



Ag Insights

EXTENSION

Herbicides Updates and Summer Crop Prospects

Josh Bushong, Area Extension Agronomist

Oklahoma Department of Agriculture, Food, and Forestry (ODAFF) certified pesticide applicators can recertify one of two ways. Either acquire enough continuing educational units (CEUs) or retest through PSI Exams, LLC. Commercial Ag and Private applicators have only 2 years left to acquire CEUs. ODAFF licenses for categories like Ag Plant and Private last five years. Regardless of when an applicator became certified or recertified, these two categories will expire December 31, 2023.

For this 5-year cycle, Commercial Ag (Ag Plant) applicators must acquire 20 CEUs and Private applicators must acquire 16 CEUs. Private applicators will be required to get 20 CEUs for the next 5-year cycle. For both categories, an applicator can only get a maximum of 10 in any one year once. Meaning for this 5-year cycle, Ag Plant applicators mathematically will have to get CEUs in at least three of the five years. Fortunately for this cycle, Private applicators can still get their 16 CEUs in 2022 and 2023.

OSU Extension will be offering several opportunities for applicators to acquire these CEUs at our county meetings. In addition to these meetings, OSU Extension will also be offering multiple in-person annual dicamba trainings throughout the region. These annual dicamba trainings are required every year for use of Xtendiflex, Engenia, and Tavium in-crop on dicamba-tolerant cotton and soybean with the Xtend trait. Bayer, BASF, and Syngenta chemical companies do offer online training for these products that are ODAFF approved.

As of right now, Oklahoma applicators do not need to attend a specific training for Enlist traited (2,4-D herbicide tolerant) cotton, soybean, or corn like applicators in Texas do. The Environmental Protection Agency (EPA) granted new registrations and labels for the herbicides Enlist One and Enlist Duo by Corteva Agriscience last month. One major change in the label for Oklahoma is that now 45 counties in the eastern half of the state cannot use these herbicides. Basically Kay, Noble, Payne, Cleveland, McClain, Garvin, Carter, Love and everything to the east. Farmers in these counties can plant cotton, soybean, or corn with the Enlist trait, but cannot apply Enlist One or Enlist Duo herbicides to these crops.

A quick reminder that applicators who mix, handle, or apply products containing paraquat must take and pass an EPA mandatory online training. EPA added this requirement on the new product labels since the fall of 2018. The National Pesticide Safety Education Center started offering the online training course February 2020. A shortcut to get to the training is to go to USParaquatTraining.com. The certificate issued

after the training is completed should be filed in the applicator's records. The training will have to be completed every three years.

Spring is just around the corner and there are some promising and concerning issues farmers are asking about. On the upside, commodity prices are very favorable right now. On the downside, fertilizer prices are very high and certain crop protection products may be in short supply and more costly. Additionally, it's no secret we are in still in drought conditions.

Immediate concerns are the prospects for spring sown oats, as we typically recommend planting mid-February to mid-March. Upping seeding rates for dusted-in oats is a good agronomic decision, but price of seed will need to be considered. OSU typically recommends an 80 to 120 pound per acre seedling rate under normal conditions. The test weight on oats are about 32 pounds per bushel, so a seeding rate of at least three bushels per acre might be needed to achieve a decent stand.

Good rains will be needed to replenish soil profiles to support a soybean or corn crop. Grain sorghum and cotton might be favored if drought continues. The high price of nitrogen might sway some farmers to soybeans or cotton, but herbicide cost and availability might sway some farmers to grain sorghum. Equinom and Sesaco are both offering excellent contract prices of above 50 cents per pound. So, sesame might take up some more acreage especially if spring rains are delayed.

Farmers are encouraged to contact their local OSU Extension office to find out about upcoming CEU and dicamba meetings, or they can check the online calendar at <http://calendar.okstate.edu/oces/>. Farmers are also encouraged to plan with their seed and chemical suppliers to book those products quickly.

Cold Weather Nutrition for Beef Cows



Just before Christmas, I told my husband that I wished the weather was more characteristic of the season. "Be careful what you wish for", he said. As a South-Central Nebraska native, my idea of winter doesn't really align with 70-degree days in December. As you all know, winter came to us in full force on January 1st with bitterly cold temps and a little moisture for some. This recent weather brings to mind the extra nutrition required by cattle in cold weather. One can't forget the February 2021 cold snap and the difficulties that cattle had maintaining body condition during that time.

Haircoat is the first aspect that makes a great deal of difference in cattle's ability to withstand cold temperatures. The amount of moisture and how wet the haircoat is also impacts cold tolerance. Rainfall, melting snow or ice increases cold stress. In addition, cattle in lower body conditions (less than BCS 5), have less tolerance for cold. All cattle will need extra feed to maintain body condition and manage stress from the cold, but those needs may vary from one group to the next.

So how much extra nutrition are we talking about? It's easy to just say that cows will need more groceries during cold weather, but let's look at some data to give us a better target of increased nutritional need. The Mesonet Cattle Comfort Advisor is an excellent tool for getting an idea of cold (and hot) conditions and the impact they have on cattle performance.

According to the Mesonet Cattle Comfort Advisor, a cow's energy requirement increases 1% for each degree the cattle comfort index is below 32. This energy need would double to 2% if the animal is wet to the skin. Remember the actual temperature isn't always what cattle (and people) are feeling and wind chill makes the temperature feel colder than the actual temperature. Let's look at a realistic example. At 1:30 pm on January 6, the cattle comfort index was 11 degrees in Kingfisher, OK. As many will recall, this was a dry cold with no moisture. According to the increased energy requirement of 1% (no moisture), cattle would need an additional 21% energy to maintain body condition ($32^{\circ} - 11^{\circ} = 21^{\circ} \times 1\% = 21\%$).

So how much would producers need to feed to meet this increased requirement? A producer feeding 20% cubes to gestating cows would need to provide an additional 3.5 – 4 pounds of cubes daily to maintain body condition. Lactating cow's energy requirement is much higher and therefore they will need an additional 4.5-5 pounds 20% cubes daily. Increasing feeding allotments like this could cause some digestive upset if fed all at once so it may be beneficial to increase feeding at a lower level before cold weather strikes and for a few days after the cold snap to recover some energy loss. Also, cows that are fed just twice or three times per week may benefit from feeding more often to distribute higher feeding levels. A higher quality hay can also bridge the energy gap in these situations, but it is helpful to know the hay quality and how much is being provided.

Check out the Mesonet Cattle Comfort Advisor to get an idea of increased energy requirements as we move into January and February. The Cattle Comfort Advisor can be found under the Agriculture tab at mesonet.org. For help interpreting cattle nutritional needs during cold and inclement weather, contact your local OSU Extension Office for assistance.



2022 Soybean Outlook

Trent Milacek, Extension Area Ag Econ Specialist

Dry conditions in Oklahoma do not inspire many farmers to look past the current wheat crop that is struggling to grow across the state. However, the cost of inputs will play a major role in crop selection for the coming year. A major advantage soybeans have over other crops is the ability to fix nitrogen. Producers looking to lower their nitrogen costs will be keen to add soybean to their rotation to assist with cash flow.



Early pricing programs on seed look to be similar in cost to previous years, so this is a viable crop option right now. Good managers need to consider access to chemical and secure inputs prior to the growing season. Otherwise, chemical may not be available or affordable when it is needed. Commodity prices are in a much better position for producers than they have been in the recent past and price risk management will be a key to success.

Contracting and hedging will ensure that early season expectations are kept throughout the year, especially when dealing with high input costs. November '22 contract beans are valued over \$13.00/bu. giving many farmers the opportunity to price cash beans above \$12.50/bu. Current moisture outlook is not favorable for early season Oklahoma beans as above normal temps and below normal rainfall is expected through April. Producers need to remain flexible in their planting decisions by moving planting back to wait for rains if necessary or consider grain sorghum or sesame as alternatives if moisture remains scarce.

Soybeans will likely fill a major double crop role as well. Weather outlooks to June and July obviously have a hefty amount of error associated with them so flexibility remains key again. It is important to remember that if a wheat crop fails, there could be a substantial amount of residual nitrogen available in the soil. Oklahoma beans do not respond favorably to preplant nitrogen and remain vegetative under high nitrogen environments which will hamper yield. Another crop may need to be considered if a soil test shows high levels of N at planting due to failed crops.

In 2019 the average U.S. farm price for soybeans was \$8.57/bu., in 2020 it was \$10.80/bu. and for 2021 it is forecast to be \$12.10/bu. The recent price rallies in corn and hard red wheat markets have reduced the price gap between the commodities. There are many good growing options and price parity should mute some of the excitement for soybeans. Hopefully this will allow price volatility to reduce as the growing season approaches. Beginning stocks will not be unmanageable for 2022 but have increased over year-ago levels. If demand remains strong and prices are supported, soybeans will continue to compete for over 85 million acres as we approach the planting season.

Time to Evaluate Beef Co Herd Breeding Potential

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

With spring calving approaching, now would be good time to evaluate the breeding potential of your cows. Research has shown that the body condition score (BCS) of beef cows at the time of calving has a huge impact on subsequent rebreeding performance. Body condition scoring is a practical management tool to allow beef producers to distinguish differences in nutritional needs of beef cows in the herd. Simply put, BCS estimates the energy status (fat cover) of cows. The scoring system used is a 1 to 9 point scale where a BCS 1 cow is extremely thin while a BCS 9 cow is extremely fat and obese. A BCS 5 cow is in average flesh or body condition. A change of 1 BCS is equivalent to about 90 lb. of body weight. To optimize pregnancy rates, mature cows should have BCS of 5 or greater at calving and 1st calf heifers should have a BCS of at least 6 at calving.

Research has shown that the BCS of beef cows at the time of calving has a huge impact on subsequent rebreeding performance. This occurs because the BCS of a cow influences days to first estrus after calving and calving interval. For a cow to maintain a 365 day calving interval, she must conceive within about 82 days after calving (283 day gestation + 82 day postpartum interval = 365 days). Figure 1 illustrates that 90% of the beef cows with BCS >5 at calving showed signs of estrus by 60 days post-calving, whereas only 59% of beef cows with BCS 4, and only 41% of beef cows with BCS <3 showed estrus. The rectangular box in this figure shows the critical breeding time in order to achieve a 365-day calving interval. Even though cows that calve in a BCS of 7 have a short postpartum interval, it is not economical to feed cows to a BCS of 7.

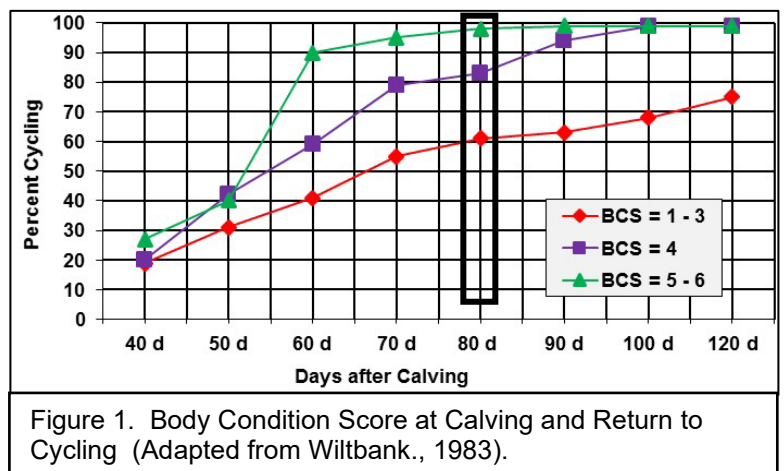
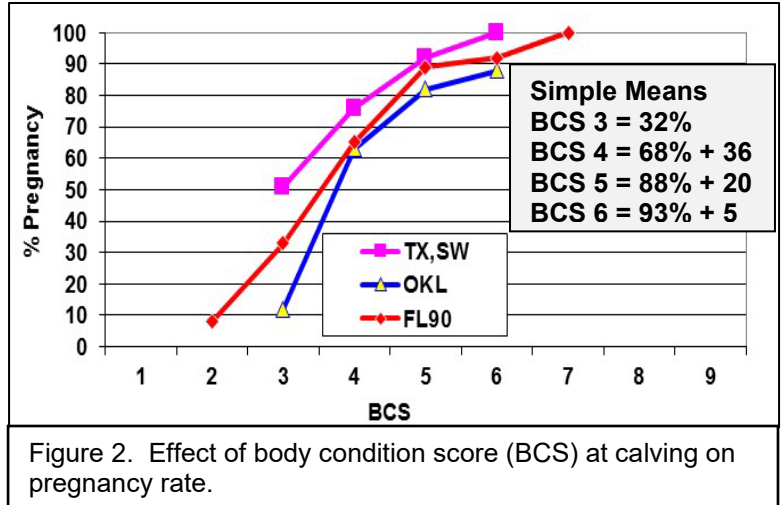


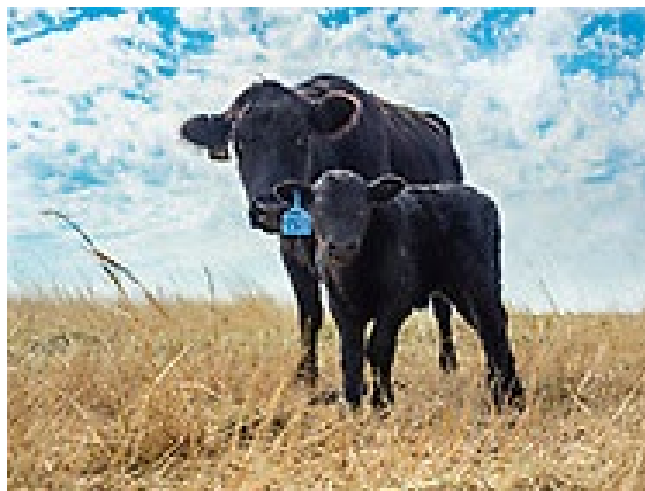
Figure 1. Body Condition Score at Calving and Return to Cycling (Adapted from Wiltbank., 1983).

Research (Figure 2) suggest that increasing calving BCS from 3 to 4 would increase pregnancy rate by about 35 percentage points (from 32 to 68%). Increasing calving BCS from a 4 to a 5 would increase pregnancy rates by about 20 percentage points (from 68% to 88%). Note this same effect of BCS at calving on pregnancy rates has been observed in different regions of the country (Florida, Oklahoma, and Texas).



In addition, thin cows at calving (BCS 4 or thinner) produce less colostrum, give birth to less vigorous calves that are slower to stand and these calves have lower immunoglobulin levels, thus reducing their ability to overcome early calf-hood disease challenges. All of these data illustrate the importance of targeting mature cows to calve in a BCS of at least 5. Since 1st-calf-heifers have only reached about 85% of their mature weight after calving and require additional nutrients to support growth, it is recommended that they be fed so they are a BCS of 6 at calving.

If your cows currently have inadequate condition, there is still some time to change the BCS prior to calving. Manage your mature cows for a BCS of 5+ at calving. If the cows are in BCS of 5 at calving, a slow gradual weight loss after calving is acceptable. Whereas, if the cows are less than BCS 5 at calving then one needs to hold or increase BCS (weight gain) after calving. However, increasing BCS from calving until breeding will be difficult and costly since cows are lactating.



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.



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INSIGHTS INTO OKLAHOMA AGRICULTURE

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