considering dryland production, if prices come in at \$4.25/bu. a 73 bu. yield is required to breakeven. At a 100 bushel yield a price of \$3.12/bu. is needed. This is certainly obtainable if the current ag outlooks hold.

Sorghum has really stepped up to the plate for 2021. Assuming a \$5.60 harvest price results in a breakeven budget at a yield of 46 bu./acre. If you can raise 70 bushel sorghum, the breakeven price falls to \$3.68/bu. This budget is friendly to a majority of producers who regularly utilize sorghum in their rotations.

For those looking for a different oilseed crop that can tolerate dry and heat, you may consider sesame. Sesame prices have increased following other commodities ranging in contract price from \$0.40-\$0.46/lb. A \$0.40 price requires a 478 lb. yield to breakeven. If you can raise 700lb. sesame then the breakeven price falls to \$0.27/lb. This is increasingly advantageous, especially for producers who cannot grow soybeans.

Cotton has expanded its range in recent years. Analyzing soley dryland cotton, a price of \$0.85/lb. requires 411 lbs./acre to breakeven and a 504 lb. yield requires \$0.69/lb. to cover costs. The general strength in oilseed markets, including cotton, has taken the pressure off of budgets.

I anticipate that soybeans in Oklahoma will break-even at 24 bushels per acre if a harvest price of \$10.82 can be achieved. The other side of the revenue equation can suggest that if a producer raises 25 bu. soybeans, a price of \$10.23/bu. is sufficient to break-even. The most exciting part of this observation is that both of those numbers seem very obtainable this year.

What can a farmer glean from my observations? I do not see a clear winner. The best advice I can give is to plant a crop that fits the rotation and that you are comfortable with. Manage price risk in the best way you can and focus on the things you can control. Perfect rains and sunshine cannot completely mask poor management decisions. We are paid on our skill as good managers.

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.

