

Spring-planted Oats

Josh Bushong, West Area Extension Crops Specialist

Due to several issues, there will be open fields this winter that could be prime candidates for a spring forage crop. Spring-planted oats can provide many possibilities for farmers. Typically in Oklahoma, oats are mainly grown for hay but they can also provide a quick grazing pasture that can bridge the gap until summer pasture is available or even provide cover for a summer crop. While oats can be grazed, the crop can't handle intensive grazing as well as some of the dual-purpose varieties of wheat.



Typically, planting dates for Oklahoma are mid-February to mid-March. A minimum average daily soil temperature of 45 degrees is needed to avoid germination issues but waiting until 50 degrees is reached would be more ideal. Sowing oats will be very similar to other small grains like wheat, but oats are much lighter, about 32 lb./bu. Seeding rates range from 80 to 120 lb./A depending on planting conditions and seed costs. Conventionally tilled fields often will have better stand establishment and early seedling vigor, but direct seeding into no-till can still be adequate when previous crop residues are minimum.

Higher seeding rates are often beneficial to achieving forage production goals. Producers should note seed quality and adjust seeding rates accordingly. Ideally, germination rates should be higher than 85%. Spring planted oats usually will not tiller much, so adequate seeding rates can be critical to production from single-stemmed plants.

When selecting oat varieties, one characteristic to inquire about should be maturity. Short maturity oat varieties produce more grain. Medium and longer maturity oat varieties tend to yield more forage. Field research from Texas A&M Agrilife Extension confirmed these statements. Longer maturities were also preferred when used for one-time hay harvest.

Spring-planted winter oats will likely yield less forage than fall-sown winter wheat. Grazing forage production potential from spring-planted oats will average 1,500 to 2,000 pounds of forage per acre. Actual rates of nitrogen would be about 40 to 60 pounds to produce this amount of forage. Since oat seedlings are not as stress tolerant as wheat, it is recommended to wait until the crop is 6 to 8 inches tall before initiating grazing. About 35 to 60 days of grazing should be expected.

When laying down for hay, peak forage quality is reached once the crop reaches the boot growth stage. Harvesting between late boot and head emergence will optimize both tonnage and quality. Delaying harvest past head emergence may lead to more tonnage at the expense of quality, but windrows will dry down sooner. One field trial near Lubbock, TX looked at six hay timings from early boot to firm dough. At early boot the hay had 18.4% crude protein, at fully headed it was 13.9%, and at firm dough it was 8.7%. But the tonnage doubled from early boot to firm dough.

Field research from Kansas State University conducted near Hutchinson, KS showed an average hay forage yield of 4 tons per acre amongst the 20 different varieties studied. These hay yields were obtained with 75 pounds of nitrogen applied preplant and an additional 50 pounds applied approximately six weeks after emergence.

If used for cover, seeding rates can be slightly reduced if the goal is to simply protect the soil from blowing. If the goal of the cover is to prevent soil water evaporation or even to shade out weeds, then seeding rates should not be reduced. If a summer crop is desired, producers need to terminate the oats once stems have elongated but before head development. The crop will start to use more water once it reaches the reproductive growth stages.

There are some broadleaf herbicide options for spring-planted oats. These include some Group 4 (Phenoxy/Auxin) products such as 2,4-D, dicamba, and MCPA, as well as some Group 2 (ALS) products such as Glean, Harmony (SG and Xtra), and Peak. Other broadleaf options include some pre-mixed products such as Bromoxynil 2 + 2,4-D, Wildcard Xtra, Carnivore, Orion, Sentrallas, Supremacy, and Trump Card. Unfortunately, there are not many herbicide options for grass control. Callisto is labeled for crabgrass control if it's less than three inches. Callisto may result in temporary crop injury.

Producers wanting to learn more about spring-planted oats should contact their local OSU Extension office. More information can also be found in the OSU factsheet PSS-2160 "Spring-planted Oat for Grazing or Hay Production".

Feeder Calibration Clinics Evaluate Feeding Accuracy

Dana Zook, West Area Extension Livestock Specialist



Knowledge is power. I have alluded to this most of my articles this fall. Whether it's a hay analysis or ration evaluation, gaining the knowledge about components of a nutritional program for livestock can be very powerful. This fall, OSU Extension gave producers another opportunity to gain knowledge and improve feeding accuracy by hosting cake/cube feeder calibration clinics throughout Northwest Oklahoma.

You might be wondering, "what is a feeder calibration clinic"? It's a quick and easy clinic where producers show up with their cube feeders and OSU Extension personnel test the accuracy of the feeder. The first goal of these clinics is to determine average feed delivery from each producer's specific feeder and adjust if needed. We quiz producers on the amount they expect to be feeding and help them change their practices if our test shows the feeder is not delivering accurately.

The whole process takes about five minutes, but producers can spend more time getting nutritional advice if desired. Each of these clinics is organized by county extension and hosted by local feed companies or co-ops.

It may come as a surprise that the results of feed delivery at these clinics ranged from one end of the spectrum to the other: underfeeding to significantly over-feeding. Even feeders of the same brand can vary widely in accuracy. To illustrate this situation, I have picked out a group of producers that attended one of our clinics this fall. It a tale of 3 feeders; one delivering too much, one delivering too little and one that was right on target.

These three producers each attended to evaluate their 3C brand cake feeder. Interestingly, these producers were all feeding a 20% pellet of the same size. One would expect that all three of these feeders would deliver the exact amount, but this was definitely not the case. The first producer who attended did not have a digital counter for his feeder but informed us that he fed using his own mental count and had a consistent feeding goal of 1.5 seconds per cow. By evaluating the feeder output, this producer was able to determine that his feeder was providing an average of 6.7 lbs. per second for his cows. Based on his goal, he was providing just over 10 pounds in 1.5 seconds. This was slightly higher than he desired, and this knowledge allowed him to accurately adjust his feeding time to better target his desired feeding level. The next two producers had digital counters on their 3C feeders, and each assumed their feeder output was 1 pound per count. The second producer was very accurate, providing

102% of what he expected. The third producer had a feeder that was providing slightly more than expected, feeding 1.22 pounds per digital count or 122% the expected amount. One may think that 0.22 pounds over the desired feeding level isn't a big deal, but numbers inflate a great deal as more animals are fed. The reality is that each pound that is fed is 22% greater than desired. Think of your expected feed bill each month and add 22%. Would that be acceptable to you? Food for thought.

The second goal of the clinics is to survey producers to gain knowledge about feeding practices such as feeder brand, feed type, and level of feeder fill. Our future plan is to compile our survey results for an extension paper that summarizes feeding practices of Oklahoma producers. In the meantime, I am really enjoying these clinics and the opportunity to meet with producers. If you are interested in a clinic like this, contact your county extension educator and we will get a date on the schedule.

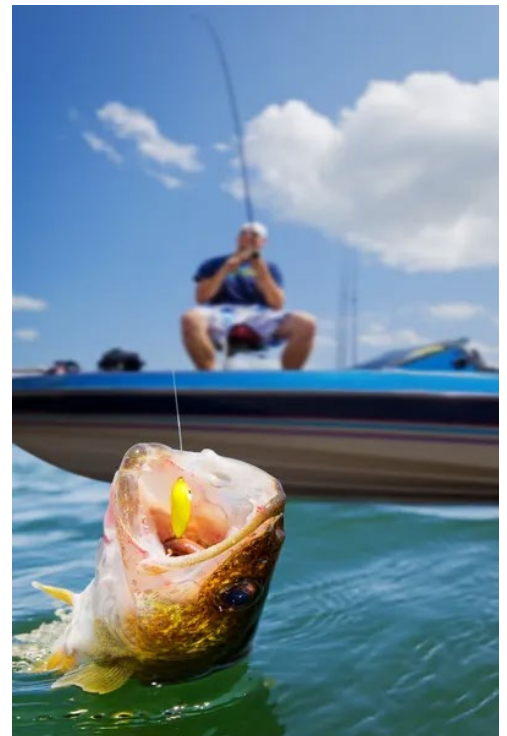
Sportfishing and Its Effect on the Local Economy

Trent Milacek, West Area Extension Ag Econ Specialist

Agriculture is a staple in rural economies and the success of local communities depends on it. There are, however, other revenue opportunities that share the same rural spaces and are vitally important. Water, in particular, is vitally important to ag, industry and municipalities.

The value of lakes and sportfishing is of particular concern in the event of a drought, which Oklahoma knows all too well. The current drought conditions and water demands have many impacts that will monetarily affect local communities. Policy makers must juggle the demands of businesses and homeowners with the value of a lake in terms of wildlife and tourism usage. The decisions made during a drought can have long-term impacts on a reservoir's ability to recover.

To help make these decisions it is important to understand the economic value of tourism to Oklahoma reservoirs and rivers. Fact sheet AGE-1054 attempts to shed light on the value of sportfishing trips to Oklahoma reservoirs. One interesting observation that the authors found was that Oklahomans spend more days fishing than wildlife watching or hunting combined as reported by the U.S. Fish and Wildlife Service. This results in \$800 million spent annually on fishing generating \$77 million in state and local tax revenue as well as supporting 11,000 jobs according the American Sportfishing Association.



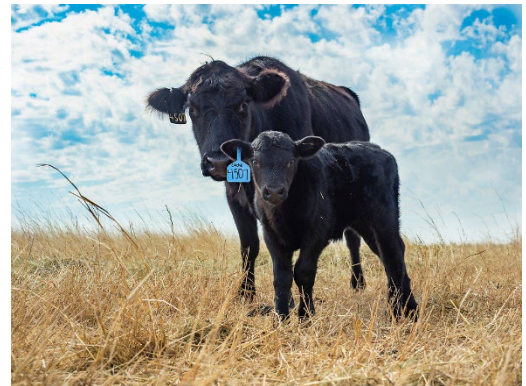
All of these benefits are in jeopardy when water levels in reservoirs fall and water quality declines. Other factors that affect lake visitation are distance of the reservoir from an angler's home, water turbidity, shoreline length, amount of forest nearby and the number of boat ramps available for use.

The following values were based on 2014 visitation information and the economic value of an associated trip. It is important to note that the increase in the consumer price index since that time would lead to a higher value in 2022 dollars. Local lakes of interest include Canton, Great Salt Plains and Kaw Lake. Annual trips to Canton Lake totaled 23,150 at a value of \$59.56 for a total value of \$1,378,814. Visitation to Great Salt Plains Lake totaled 2,925 trips at a value of \$59.48 for a total of \$173,979. Finally, visitors frequented Kaw Lake 90,838 times at a value of \$59.85 per trip for a total of \$5,436,654.

Effect of Heifer Calving Date on Longevity and Lifetime Productivity

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

Longevity and lifetime productivity are important factors influencing profitability in a cow-calf operation. If a heifer calves earlier in the calving season (first 21-day period), they have more time to heal and resume cycling before the next breeding season commences in order to maintain a 365-day calving interval. Calves born earlier in the calving season will also be older and heavier at weaning. A study conducted at the University of Saskatchewan in western Canada and published research from South Dakota State University and the U.S. Meat Animal Research Center (USMARC) clearly demonstrate the importance of early conception in beef heifers. In these studies, heifers were grouped based on when they calved in their first calving season (first 21 days - day 1 to 21; second 21 days - days 22 to 42; or greater than 42 days after the start of the calving season).



In all three studies, heifers that calved with their first calf during the first 21-day period of the calving season remained in the herd longer (greater longevity) as compared with heifers that calved in the second 21-day period, or later. Average longevity for South Dakota heifers that calved in the first or later period was 5.1 and 3.9 years, respectively. Average longevity in the USMARC heifers that calved in the first, second, or third period was 8.2, 7.6, and 7.2 years, respectively. In the Canadian study, heifers that had their first calf during the first 21-day period of the calving season had increased longevity

compared with heifers that calved in the second and third 21-day periods (7.2, 6.5, and 6.2 years for period 1, period 2, and period 3, respectively).

This data also indicated that the females that calved early as heifers tended to calve earlier throughout the remainder of their productive lives than the females that calved later in their first calving. Due to the fact these heifers calved earlier, their calves were older and heavier at weaning. In the USMARC data the weaning weight of the first 6 calves born to heifers that calved in the first calving period of their first calving season was greater than those of heifers that calved in the second or third period of their first calving season. Furthermore, calving period influenced the total pounds weaned and average weaning weight, with heifers that calved during the first period having increased weaning weights, total pounds weaned, and average weaning weights compared with heifers calving in the second or later period. Similarly, heifers calving during the second period had increased weaning weights, total pounds weaned, and average weaning weights compared with heifers calving later.

In the Canadian data, when lifetime productivity for each animal was pooled, calf actual average weaning weight and average adjusted 205-day weaning weight were 33 lb heavier and 20 lb heavier, respectively, for period 1 and 2 cows compared to period 3 cows. The average number of lifetime calves weaned for cows that calved in the first, second, and third 21-day periods was 5.4, 4.5, and 4.2 per cow, respectively. Due to the combined effects of greater average number of calves weaned over lifetime and actual calf weaning weight, cows that had their first calf during the first 21-day period had greater total weight weaned (2551 lb.) compared with heifers that calved in the second (2087 lb.) or third (1855 lb.) 21-day period.

In conclusion, the results of these studies clearly illustrate that developing heifers so that they conceive early in the breeding season and subsequently calve early in the calving season is critical for heifer longevity in the herd as well as the performance of her progeny in subsequent generations. This occurs because heifers that conceive earlier in the breeding season will calve earlier in the calving season and have a longer interval to rebreeding. Calves born earlier in the calving season will be older and thus, heavier at weaning. Moreover, in their lifetime, heifers that calved during the first 21-day period of their first calving season weaned approximately one more calf compared with heifers that calved later in the calving season.



From Josh, Dana, Trent, and Britt

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.



Extension Experience
INSIGHTS INTO OKLAHOMA AGRICULTURE

OSU | **EXTENSION**

**AN AGRICULTURE PODCAST PUBLISHED
WEEKLY ON APPLE PODCAST, GOOGLE PODCAST, AND SPOTIFY**

Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Oklahoma Cooperative Extension Service is implied.

Oklahoma State University, as an equal opportunity employer, complies with all applicable federal and state laws regarding non-discrimination and affirmative action. Oklahoma State University is committed to a policy of equal opportunity for all individuals and does not discriminate based on race, religion, age, sex, color, national origin, marital status, sexual orientation, gender identity/expression, disability, or veteran status with regard to employment, educational programs and activities, and/or admissions. For more information, visit <https://eeo.okstate.edu>.