



Ag Insights

From the Desks of Your Northwest Area Ag Specialists

Oklahoma Cooperative Extension Service - Division of Agricultural Sciences and Natural Resources - Oklahoma State University

August, 2017

NW Area Office, Enid

Phone: (580)-237-7677

Dana Zook

Area Livestock Specialist
dana.zook@okstate.edu

Trent Milacek

Area Ag Economics Specialist
trent.milacek@okstate.edu

Josh Bushong

Area Agronomy Specialist
josh.bushong@okstate.edu

OPREC, Goodwell

Phone: (580)-349-5441

R. Britt Hicks

Area Livestock Specialist
britt.hicks@okstate.edu

Tracy Beedy

Area Agronomy Specialist
tracy.beedy@okstate.edu

Facebook Page:

[facebook.com/
nwareaosuextension](https://www.facebook.com/nwareaosuextension)

Website:

[http://oces.okstate.edu/
nwareaextension](http://oces.okstate.edu/nwareaextension)

Summer Annual Crops Provide Opportunities and Risks

Dana Zook, NW Area Livestock Specialist

Summer annuals provide a great opportunity to diversify an Oklahoma beef producers grazing plan. Recent popularity of cover crops has allowed for increased availability of summer annual crop options for grazing and forage resources for beef cattle. However, producers should be aware of necessary steps to take to evade any toxins that have a tendency to accumulate in these crops.

Sudan and sorghum are commonplace summer crops used as sources for grazing or for silage and hay production. These crops are drought tolerant and yield very well in a short growing season. While highly popular, these plants have the potential to accumulate nitrates and prussic acid during hot dry summer conditions that can occur during Oklahoma.

Excessive nitrate accumulation occurs when the uptake of nitrate in the plant exceeds what can be utilized in the plant to produce protein. Any conditions that stress the plant such as drought, shade, frost or temperature extremes increase the possibility to accumulate these toxins. Regardless of the age of the plant, the highest nitrate accumulation will occur in stem. This area of the plant can be avoided during harvest by raising the cutter bar of the swather or harvester 6 – 12 inches from the base of the plant.

Another toxin common in summer annual crops is prussic acid. During times when plants are stressed, an enzymatic reaction occurs within the plant that produces prussic acid or hydrocyanic gas. Prussic acid accumulates in new, young plant growth. When consumed, prussic acid limits body cell's ability to take in oxygen. As a result, infected animals can die of suffocation very quickly. Prussic acid is released in a gaseous form when the plants cells are damaged. Cutting and sun-curing will reduce the risk of prussic acid toxicity in harvested forages. For this reason, prussic acid is more of a concern when these forages are grazed.

Many issues of nitrate or prussic acid toxicity occur when cattle are forced to graze the crop more heavily and/or are allowed to graze regrowth. With management and awareness of trigger conditions, many of these issues can be prevented. Producers should wait to graze sudan, sorghum, and other hybrids until the plant reaches 24 inches in height. Rotational grazing is ideal with these crops for no longer than 10 days at a time. Animals should be removed to allow regrowth to occur. Stocking rates are approximately 4 - 5 animal units or 4,000 - 5,000 pounds of beef per acre for each grazing period. Animals can be allowed to graze again after regrowth reaches 18-24 inches in height. This stocking rate may sound extreme, however, consuming the forage quickly and evenly will help prevent nitrate and prussic acid poisoning.

Another management method is to avoid turning hungry cattle out in these pastures. Cattle can acclimate to a low level of nitrates over time. However, a full belly of toxic forage all at once can

(Continued on page 2)

(Continued from Page 1)

be deadly. Allowing cattle to become satisfied on other non-nitrate forages prior to turn-out will help mitigate the risk of toxicity. Cattle do a majority of grazing early in the day and so waiting until late afternoon or evening to move cattle to these pastures will also reduce toxicity risk.

When planning to graze any summer annual crop, producers should take advantage of quick detection tests for nitrates and prussic acid. These quick tests are available at most OSU County Extension offices. These tests can indicate the presence of toxins which helps producers adjust grazing management according to the result. Stop by your local OSU county extension office for advice about utilizing these summer annual crops in your grazing plan this summer.

Quick Comparison of Nitrates vs. Prussic Acid		
Conditions	Nitrate	Prussic Acid
Plant parts affected	Older, lower stems and occasionally leaves	new growth, young growth, re-growth
Plants likely to Accumulate	Sorghums, sudans, sudan grass, pigweed, Johnson grass, and many others All plants have the potential to accumulate when conditions are right	Sorghums, sorghum-sudan hybrids, Johnson grass, and others
Death Occurs	Usually within 4 hours of consumption	Within minutes of consumption
Effect of haying on Concentration	None – concentration Remains the same	Dissipates when properly cured

Inzen/Zest Herbicide Update

Tracy Beedy, Panhandle Area Agronomy Specialist

Today's Inzen (ALS)-tolerant sorghums from Alta and Pioneer are derived from Inzen-tolerant shattercane discovered by Kansas State University and licensed to DuPont. This technology has been a year from commercialization for many years, however Zest herbicide has now received a label for application to grain sorghum in Oklahoma (see <http://labelfinder.dupont.com>). Zest will be the first true over-the-top herbicide for grass control in grain sorghum.

Inzen-tolerant seed has been sufficient in 2017 for many herbicide trials across sorghum-growing areas of Oklahoma. Check with your local extension agronomist or educator to arrange to view the research. When this technology becomes available be careful to follow label directions, especially those which help to avoid developing ALS-resistance to the targeted grassy weeds. Target weed height varies, with some species controlled only at 2-inch height, and other weeds controlled at up to 6-inch heights.

Although Johnsongrass is not among the weeds listed on the Zest label to be controlled in grain sorghum, nicosulfuron is labeled for Johnsongrass control in corn. Although Accent (nicosulfuron) is recommended on the label for seedling Johnsongrass in corn up to 12-inch heights, best control is seen when sprayed at 4-6" height (Figures 1 & 2).

(Continued on page 3)

(Continued from page 2)



Figure 1. Johnsongrass and Sorghum at six-inch Treatment stage at Goodwell in 2016.



Figure 2. Johnsongrass suppressed with Zest (left) and not suppressed (right) at Goodwell in 2016

Land sprayed with nicosulfuron may be rotated to corn without restriction, to soybeans after 15 days, and to other crops such as winter small grains, non-Inzen tolerant sorghum hybrids, and cotton with much longer intervals. Please consult the Zest label for detailed instructions on its use.

Wheat Pasture Projections for 2017

Trent T. Milacek

Northwest Area Ag Econ Specialist, OCES

Wheat producers will soon determine if they wish to grow dual-purpose wheat for grazing. Making this management choice will require earlier planting, starter fertility, higher planting rates and specific variety selection. Another consideration producers will have to make is what type of cattle they will purchase and the profit potential on the dual-purpose wheat enterprise.

Cattle prices have recovered during the summer causing stocker cattle to be more expensive. Value of gain has been a topic of concern in recent years, having fallen dramatically from 2013-14 levels. Producers can look to current markets to begin calculating what growing cattle will be worth in 2017. Many things will affect this including the price of wheat and cost of gain.

The first useful piece of information to gather is futures prices for feeder cattle. The October feeder cattle contract is trading slightly above \$150/cwt., which is a starting place for calculating an expected purchase price. Using beefbasis.com historical basis information, a producer can expect a steer at Woodward weighing between 450-500 lbs. to have a basis of +\$20.07/cwt. in October. Therefore, the current market expects those calves to cost \$170/cwt. at purchase.

If those calves gain 250 lbs. over the winter grazing season, they will weigh 750 lbs. in March. Using the same beefbasis.com data, the average basis for 750 lb. calves is -\$0.66/cwt. sold in March. The current futures bid for March 2018 Feeder cattle is near \$143/cwt. Making broad assumptions that current market conditions hold, then 750 lb. steers in March could be worth approximately \$142/cwt.

From the example, divide the difference between the selling price and purchase price of the animal by the weight gained, to calculate the value of gain. This value comes to \$0.86/lb. suggesting that each 100 pounds gained is worth \$86.

One thing to consider when purchasing cattle is the beginning weight. On the day of purchase, market information will be different and the weight classes of cattle will sell accordingly. Maintaining flexibility in the size of calf you are willing to purchase can allow a producer to take advantage of discounts in the market. Also, be mindful of pricing opportunities in the futures market. If hedging can lock in an attractive value of gain, then consider that management opportunity to minimize price risk.

Resources are available to assist producers in calculating examples like the one above. For more information on budgeting and marketing, please contact your local county extension educator.



NORTHWEST OKLAHOMA BEEF CONFERENCE

Improving Efficiency for a Progressive Future

SPEAKERS

Burke Teichert

Owner of Teichert Management and Consulting
"Five Essentials for Successful Ranch Management"

Jaymelynn Farney

KSU Extension Beef Systems Specialist
"Cover Crops: The Do's and Don'ts of Grazing"

Gant Mourer

OSU Beef Value Enhancement Specialist
"Added Value of Preconditioning"

Richard Prather

DVM Ellis County Animal Hospital
"Maternal Management for Improved Herd Health"

Lunch and refreshments provided by:

- InterBank, Enid
- Security National Bank, Enid
- Northwest Vet Supply, Enid
- Central National Bank, Enid

For more information, contact your local Extension office, or
Dana Zook (580.237.7677; dana.zook@okstate.edu).

August 31, 2017
9:30 am – 3:00 pm

Chisolm Trail Expo Center
111 W. Purdue Avenue
Enid, Oklahoma

Be sure
to visit the
**trade
show!**

REGISTRATION

(Registration covers speaker fees and travel.)

NAME _____

ADDRESS _____

PHONE # _____ EMAIL _____

COST: \$10 in advance
(by August 25)
or
\$15 at the door

Detach card and send with proper postage to:

Garfield County OSU Extension Center, 316 E. Oxford, Enid, OK 73701

Make checks payable to: *Garfield County OSU Extension*

Make Plans to Attend the 2017 Northwest Oklahoma Beef Conference

The Northwest Oklahoma Beef Conference is slated for Thursday August 31st, 2017. The conference will again be hosted at the Chisholm Trail Expo Center located at 111 West Purdue on the Garfield County Fairgrounds beginning at 9:30 am.

Over the past few years, the beef industry has experienced its ups and downs. Similar to other agriculture sectors, profit has been difficult to nail down. Some of the most successful operators in agriculture report that long term success starts with conquering the basics and the cattle industry is no different. Basic fundamental properties such as breeding efficiency, suitable stocking rates, and nutrition are small things that make operations great and hold a beef operation steadfast. This year's conference showcases a great set of speakers that will help critically evaluate the basics of the commercial beef operation and work toward "Improving Efficiency for a Progressive Future".

Our keynote speaker this year is Mr. Burke Teichert, Owner of Teichert Management and Consulting. Former Vice President and General Manager with AgReserves, Inc., Teichert is now a ranch consultant and speaker. Many people may recognize Mr. Teichert from his monthly column in Beef Magazine focused on strategic ranch planning. At the conference, Mr. Teichert will provide his approach of purposeful planning to maximize the value of the natural resources on your ranch. Cow selection, scheduling the herd, managing people, and continued marketing and analysis will round up his presentation titled "Five Essentials for Successful Ranch Management".

Cover crops are a popular addition to crop rotations in Northwest Oklahoma. Dr. Jaymelynn Farney, Extension Beef Systems Specialist from Kansas State University will discuss her latest research on cover crops and the opportunities cattle producers have to utilize some of these as forages in our grazing systems.

One method for cattlemen to managing risk on their operations is to institute a program to wean, vaccinate and pre-condition calves prior to sale. Mr. Gant Mourer, OSU's Beef Value Enhancement Specialist will talk about the Oklahoma Beef Value Network (OQBN) and its opportunities for producers to showcase proper pre-conditioning practices for premiums at time of sale. Dr. Richard Prather, Ellis County Animal Hospital DVM will take the discussion a step further to look at how preconditioning practices will benefit herd health as a whole.

We hope your schedule will allow you to join us for this excellent program. The Northwest Oklahoma Beef Conference includes a trade show and lunch catered by Hello Catering and Bakery of Perkins, OK. Lunch is sponsored by generous local businesses; Interbank, Security National Bank, Central National Bank, and Northwest Vet Supply. **The registration for this year's event is \$10 to cover speaker fees and travel. Please RSVP to the Garfield County Extension office with registration fee by Friday August 25th so that an accurate lunch count can be obtained. Cost to attend the day of the conference will increase to \$15 per person.**

Fire, Flood, Tornado Losses and Tax Benefit Rules

J C. Hobbs

Extension Tax Specialist

Many income tax benefits exist for individuals and business owners who have experienced losses of or damage to property due to fires, floods, tornados, or other disasters. A new fact sheet is available that discusses the potential deductibility of these losses on your income tax return. Several examples of losses describe how to determine the amount of the loss and the rules concerning deducting them on a tax return. Fact sheet "AGEC-1066: Disaster Losses and Related Tax Rules" can be picked up from your local county extension office or downloaded from the Oklahoma Cooperative Extension Fact Sheets website at: <http://osufacts.okstate.edu> at no cost.

Preparing for Clean Wheat Fields

Josh Bushong, NW Area Agronomist

Amongst all the disciplines of producing a successful wheat crop, weed management can often seem like an expense that might not be economical in times of tight budgets. Unlike other pests like insects and some diseases, once weed infestations establish on a farm they will be there for years to come. Producers need to have the mindset of thinking about weed control as a long-term investment. Herbicide applications might not always pay off the first year, but benefits over time can offset the cost.

Heavy weed infestations are a two-fold issue for wheat producers. First, the weeds will compete for water, nutrients, and sunlight that will led to reduced grain yields. Second, there will be price reductions at the elevator. Most weeds will count towards dockage and just be a weight deduction on a load of wheat, but some elevators will have an actual price reduction if dockage is high enough. Feral rye counts towards foreign material (not easily removed from grain) and price reductions are much steeper than dockage.

Many of the most problematic weeds in wheat fields are winter annual grassy weeds such as feral rye, ryegrass, cheat, jointed goatgrass, rescuegrass, bromes, and wild oats. As one can imagine, there are fewer chemical options to control a grassy weed in a grass crop. Other the past few decades, producers have relied predominately on a single group of herbicides called ALS inhibitors. Both sulfonylurea (i.e. Finesse, Glean, Maverick, Olympus, Osprey, PowerFlex, etc.) and imidazolinon (i.e. Beyond) herbicides belong to this group of ALS herbicides.

Due to the overreliance of ALS herbicides, what few options wheat producers had to control these grassy weeds are now becoming even fewer because some weeds are starting to develop resistance to these herbicides. In 2009 OSU documented that about 70% of the ryegrass in Oklahoma (200 samples from across the state) were not controlled with ALS herbicides. A couple years later, cheat from north central Oklahoma was also found to have herbicide resistance.

Utilizing different herbicide groups, or modes of action, is the only way to prevent, delay, or overcome herbicide resistance. For ryegrass, many producers the past few years have relied on ACCase herbicides such as Axial XL. This has worked great, but surrounding states already have confirmed resistance to this group of herbicides and there have been some potential resistance cases in Oklahoma.

Dr. Misha Manuchehri, OSU Extension Weed Scientist, conducted field trials this past year evaluating a few preplant and early postemergence herbicide products for potential ryegrass control options. These products include Zidua (Seedling Shoot Growth Inhibitor), Anthem Flex (Seedling Shoot Growth Inhibitor and PPO Inhibitor), and Axiom (Seedling Shoot Growth Inhibitor and Photosynthesis Inhibitor). The modes of action with these products are different the ALS and ACCase herbicides. These products showed to provide good ryegrass control when applied at the right timing and rate.

For feral rye and jointed goatgrass management, a good option is to utilize the Clearfield System. This system consists of planting a

(Continued on page 7)

(Continued from page 6)

wheat variety with the Clearfield trait and applying the herbicide Beyond. For increase weed control, producers can use the Clearfield Plus System. The wheat varieties for this system have been bred to have a 2-gene tolerance to the Beyond herbicide. These varieties will be designated with either a CL2 or CL+ at the end of their name. With the Clearfield Plus System, methylated seed oil (MSO) can be added with the herbicide to provide better control. Adding MSO with Beyond on older Clearfield varieties will kill the wheat. For best results, producers will need to make sequential applications of Beyond, once in the fall and once in spring, to young actively growing rye.

The best option for controlling winter annual grassy weeds will be crop rotation with either winter canola or a summer crop. Growing wheat and double cropping with a summer crop is not a true crop rotation since wheat is still being grown year after year. Either a winter broadleaf crop or leaving a farm winter fallow are the only ways to utilize different herbicide modes of action to control these weeds during the right time of year.

Weed management is a long-term investment. Some weeds like feral rye can stay viable in the soil for nine or more years. Multiple years of intensive management is needed to regain control of weed infestations, and letting a few weeds go to seed in just one year could result in weed populations returning to previous levels. Other than deep tillage or haying off the wheat crop, utilizing multiple herbicide modes of action and crop rotation are the only solutions to a successful weed management program on your farm.

For more information about weed management in wheat, contact your OSU County Educator.



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.

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, U. S. Department of Agriculture, State and Local governments cooperating. Oklahoma State University in compliance with Title VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, Title IX of the Education Amendments of 1972, Americans with Disabilities Act of 1990, and other federal and state laws and regulations, does not discriminate on the basis of race, color, national origin, gender, age, religion, disability, or status as a veteran in any of its policies, practices, or procedures."