

Noble County Oklahoma Cooperative Extension Service
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The Noble County Courthouse and OSU Extension is now open to the public. Entrance available only through the west door. Your temperature will be checked prior to entering and must be less than 100.4°. Appointments are encouraged and preferred. We continue to practice social/physical distancing, as we meet the needs of OSU University and Noble County OCES. Thank you for understanding.



**NOBLE COUNTY
EXTENSION**

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Noble County OSU Cooperative Extension Service



Agriculture News and Updates: July 2020



**NOBLE COUNTY
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Native Grass Haying

Josh Bushong, Area Extension Agronomy Specialist

Early July is the optimum time of year to be haying native grass pastures for hay. There are some basic production practices to maximize production potential of these hay meadows. Since native hay meadows are a long-term investment, they should be managed in such a way to sustain long-term productivity.

The most important management practice is cutting date. In most years, the optimum cutting date will be between July 1 and 10. Harvesting native hay at this time will achieve a good balance of forage yield and forage quality while also allowing the native stand to recover the rest of the year to sustain production for following years.

The main key to managing any perennial hay field is to maintain a balance between forage yield and forage quality. Time of cutting will be the primary production practice that will determine the forage yield and quality. The maximum forage yield and maximum forage quality hardly ever occur at the same time. Hay tonnage will typically peak in late August, while crude protein and digestibility are usually highest in May.

The second most important management practice is proper cutting height. Cutting height can easily be overlooked but, can be highly detrimental to the life of the stand. Native grasslands should never be cut shorter than 4 inches. Growing points on these grasses are elevated during this time of year. If the growing point is cut off, then production will be greatly reduced the following year.

Cutting height is also important because most of the native grass species need time to re-grow to build root carbohydrate reserves. To sustain a native hay meadow it is recommended to only harvest it for hay once a year. Native grass species grow rapidly through May and June but, will exhibit slow re-growth in July after harvesting a hay crop. In addition to the slow growth, the re-growth is often less palatable as

well. Native species have adapted through natural selection for these traits to ensure grazing animals will not exhaust the root carbohydrates prior to winter dormancy.

Field research conducted by Oklahoma State University has shown that forage tonnage can be increased with an application of fertilizer, however it is rarely economical to do so. When adequate moisture is available during spring and early summer, 30-80 pounds of actual nitrogen fertilizer can increase hay yield and crude protein. Herbicide applications are rarely warranted on native grasslands. If managed properly, there should be a mix of native forbs and legumes that benefit the grass production.

Some small plot studies conducted by OSU has shown an increase in grass production is possible when broadleaf weeds (forbs) are controlled with an herbicide application. However, increases varied depending on growing conditions and thickness of grass stand. Previous mismanagement of the pasture often leads to more weeds. Herbicides such as 2,4-D and/or dicamba are effective when applications are made to small weeds. As weeds get bigger, more costly herbicides are often needed.

Good management practices include harvesting prior to mid-July, leave at least 4 inches of stubble, harvest only once during the growing season, and manage the re-grown forage in the dormant season with either fire or grazing.

For more information about harvesting native grasslands for hay, contact your local Oklahoma State University Cooperative Extension Office. Information can also be found from the OSU factsheet "NREM-2891 Native Hay Meadow Management".

Simple Biosecurity Steps within Livestock Operations

Dana Zook, Extension Livestock Specialist

Biosecurity is a big scientific word that is more present in our lives these days due to COVID-19. A recent producer question brought biosecurity back down to earth as a daily topic within the beef industry. The question dealt with the necessary biosecurity steps of introducing newly purchased pregnant heifers into his current herd. That got me thinking about the general guidelines of biosecurity within the beef industry and how being bio secure is not often second nature to many producers. It's a fact, it is easier in the near term to ignore biosecurity and proceed with our plans, but a few simple steps can prevent the spread of disease in the future.

Let's start at the beginning by addressing the definition of biosecurity. According to the Oklahoma Beef Quality Assurance Manual, biosecurity is a practice designed to prevent the spread of disease by minimizing the movement of biologic organisms onto and within your operation. Due to the complexity of our industry, this can be challenging. When new stock is purchased, what should be done to preserve biosecurity on our operation?

To build the groundwork for biosecurity, producers should develop and maintain a good relationship with a local licensed veterinarian. Besides being trained to perform medical interventions on livestock, they are also a good source of advice when it comes to vaccinations and local biosecurity concerns.

Your consulting veterinarian should be on the "first call list" when planning to purchase new livestock. They could perform a health exam and depending on the source of the new livestock, they could provide advice on additional vaccines or treatments that might be needed. In a situation where producers plan to

purchase livestock, vaccination records should be obtained in advance in order to plan for necessary vaccinations.

A key step in biosecurity is separation and quarantine. Newly purchased livestock should be kept separate with no contact from the rest of the herd for at least 21 days. This period of separation will give the owner time to observe the animals for any sign of abnormal health issues or behaviors. During this time, new stock should be brought up to current status on the health program that is used for the rest of the herd. Work with your vet to determine the best treatment for any sick animals that may show up during this time.

Here are some examples where separation or quarantine of livestock would be beneficial to preserve biosecurity on a farm or ranching operation:

- A newly purchased breeding bull
- A group of bred heifers
- Any animal that has been to a show or exhibition
- A purchased steer that you intend to finish out for slaughter
- A group of heavy bred cows from a local livestock market

In these examples, the livestock in question may have been exposed to other animals with a disease status that is inferior to their own. Keep in mind, whenever animals are comingled or have the opportunity to touch noses, biosecurity may have been compromised and separation procedures should be instituted. With luck, the 21 day separation will not present any illness that needs to be addressed and they can be comingled with the rest of the herd.

This article is very beef focused but the ideas presented can apply whether you any livestock species; sheep, goats, chickens, show stock. Operations big and small should take steps to preserve the biosecurity status of their animals. If you have other questions about biosecurity, contact your local Oklahoma Cooperative Extension Educator or local Livestock Veterinarian for more information.

On-demand Farm Management Resources Available Anywhere

Producers can learn about farm financial management, production, marketing, and risk management topics online by visiting the e-Farm Management website. This site contains videos, decision tools, and publications for farmers and ranchers to strengthen their farm management skills.

In the Conservation Compliance video, viewers learn about conservation provisions that require compliance from anyone participating in Farm Service Agency, Natural Resources Conservation Service, and Risk Management Agency programs. The video examines how compliance is determined by these agencies. Finally, viewers learn about how to regain eligibility if found not in compliance with these provisions.

To view this video and find additional information on Farm/Ranch Conservation Issues, visit: <http://agecon.okstate.edu/efarmmanagement/ranch.asp>.

More information on this and other farm management topics may be found: 1) by contacting your nearest Extension Educator (<https://extension.okstate.edu/county/index.html>) 2) on the e-farm management

website (<http://agecon.okstate.edu/efarmmanagement/index.asp>) or 3) on the OSU Agricultural Economics YouTube Channel (<https://www.youtube.com/user/OkStateAgEcon>).

TICKS

Earl H. Ward, Area Livestock Specialist

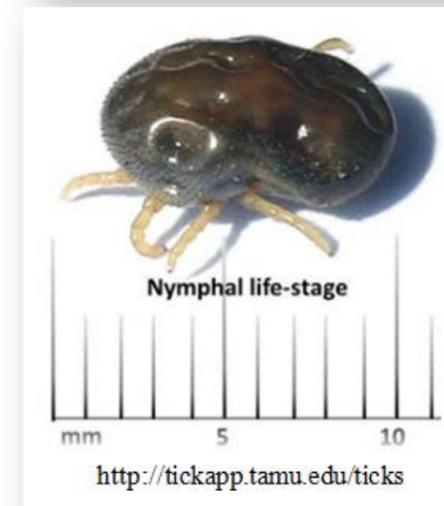
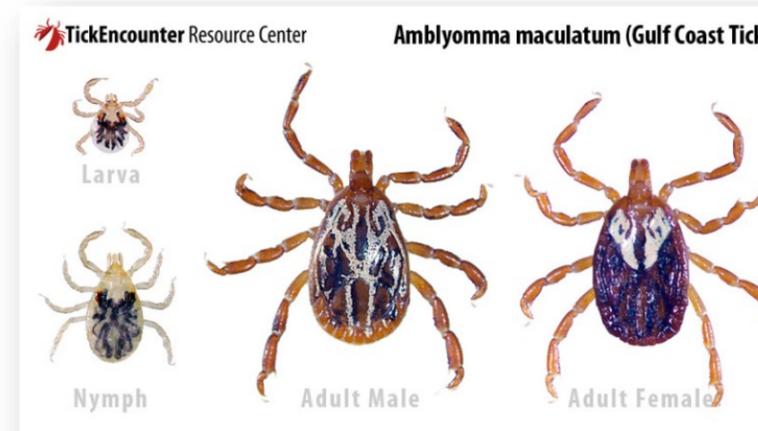
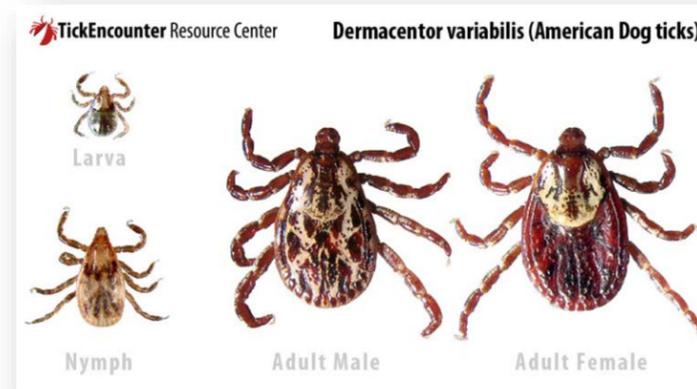
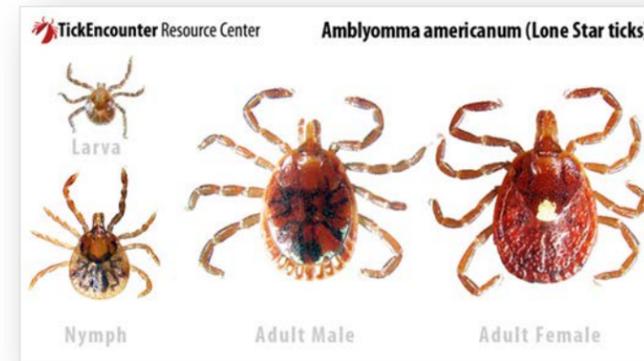
Have you ever gotten back from a great day in the outdoors and find a few travelers have attached themselves to your wagon so to speak? Of course, once you find one crawling, you feel a hundred of them crawling. Ticks have been and will continue to be a problem, especially in our livestock operations. Ticks belong to the Arachnida class along with spiders. They have four stages of life: the egg; a six-legged larvae or seed tick; the nymph; and adult with eight legs. The eggs are laid on the ground and work their way up the stems and leaves of plants until they can attach themselves to a host. Ticks require one, two, or three hosts to move from larvae to the adult stage. The larva, nymph and adult stages of three-host ticks are each spent on a different animal. Most ticks causing problems in livestock are three host ticks.

Lone Star Tick

Lone Star Tick adults are brown to tan, 1/3-inch-long before feeding and up to 1/2-inch long engorged. Females have a single silvery-white spot on its back while males have scattered spots or streaks around the margins of the body. They do not carry disease in the larva stage and have no preference on the species of animal to feed on.

American Dog Tick

The American Dog Tick occurs primarily in wooded, shrubby and long-grass areas. However, it is possible for residential areas to support populations of this tick. Shrubs, weeds, tall grass, clutter and debris on the property attracts the rodents that are hosts for immature ticks. It is also the major vector for Rocky Mountain Spotted Fever.



Gulf Coast Tick

The Gulf Coast Tick looks very similar to the dog tick but possesses larger mouth parts. The adult ticks, which feed primarily on the ears of large mammals, cause weight and blood loss, plus irritate their hosts. Their larvae and nymphs feed on small rodents and ground dwelling birds.

Spinose Ear Tick

The Spinose Ear Tick utilizes a single host in completing its lifecycle. When larvae encounter a suitable host they crawl to the ear and attach below the hair line. Adults do not feed, but adult females can survive for two years, depositing up to 1500 eggs in

several clutches.

Now that we are all feeling creepy crawlers on our backs, how do we control ticks on our livestock. For more information on controlling ticks and tick-borne illnesses visit your local OSU Extension Office.

Factsheets:

EPP-7001 Common Ticks of Oklahoma and Tick-Borne Diseases
EPP-7019 External Parasites of Goats
VTMD-7000 Beef Cattle Ectoparasites

Rabies in Farm Animals

Barry Whitworth, DVM Area Food/Animal Quality and Health Specialist for Eastern Oklahoma

According to Dr. Morris, State Veterinarian with the Oklahoma State Department of Health, Oklahoma had 24 confirmed cases of rabies in 2019. As of May 31st, 2020, the state has 20 confirmed positive cases. Two of the cases were in cattle. If the cases continue at the current rate, Oklahoma will have a large number of positive cases this year.

When most people think of rabies, they usually have visions of foaming at the mouth, snarling, aggressive dog that attacks everything in sight. However, in farm animals, this is not always the case. Many veterinarians at some time in their career probably receive a phone call that goes something like this.

“Doc, I found this cow away from the herd yesterday. I got her to the lot. She seems a little depressed. She kept straining like she was constipated. She was having trouble swallowing and was a little bloated. My neighbor and I opened her mouth, but we could not find anything. We both ran our arms down her throat, but we could not find anything. I need you come out and take a look at her.” Unfortunately, many producers have been exposed to rabies because they do not recognize that this animal was infected with the “dumb” form of rabies. Not all animals with rabies have the “furious” form of the disease.

Rabies is a virus in the genus *Lyssavirus* in the family *Rhabdoviridae*. The virus does not survive in the environment for very long. Most disinfectants will kill the virus. The disease is fatal to animals and humans. On very rare occasions, people have survived the disease. In experiments, animals have also survived the disease. Surviving rabies may occur in wild animals as well. Domestic animals are infected with the virus from wildlife reservoirs. In Oklahoma, the most common reservoir is the skunk. In the world, the estimation is that 50,000 to 60,000 people die each year of the disease. The few people that die of the disease in the United States are usually unaware that they have been exposed to the virus.

In order to be infected with the virus, an animal must come in contact with the saliva from a rabid animal. This normally occurs from a bite wound. The virus may gain entry by saliva coming in contact with a mucous membrane or a break in the skin. Aerosol transmission has been reported in laboratories and bat caves, but this is very rare. Once in the body, the virus replicates in the muscle tissue. Next, the virus enters the peripheral nerves and is transported to the spinal cord and to the brain. Once in the brain, the virus enters the systemic circulation which includes the salivary glands. The timeline for all this to take place is variable. It depends on how much virus is initially transmitted to the animal and the location of the bite wound. If a large number of viruses are transmitted, the incubation time will be shorter. If the bite wound is close to the head, it will take less time for the virus to get to the brain. If the bite wound is on the foot, it may take several months for the virus to get to the brain.

The furious form of the disease is the most recognized by people. Animals with this form will be restless, wander, vocalize, drool, and attack anything in sight. These animals are not afraid of anything. Nocturnal animals with rabies are often seen in the day. They will have convulsions in the late stages of the disease. They usually die in 4 to 8 days after showing clinical signs.

The paralytic (dumb) form of the disease is a progressive paralysis. In these animals, the throat is paralyzed, and the animal cannot swallow or vocalize normally. Cattle might have a high-pitched bellow or attempt to bellow with no sound being produced. Due to the progressive paralysis, rumination will cease which may result in bloat. They also may appear to be straining to urinate or defecate. These animals will have problems walking and will become recumbent. This form is often mistaken as a digestive problem. Some producers may think the animal is aborting or has a urinary problem. These animals usually die in 2 to 6 days from respiratory failure.

When an animal has neurological signs, rabies should be suspected. Producers should avoid contact with the animal and contact their local veterinarian. If the veterinarian suspects rabies, he/she will not treat the animal since the condition is fatal and the danger to humans is not worth the risk of treatment. To confirm the diagnosis of rabies, a veterinarian will submit the brain for testing.

Rabies can be prevented by vaccination and by preventing unnecessary exposure of domestic animals to wildlife. All pets should be vaccinated. Obviously, vaccinating a large herd or flock of animals would not be cost effective. However, animals that are in constant contact with humans such as show animals or horses should be vaccinated. If a producer has a family milk cow, she would be a good candidate for vaccination. Preventing contact with wildlife is difficult but paying close attention to sanitation should discourage wildlife from entering areas where animals are kept.

Rabid animals are dangerous. If animals have the furious form, they may attack and injure producers. Animals with the dumb form of the disease can infect unsuspecting producers. Anytime an animal is suspected of having rabies a veterinarian should be contacted. As stated earlier, most people who die of rabies in the US are not even aware that they have been exposed. More information about rabies is available at the Oklahoma State Department of Health at https://www.ok.gov/health/Prevention_and_Preparedness/Acute_Disease_Service/Disease_Information/Rabies_Surveillance_Data_and_Statistics.html. Livestock producers with questions about rabies should contact their local veterinarian or Oklahoma State University County Extension Educator.

Kylie Sherrill **Noble County 4-H Educator**

Hello everyone! I am the new 4-H Extension Educator for Noble County. I am looking forward to working with the youth, parents and community to provide new and exciting opportunities.



Originally from southwest Arkansas, I was raised on the farm with cattle, horses, poultry houses and swine barns. I was very active with livestock projects and shows, judging and many different speaking and volunteer projects through FFA. In college, I became interested in veterinary parasites and got involved with the Livestock Entomology lab my first year in Stillwater. I have spent several years working with Dr. Justin Talley on different projects involving biting flies, ticks, lice and internal pests. I graduated in 2019 with my Masters in Entomology from Oklahoma State University.

In my off time I enjoy reading, gardening, fishing and generally being outdoors. Most weekends are spent with my husband Cooper on the farm, working on cattle, horses, goats and other farm projects. I hope that my diverse background and interests will be of benefit to the youth and community.