



# Blaine County Agriculture Newsletter

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2020

Blaine County Cooperative Extension Service  
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Blaine County Producers:

I hope this finds you having a good summer and if you raise wheat, I hope your harvest was safe! What a blessing the rain was, especially when the long range forecast was for continued drought. Rain in July is always good!

I will be planning fall programming meetings in the near future. If there is a topic that you would be interested in, please don't hesitate to call me with your suggestions or needs. I know that you are extremely busy this time of the year with hay, etc. But, the northwest district area specialist have been producing a weekly pod cast that you may find interesting and easy to listen to while you are working. Listed below is the information where the pod cast can be found. Try to stay cool and enjoy the rest of summer!

Becky Bedwell –Extension Ed-Ag/4-H &CED

The *Extension Experience* podcast is brought to you by Josh Bushong, Trent Milacek, and Dana Zook. Each week we 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/>.

## August Garden Tips

### Vegetables

August is a good month to start your fall vegetable garden. Bush beans, cucumbers, and summer squash can be replanted for another crop. Beets, broccoli, carrots, potatoes, lettuce, and other cool-season crops can also be planted at this time.

Soak vegetable seed overnight prior to planting. Once planted, cover them with compost to avoid soil crusting. Mulch to keep planting bed moist and provide shade during initial establishment. Monitor and control insect pests that prevent a good start of plants in your fall garden.

### General

Always follow directions on both synthetic and natural pesticide products.

Watch for high populations of caterpillars, aphids, spider mites, thrips, scales and other insects on plant material in the garden and landscape and treat as needed.

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## Preparing for Wheat Pasture

Josh Bushong, Area Extension Agronomy Specialist

August is now here and sowing wheat for pasture is just around the corner. Producers wanting to take advantage of early-planted wheat for fall forage have many challenges to consider in order to produce enough forage to graze. Sowing wheat early significantly increases the possibility that diseases and insect pests can limit fall forage production.

When growing wheat for forage one of the easiest ways to get more tonnage is to plant early. Research conducted from OSU has shown that more forage is produced the earlier we plant. Some trials show that sowing wheat the first week of September yielded about twice as much fall forage as a mid-late September planting date. When sowing wheat this early we can sacrifice some grain potential and some issues can occur. When planting this early the potential for pests can increase. These pests include many viruses, root rots, foliar diseases, hessian flies, wheat curl mites, wireworms, army cutworms, and weeds. Some aid can be made through the use of seed treatments that include an insecticide and/or a fungicide. These seed treatments can reduce root/foot rots, bunt, smut, leaf rust, powdery mildew, hessian fly as well as reduce aphids that can transmit barely yellow dwarf virus. When selecting a seed treatment be cautious of grazing restrictions, which can range from 0-45 days depending on product used.

Over the past few years, getting a stand off a going has been challenging due to armyworms and some mite-transmitted diseases (wheat streak mosaic, high plains disease, or Triticum mosaic). The best management practice would be to prevent a "Green Bridge" prior to sowing the wheat. A minimum of two weeks of nothing green (including corn, sorghums, volunteer wheat and other grassy weeds) is needed to allow the wheat curl mite to starve out prior to wheat seeding. The wheat curl mite still might vector these viruses when invading from neighboring fields, but the viruses will cause less of an impact due to a later infection.

When selecting a wheat variety be sure to note certain characteristics like acidic soil tolerance, high soil temperature germination sensitivity, coleoptile length, forage production potential, pest resistance, recovery after grazing, and first hollow stem date. Utilizing certified seed wheat can also ensure adequate seed quality. Good seed vigor with a known germination percentage will aid in developing early seedling vigor, which will typically lead to producing more fall forage.

The next easiest way to increase fall forage would be to increase your seeding rates. Several trials have shown that fall forage will increase with a seeding rate of 2 bushels (120 lb) per acre. Fall forage can be increased with even higher seeding rates, but the economics start to become a little less favorable due to seed costs. Increasing seeding rates as the planting season progresses can also assist in producing more forage but increasing seeding rates hardly ever makes up for lost forage potential from seeding earlier.

In addition to seed costs, fertility will likely be another high input cost. Managing fertility economically can be challenging. Starting with a simple composite soil sample can go a long way in managing this input. Knowing your soil pH and levels of the other nutrients will dictate where you should focus your dollars. Acidic soils can limit forage production as much as anything else. The only solution to fix acidic soils is to apply lime, but variety selection and banding phosphorus fertilizer in-furrow can help offset the loss in forage production. Banding fertilizer with our grain drills is more efficient and economical because it is placed right with the seed.

This newsletter is one way of communicating educational info to the citizens of Blaine County in the Areas of Agriculture & Rural Development.. For free subscriptions, contact the Extension Office at 580-623-5195. The information given is for educational purposes only. 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. This information was produced at a cost of 1 cent per page for a total of \$13.20.

Editor—Becky Bedwell, Extension Educator—Ag/4-H & CED

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## Ionophores Mitigate Risk in Finishing Cattle

Dana Zook, Northwest Area Extension Livestock Specialist

Recent interest in locally raised beef has led to a great amount of education for producers and consumers alike. Education has been flung far and wide to educate producers and consumers alike about management, nutrition, marketing and processing. For small producers finishing cattle, it is important to understand how to produce wholesome beef efficiently but to know that this isn't a cheap process. Like anything in agriculture, there are risks involved. Producers should be aware of the management factors and technologies available that help mitigate risk. One of those technologies is the use of ionophores.

Ionophores are feed additives that were developed to improve feed efficiency and prevent coccidiosis. According to a recent feedlot survey from New Mexico State representing 14 million cattle on feed, 97.3% of feedlots utilize an ionophore in finishing diets. In addition to the improvement of efficiency and gain, ionophores have a derived benefit of preventing and controlling digestive disorders such as acidosis and bloat. This is very valuable when finishing cattle due to the increased likelihood of these conditions.

The two most common ionophores utilized are monensin (Rumensin® and Monovet®) and lasalocid (Bovatec®). Ionophores improve feed efficiency by increasing the amount of energy available to the animal through selection of more efficient microorganisms in the ruminant digestive system. On average, feedlot cattle are 4% more efficient when fed an ionophore.

Ionophores can be included in a variety of feedstuffs such as mineral mixes, free choice feeds, and pelleted supplements. Most feed products at retail locations throughout the state may not offer ionophores in stock feed mixes but most can be accessed with a custom or special order. Pure forms of ionophores are very potent and require extreme precision when adding to blended feeds and supplements. For this reason, most small producers will not purchase ionophores to mix themselves. Rather, producers would benefit from purchasing mineral and feed supplements that already include ionophores at the proper dosage. These supplements increase feeding accuracy and reduce the guesswork for producers feeding smaller amounts of feed. Most retail feed locations can include ionophores in a blended feed or ration upon request.

Another thing to keep in mind is the antibiotic status of Ionophores. Ionophores are considered antibiotics, not because they kill bacteria, but due to their ability to limit functionality of certain types of bacteria in the rumen. Although they are antibiotics, ionophores are not limited by the Veterinary Feed Directive (VFD) because they are not used in medically relevant applications for humans. However, due to their antibiotic status, they may not be allowed in certain natural or grass fed feeding programs.

When feeding ionophores in a pure form or within a supplement, label instructions should be strictly followed.

Monensin is toxic specifically to equine species and some monogastric animals. Ionophores can be toxic to any animal when overconsumed.

People interested in finishing small groups of cattle should consider using ionophores to help manage the risk of digestive upset but also help improve finishing efficiency.

## Summertime Water Requirements For the Cow Herd

During hot summer months, the water needed for a cow herd often determines several other management decisions. To best assess the adequacy of water quantities in surface water or from wells or "rural water" supplies, it is first necessary to have an idea of the amount needed for cattle of different sizes and stages of production that you may have during the summer on the ranch.

[A University of Georgia publication](#) (Rossi and Pence, revised by Dyer, 2012) lists the estimated water requirements for cattle in different production stages if the daily high temperature is 90 degrees F. They suggest that the amount of water required can be estimated by the production stage and the weight of the cattle. For instance, a lactating cow needs 2 gallons of water per 100 pounds of body weight. A non-lactating cow or bull needs just 1 gallon of water per 100 pounds of body weight. If you are estimating water needs for your cattle, be honest about the weight of the cows in the herd. Many cows today weigh 1200 pounds or more (some a lot more). Therefore expect that most spring calving cows will need at least 24 gallons per day for themselves and for their calf. Also recognize that some summer days in Oklahoma get even hotter than the 90 degrees used in the Georgia paper. On days with extreme heat, expect the water usage to go up even further.

Water quality is also a consideration in the summertime. Nitrate concentrations in surface water may be a concern especially if that water source has runoff from nearby crop fields. Nitrates in water can add to the nitrates consumed from stressed plants such as forage sorghums and Johnsongrass. Water samples can be sent for nitrate content via your local County Extension office to the Oklahoma State University [Soil, Water and Forage Analytical Laboratory](#) in Stillwater. Blue green algae also may occur in standing water and be toxic to cattle. Although it is titled "blue-green algae", the culprit is actually a cyanobacteria that produces the toxin which can be lethal to cattle that drink from the affected pond.

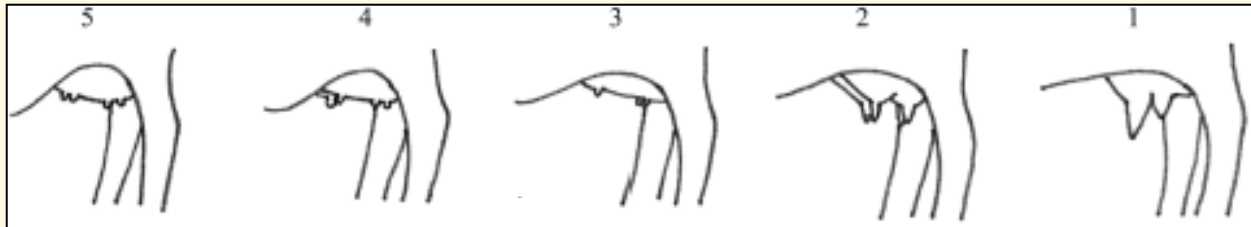
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## Effect of Cow Udder Score on Calf Performance

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

Beef producers cull cows based on factors that include reproductive failure, structural issues, progeny performance, and disease. Udder conformation has been indicated as an important factor in cow-calf profitability due to management challenges and reduced calf performance. In some cases, cows are culled for udder problem, whereas, in other cases, cows lose their calves because of udder problems and the cows are culled because they fail to wean a calf. University of Nebraska research evaluated the effect of beef cow udder conformation on pre- and post-weaning progeny performance.

In a 5-year study, crossbred cows at the Gudmundsen Sandhills Laboratory (Whitman, NE) were assigned an udder score each year at calving, from 1 to 5, using an udder and teat combination score (Figure 1). An udder score of 1 or 2 consisted of pendulous udders and large teats, whereas 3 to 5 consisted of tight udders and small, symmetrical teats. An udder score of 3 would be considered the commercial cow average score. The cows were grouped by udder scores and classified as either low udder score (udder score 1 or 2; 223 cows) or high udder score (udder score 3 or 4; 1,742 cows). An udder score of 5 was not recorded during the study. Intervention is suggested for scores of 1 or 2 since oversized teats are difficult for newborn calves to nurse and the calf may not receive adequate colostrum.



**Figure 1.** Diagram adapted from the Integrated Resource Management Guide (NCBA, 2013). The system uses a combined udder and teat score system of 1–5

If teat and udder conformation limits the ability of a calf to suckle, then udder conformation may limit a calf's genetic potential for growth. However, in this study, calf weight at birth, weaning, and adjusted 205-days weights were similar between udder score groups. Similarly, other researchers have reported no differences in calf weaning weight due to teat conformation of the dam which may indicate a lack of relationship between udder conformation and calf growth. In contrast, other research has reported that dams with poor udder conformation weaned lighter calves compared with well-attached udder counterparts.

Research evaluating the effect of dam udder score on subsequent offspring feedlot performance is limited. Most research on udder conformation on calf performance ends at weaning and not the entire production system. In this study, cow udder score did not influence feedlot initial and final weights or performance (feed intake, average daily gain, and gain efficiency) of steer progeny. However, steers suckling high-udder score dams had greater carcass weights (858 vs. 827 lb) and backfat thickness (0.57 vs. 0.50 inches) compared with low udder score counterparts. These authors suggested that the conflicting results in carcass weight and finishing BW may have been due to increased variability in final weights from factors such as mud and gut fill. In addition, high-udder score steers had numerically greater final weights than low udder score steers (1385 vs. 1360 lb.) which may have influenced the increased carcass weight.

Results from this study suggest that cows with less desirable udder structure may not have a negative impact on calf pre-weaning growth and performance. However, backfat thickness and carcass weights in the finishing phase were lower in steers from cows with a lower udder score. These authors concluded that culling cows for poor udder conformation may not be warranted, if calf suckling at birth is not an issue, due to similar postnatal calf performance.

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## Snake ID and Management

Dr. Dwayne Elmore, Professor and Bollenbach Endowed Chair in Wildlife Extension

Over 40 species of snakes occur in Oklahoma and the vast majority are non-venomous. Note that I use the term venomous, rather than poisonous. Venomous animals are those that inject a toxin directly into their prey as opposed to a poisonous animal that contains a toxin within portions of its body that cause harm if ingested or touched. Fortunately, most of the snakes that are capable of inflicting injury are very docile. Most bites are preventable and occur as a result of someone harassing the snake or putting their hands under objects without looking first. Snakes, both venomous and non-venomous, provide important ecological services.

Several species of rattlesnake occur in Oklahoma including the timber, western diamond-backed, prairie, western massasauga, and western pygmy. Depending on where you live in Oklahoma, you are likely to encounter one or more of these distinctive snakes. Often, rattlesnakes give warning if you get too close. However, the smaller rattlesnakes (pygmy and massasauga) can be difficult to hear, and timber rattlesnakes are so docile they often do not rattle. The copperhead is a common venomous snake in the eastern half of Oklahoma, but this secretive snake is seldom seen. Watch carefully where you put your hands to avoid copperheads as they often hide in ground vegetation or under debris. It is commonly believed that every water snake is a venomous “water-moccasin”. In reality, while there are several species of water snakes in Oklahoma, only one species is venomous – the northern cottonmouth. This species is confined to eastern and southeastern Oklahoma and it is easily identified by the signature white lining of the mouth.

The vast majority of snakes that a homeowner will encounter are harmless. A good resource for snake identification in Oklahoma is the website <http://www.oksnakes.org> and the book “A Field Guide to Oklahoma’s Amphibians and Reptiles” that can be purchased through the Oklahoma Department of Wildlife Conservation at <http://www.wildlifedepartment.com/outdoor-news/amphibian-and-reptile-field-guide-custom-made-oklahoma>.

If a homeowner finds a snake in their yard, what should they do? Almost always, the answer is to leave it alone! Killing the snake and then determining the type is not advised. Chances are the snake is harmless and the landowner has killed the snake needlessly. So, if the snake is nonvenomous, simply let it be as the snake is doing its job of keeping rodents under control. Occasionally non-venomous snakes become a nuisance when they take eggs from your chicken house or from native birds in your yard. If you are having trouble with chickens, try sealing the hen house as best as possible to limit snake entry. Also, you can put special snake/predator guards on trees with bird houses to help limit snake access. Homes and other structures should be well sealed to prevent wildlife (including snake) entry. If the snake is venomous, the best action is to keep dogs and children away from the snake until it moves away. Most bites occur when people try to handle venomous snakes. If you must move the snake out of your yard for safety reasons (or if it is in your home), put up any dogs and children and use a long handled rake or pitchfork to gently lift it and then place it in a bucket that can be sealed before moving.. Finally, give snakes a break when you see them crossing a road by avoiding hitting them.

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