



# Ag Insights

## EXTENSION

### **Podcasting – Extension Experience**

**Josh Bushong, Area Extension Agronomy Specialist**

We're almost a fifth of the way through the twenty first century. Times are always changing, and technology has been at the forefront even in agriculture. About six months ago, the area Extension specialists out of the Enid office (Dana Zook, Trent Milacek and I) decided to begin a new endeavor to reach Oklahoma Ag producers. We started a podcast.

What is a podcast? Basically, it's a digital audio file made available to listen to on the internet or mobile device. You can think of it as talk radio, but you can access it anytime. Most mobile device applications, aka apps, are free for users. While our recordings are not broadcasted live, most apps will notify the user when a new episode is published if setup to do so. Since the recordings are cataloged in some way in the apps, the user can go back and find older episodes of interest as well.

Our podcast is named Extension Experience – Insights into Oklahoma Agriculture. It's currently published on Apple Podcasts, Google Podcasts, Spotify, and several other podcast apps. If a user doesn't have a mobile device that can play podcasts, most platforms are also available online and can be accessed with a personal computer, laptop, or even a smart television. You can find our webpage at [spotlight.okstate.edu/experience/podcast/](http://spotlight.okstate.edu/experience/podcast/) to find all our episodes online.

One of the benefits of using a mobile device, is that you can either play the podcast recordings over your cellular data or download it to the device beforehand to use later. Downloading episodes to the device can have a couple benefits. First, if you know you are going somewhere with limited reception you can still have something to listen to. Another would be capitalizing on using WiFi either at home or many public areas, which is often faster and will greatly reduce cellular data usage.

We've received some feedback from Oklahoma producers that listen to podcasts, either on the tractor or driving, that recommend for us to give a shot. Our main objective is to provide educational information about agriculture production relevant to the region, but to do so in more of a personal conversation. Incorporating personal experiences to the discussed topic of the episode can hopefully start the conversation with producers. Ideally these episodes will spark a topic of interest that a producer will contact an OSU extension educator to find out more. In addition to being centered to something

educational, we also want it to be entertaining to strive towards building upon the producer and OSU Extension relationship.

Our podcasts are typically about 15 to 30 minutes in length. We know time is very valuable to most and we don't want it to seem like an inconvenience for producers to dedicate too much time to listen. We publish new episodes almost weekly. Since we comprise of an agronomist, livestock specialist, and an economist, we have offered a diverse series of episodes so far. We have had episodes about grazing crop residues, late planted wheat, alfalfa production, weed control, beef cow mineral, preconditioning, and beef cow nutrition just to name a few.

We have made a great effort in trying to keep the content useful to a wide array of listeners, from a seasoned producer to someone that's never farmed before. Explaining terminology and practice concepts have helped a good deal. Hopefully the episodes are easy listening, but also provide at least a nugget of knowledge and spark curiosity to learn more.

## **Energy Supplementation of Stocker Cattle on Wheat Pasture**

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

In the November Ag Insights newsletter, I focused on the various aspects that need to be considered when planning a mineral program for wheat pasture. This article will focus on designing energy supplements for cattle grazing wheat pasture. Both the energy and crude protein content of wheat pasture are high. Wheat forage will commonly contain 75% TDN (total digestible nutrients) and 25 to 30% crude protein during the fall and early spring grazing period. However, there are times when providing supplemental energy on wheat pasture may be beneficial. Supplementation of cattle grazing wheat pasture is of interest to 1) provide a more balanced nutrient supply and feed additives such as ionophores or bloat preventive compounds, 2) substitute supplement for forage where it is desirable to increase stocking rate in relation to grazing management and/or marketing decisions, and 3) substitute supplement for forage under conditions of low forage standing crops.

Two ionophores (monensin and lasalocid) are available for wheat pasture stocker cattle. Both, if delivered at the proper dosage, increase weight gains of growing cattle on wheat pasture by 0.18 to 0.24 lb/day more than that of the carrier supplement and improve the economics of supplementation programs. Poloxalene is the only product labeled for bloat prevention. Although monensin is not a true bloat preventive compound like poloxalene, studies have shown that it does decrease the incidence and severity of wheat pasture bloat.

This article will review two different strategies for providing energy supplements to growing cattle on wheat pasture. One strategy is to hand feed a small package (target intake of 2 lb/day or 4 lb every other day) monensin-containing energy supplement to provide a more balanced dry organic matter to crude protein ratio in the total diet. A summary of five OSU trials showed that this strategy consistently increased daily gain by 0.42 lb with a supplement conversion of 4.72 lb of supplement per lb of increased weight gain which will often be profitable. The supplement increased profits by \$15 to \$31 per steer depending on supplement cost and profit potential of the cattle.

It is recommended that this supplement be manufactured as a small pellet consisting of about 82 to 90% corn, milo, wheat middlings and/or soybean hulls as the source(s) of energy. To meet mineral and vitamin needs, the supplement should contain 2.25 to 2.75% calcium, 1% phosphorus, 0.7% magnesium, 0.75 to 1.25% salt, 60 ppm copper, and a minimum of 10,000 IU of added vitamin A. It should also contain 90 to 100 mg of monensin per pound. This supplementation program does require close management. Feeding the supplement every other day may increase the likelihood that some cattle could eat more than the desired amount of supplement. The primary challenge in using this supplementation program is one of having good management and enough time to be a good observer of what the cattle are doing.

A second strategy is to feed energy supplements in larger amounts (about 0.75% of body weight) to increase stocking rate during the fall/ winter grazing period and to have more cattle on hand for spring graze-out of wheat. In a three-year OSU study, a high-starch, corn-based supplement and a high-fiber byproduct feed-based supplement were compared. The high-fiber energy supplement contained about 47% soybean hulls and 42% wheat middlings, and all supplements contained 40 mg/lb of monensin. The supplements were hand fed six days per week at a level of about 0.75% of body weight. Non-supplemented, control cattle had free-choice access to a high-calcium (16%) commercial mineral mixture throughout the study.

During the study, mean daily supplement consumption was 0.65% of body weight which increased daily gain by 0.33 lb and allowed stocking rate to be increased by one-third. Type of supplement did not influence daily gain, supplement conversion or the substitution ratio of supplement for forage. However, the cattle seemed to prefer the high-fiber supplement and consumed it much more readily than the corn-based high-starch supplement. Generally, the cattle consumed the high fiber supplement in a matter of 10 to 30 minutes in the morning. In contrast, the corn-based supplement was eaten during at least two feeding periods during the day (morning and mid-afternoon). From a feed and bunk management standpoint, this difference in the supplements is extremely important on days of inclement weather (rain, snow, etc.). In addition, the potential for acidosis is much less for the high-fiber supplement.

Supplement conversion with this strategy was approximately 5 lb of supplement per lb of increased gain per acre. This conversion was substantially less than conversions of 9 to 10 that have traditionally been used in evaluating the economics of energy supplementation programs for wheat pasture stocker cattle.

In summary, research illustrates that supplementation strategies that 1) result in a more balanced nutrient supply, 2) provide feed additives such as ionophores or bloat preventive compounds, 3) result in substitution of supplement for forage when it is desirable to increase stocking rate in relation to grazing management and/or marketing decisions, and/or 4) decrease production risk with respect to average daily gain, offer opportunities to increase profitability of wheat pasture stocker cattle operations. The type and amount of supplement fed should be adjusted according to the primary objective(s) of the supplementation program.

## **A Big Year for Soybeans**

**Trent Milacek, Extension Area Ag Econ Specialist**

What a difference a year can make. The 2020 soybean season began with futures prices near \$8.50/bu. relegating soybean production to highly productive acres. Many Oklahoma producers experienced good summer rains and the production year seemed like it would turn out okay.

What was not expected is the \$3.50/bu. increase in soybean prices to end the year. That kind of a price move is not unprecedented but could be unexpected for farmers that have been dealt many difficult situations over the past decade.

Without spending a great deal of time on soybean budgets, I expect that a farmer that produces \$220/acre in total revenue is covering most imaginable costs of production. Given the approximate \$8.00/bu. cash price at planting, this commanded a 27.5 bu. yield to cash flow.

What has transpired makes soybean breakeven attainable for more producers across Oklahoma. Current cash beans can be sold in many locations for \$11.25/bu. At that price the breakeven is pushed below 20 bu./acre.

The problem with current prices is sustainability. Can price levels hold and why are prices at these levels in the first place. Fundamentals including growing condition concerns are a major reason. Strong trade is another but cannot shadow the influence of fund buying.

November 2021 soybean trade is currently at \$10.50/bu. over \$1.00/bu. lower than current prices. This does steal some of the luster from a 2021 soybean budget, but it is a much better situation than in April 2020.

It is early to consider price protection for 2021 production. Put options or straight hedges can be executed but must be done so conservatively. Other crops of note include the outstanding basis bids for grain sorghum. Those budgets have gotten equally better and basis contracts should be at the forefront of a price risk mitigation strategy.

Times are looking better for Oklahoma farmers as the current wheat crop continues to grow. Use the winter months to look back on what transpired in the previous year. We are always learning and there could be many more crop production options in 2021 due to increasing prices.

If you would like more information on budgeting or growing soybeans, please contact your local county extension educator. Enterprise budgeting software is available to producers so that individual costs and production goals can be used. This will assist producers in adopting new enterprises on their operations.

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.

## **The Family Tradition of Crop Residues**

**Dana Zook, Extension Area Livestock Specialist**

Happy Be-lated Thanksgiving! I hope this article finds each one of you happy and healthy after the holiday. For many, Thanksgiving looked much different this year. My household stayed at home this year and spent 4 much-needed days without a schedule. Keep in mind there is an 18-month-old and 3 ½ year old around the house so Play-doh, crayons, construction paper turkeys, and lots of outside play filled the days. There were also some actual chunks of time for my husband and I to spend time with our hobbies. It sounds pretty cliché, but it was wonderful.

We are an unconventional family in that we don't really like turkey (gasp!). I will be honest that I enjoy turkey most when it's in a casserole dish with spaghetti and mushrooms as Tetrizzini. This year, our Thanksgiving feast consisted of ham on the smoker, scalloped potatoes, and the top-secret Ziegler stuffing balls – like I said, unconventional.

When I was growing up, many Thanksgiving holiday breaks were spent putting up electric fence on crop residues. This is a common practice in corn country that provides an excellent source of nutrition for dry spring calving cows. Corn and milo acres have increased across Oklahoma allowing producers to take advantage of this

alternative forage. In some situations, crop residues could provide an option to offset winter supplementation needs for some livestock.

If you are considering using residues or have already put cows out on stalks, consider a few aspects of this resource. The most nutritional value in crop residues is in the grain and leaves followed by the stalk. Cows will select and consume the most nutritional components first. Weathering reduces the quality of crop residues, so producers are working against mother nature to obtain the best nutritional value. For this reason, start using residues as soon after harvest as possible.

Stocking rates are variable, but a good rule of thumb is a 1300-pound cow can graze one acre of crop for residue 30 days. Realistically, cows stocked properly will use up the value of crop residues within 45 to 60 days. How does one know when the “goody” has been gained from the residue? Keep an eye on the manure patties. If less grain is observed in the manure, cows have likely consumed the best components. Producers should then be thinking of switching pastures or adding some additional supplement to meet their nutritional requirements.

Crop residues can supply the full nutritional needs of dry cows, but producers should consider additional nutrition for lactating cows, developing heifers, and stocker calves. For questions regarding this topic consult your local county OSU Extension Educator.

For a more extensive discussion on this topic, check out the *Grazing Crop Residue* episode on the *Extension Experience* podcast. You can find our podcast on your smart phone on the Spotify, Apple Podcast, or Google Podcast Apps. Or access our podcast on our Spotlight website by visiting <http://spotlight.okstate.edu/experience/podcast/>.

## **Managing Beaver Damage**

**Dwayne Elmore, Ph.D., Extension Wildlife Specialist**

The American beaver is an incredibly important animal. This ecosystem engineer is known as a keystone species, meaning it creates habitat and conditions for many other species that depend on it. By felling trees, beaver create sunny openings which benefit deer, woodcock, and many species of plants. By building dams, beaver impound water creating habitat for fish, amphibians, wading birds, and waterfowl. Beaver impounded streams also slow down water velocity which helps prevent erosion, reduce downstream flooding, and improves water quality. Despite the numerous benefits beaver provide, they can be problematic.

The primary types of beaver damage include: tree damage through girdling, felling, and flooding; pond and levee damage from burrowing; and disrupting water control structures such as culverts and gates. Blocking up culverts can result in flooded roads and blocking control gates can prevent periodic drainage of wetlands and ponds.

Fortunately, many of these issues can be managed. For homeowners that have a few susceptible trees near a lake or stream, wrapping the base of the tree in metal wire will keep beaver from damaging the tree stem. Make sure that the wire does not touch the tree so that it does not grow into the wire. Culverts and other water control structures can be protected with exclusion cages which prevent beaver from clogging the openings. Contact your local USDA Natural Resource Conservation Service office for designs and assistance with these beaver exclusion devices. Dams and levees can be protected by using rock rip-rap to prevent beaver from burrowing into the earth. All of these practices have an upfront cost, but they offer long-term solutions without needing to control beaver numbers.

Even though many damage issues can be alleviated without lethal control, there are situations where beaver control may be the best solution. For example, when large areas of commercially viable trees are being flooded or felled, beaver control may be warranted. Also, as it is not practical to place rock rip rap on some dams and levees, control of isolated beaver might be needed. In these situations, it is recommended that the landowner contact a trained trapper. Beaver can be difficult to trap and are primarily nocturnal making shooting difficult. Therefore, for most landowners hiring a professional is the best option. A list of nuisance wildlife trappers can be found at <https://www.wildlifedepartment.com/law/nwco-operators>.



*A simple metal cage placed around vulnerable trees will prevent damage from beaver. In situations where only a few trees are of concern, such as the home landscape, this will typically solve beaver damage issues.*

## **Winter Disking to Promote Forbs**

**Dwayne Elmore, Ph.D., Extension Wildlife Specialist**

Forbs are a broad group of plants that includes non-woody and non-grass species. Many forbs are desirable for wildlife. Some forbs are eaten by wildlife including common ragweed, daisy fleabane, and various clover species. Others provide seeds for wildlife including croton, broomweed, and sunflower. Forbs also provide food indirectly by harboring insects that many birds consume. Some species of forbs offer little food, but are important for cover allowing wildlife to use areas that otherwise would be too exposed. Species such as sunflower provide all of these attributes as the foliage is consumed by deer, rabbit, and grasshopper; the seeds are consumed by quail, turkey, and goldfinch; and the overhead cover hides turkey poults that feed on the grasshoppers.

While soil type is related to plant abundance and diversity, management can strongly influence forbs. Many forbs are annuals; therefore, disturbance can dramatically increase them. Also, past management such as unrestrained herbicide spraying can reduce the number of forbs - especially perennials. Prescribed fire is often promoted as a management activity to increase forb abundance and diversity, and fire is typically the best and most cost-effective method to use. Adjusting cattle stocking rates and forest thinning can also be used. However, sometimes these actions are either unavailable or do not yield the forb response that meet landowner objectives. In these situations, strip disking may be a tool to consider.

Strip disking refers to tillage to disturb the soil in isolated patchy areas. This is not the same as deeply turning over soil as in plowing. Tillage will generally only disturb the first few inches of the soil exposing dormant seeds and temporally reducing competition from grasses. This allows forbs to germinate and be dominant. This forb dominance will generally persist for 1-3 years depending on the soil, rainfall, and other plant species present. Disked areas can be highly attractive to wildlife during this period.

If using strip disking, there are a few things to consider. First, disking land that has never been plowed or otherwise seen soil significant disturbance is not recommended as you could be altering soil structure and dramatically changing the plant community. On old crop fields already heavily altered or in deep sandy soils lacking distinct soil horizons this is less of an issue. However, some sites have highly erodible soils and tillage should be used conservatively regardless of past management. Consult with your local county extension or USDA Natural Resource Conservation Service office for assistance before implementing any disking regime. Second, in most situations only disk small areas in patches or strips. Isolated disking that retains abundant cover (grass and shrubs) around the disked areas allows wildlife to have food and cover in close proximity. This is important for quail, turkey, deer, rabbit, and pheasant. Alternatively, dove and waterfowl feel more secure in larger patches where they can see danger



approaching. Last, season of disking influences forb response. While the response can vary between years and sites, disking during the winter (October – February) is more likely to provide a favorable response of desirable plants from a wildlife perspective.



*This old crop field (pictured in June) was disked the previous winter. About 1/3 of the total field is disked each year on a rotation so that in a 3-year period the entire field is disturbed. This soil is loamy and 2-3 tractor passes produces enough soil disturbance. Tighter soils with dense grass may require more passes. Notice the abundance of common ragweed and annual sunflower. This field is being heavily used by white-tailed deer and northern bobwhite.*

## **Animal Disease Traceability – Opportunity for Free Tags**

**Rosslyn Biggs, DVM., OSU College of Vet. Med. and Beef Cattle Ext. Spec.**

As a result of the current pandemic, terms such as “herd immunity,” “infection rates,” and “contact tracing” are now part of daily conversations. Similar terms and principles would apply if an incursion of a foreign animal disease, such as foot and mouth disease, occurred in the United States. In such situations, animal disease traceability is critical to emergency response efforts.

Animal disease traceability (ADT), as defined by the United States Department of Agriculture (USDA), is knowing where diseased and at-risk animals are, where they’ve been, and when. ADT does not prevent disease introduction, but does allow expedited emergency response. Accurate and timely response is critical for both producers and industry.

ADT allows official individual identification of animals and rapid tracing during an outbreak. One ADT system that allows individual identification is the National Uniform Eartagging System (NUES). This system has been used for years and is familiar to many producers. The common names for these tags are “Bangs tags” or “Silver Bright tags. These tags are used for cattle requiring brucellosis vaccination or tuberculosis testing.

Another system of official identification involves the use of radiofrequency (electronic) tags beginning the tag number with the digits 840. Radiofrequency identification (RFID) tags are available as low frequency and ultra-high frequency. In certain circumstances other forms of identification, such as registration tattoos and brands, may be used as official identification.

Currently, official identification is required only under certain conditions and for certain classes of cattle. The two primary situations requiring official identification are program disease testing, (such as that required for brucellosis), and interstate movement.

The cattle classes requiring identification when moving interstate are listed below. Exceptions to this requirement do apply under unique movement types, such as travel for veterinary care. Feeder cattle and animals moving directly to slaughter do not require official identification for interstate movement.

Classes of cattle requiring USDA official identification for interstate movement include:

### **Beef Cattle & Bison**

- sexually intact and 18 months or older
- used for rodeo or recreational events (regardless of age)
- used for shows or exhibitions

## **Dairy Cattle**

- all female dairy cattle
- all male dairy cattle born after March 11, 2013

In the event of a disease outbreak, effective and rapid response will hinge on the electronic sharing of data within a traceability system. Efforts such as U.S. CattleTrace, a cattle industry-driven multi-state initiative, are evaluating traceability system design and usage. Any final nationwide system must be functional for the cattle industry. Such a system must be cost effective and maintain confidentiality while continuing to allow cattle to move at the speed of commerce.

The USDA has proposed changes to move away from the use of the NUES metal tags towards RFID tags. The public comment period for these changes closed at the beginning of October 2020. A variety of industry organizations and leaders have provided comment.

Producers and veterinarians interested in incorporating RFID may wish to participate in a program offered by the Oklahoma Department of Agriculture, Food and Forestry (ODAFF). ODAFF is distributing approximately 550,000 low frequency 840 RFID tags for the cost of shipping. The goal is to increase RFID tag usage in young breeding cattle intended as replacement stock. Producers must first obtain a premise identification number and then submit an order form. The number to call for questions is ODAFF Animal Industry Division 405-522-6141. Information can also be found at <http://www.oda.state.ok.us/ais/traceability.htm>

About the author: Dr. Rosslyn Biggs is an assistant clinical professor at Oklahoma State University's College of Veterinary Medicine. She earned her DVM degree from Oklahoma State University and currently serves as a Beef Cattle Extension Specialist and Director of Continuing Education.

## **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.

