

Fall Gardens Lynn Brandenberger, Extension Specialist

Being successful with your fall garden really begins with getting an early start. I've said for quite a while that the time to begin is as soon as the first cool front comes through the state in August. Well, Mother Nature has blessed us with the arrival of an early cool front that has brought with it much cooler temperatures and even some rain. So . . . Now is the time to begin if your garden is ready or at least time to start preparing your garden for fall plantings. The following steps should allow you to have a great start to my favorite time for gardening!

First, begin by taking a good soil sample and having it analyzed. Fact sheet PSS 2207 "How to Get a Good Soil Sample" does a great job of outlining the process which will help you manage the fertility in your garden, it is available at: <https://extension.okstate.edu/fact-sheets/how-to-get-a-good-soil-sample.html>.

The great thing about using the OSU lab for soil testing is that fertility recommendations can be tailored to specific vegetable crops if that is what you would like, otherwise just ask for the general garden recommendations.

If you are hoping to direct seed then pre-germinating the seed would be a great way to go if you will be seeding by hand. How to pre-germinate seed can be seen at: <https://www.youtube.com/watch?v=mOyeljWAFS4&t=10s>.



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OKLAHOMA COOPERATIVE EXTENSION SERVICE



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Roger Mills Ag Newsletter

Mystery packages seed community with suspicion and risk

Oklahomans are being asked to go against their natural curiosity and green-thumb tendencies, setting aside mail deliveries of mystery seeds from China instead of planting them.

The packages have turned up in several other states as well, including Kansas, Kentucky, Louisiana, Ohio and Washington, according to reports from those states' departments of agriculture. Many of the seeds have been mailed in white or yellow pouches with the words "China Post" in English and other words in Chinese lettering. Some of them falsely suggest jewelry inside; others provide no clues about contents.

The U.S. Department of Agriculture quickly provided guidance in conjunction with state agriculture departments because of the scale of risk involved, said Morgan Vance, spokeswoman at the Oklahoma Department of Agriculture, Food and Forestry. The state department is also working with [Oklahoma State University Extension](#) for collection and disposal of the seeds.

"Although these items may turn out to be harmless, they may also carry a potential threat to our country and our state's soil and natural resources," Vance said July 28, following a weekend of millions of social media questions across the country. "We would like to have all these seeds in our possession so they can be handled properly."

OSU Extension Assistant Director Randy Taylor said Extension staff across Oklahoma have been trying to reach as many people as possible to urge caution and avoid problems with unpredictable outcomes.

"Unsolicited seeds could be invasive, introduce diseases to local plants or be harmful to livestock," Taylor said. "This is not just an Oklahoma-level threat."

Jeff Edwards, head of OSU Plant and Soil Sciences Department, said much the same thing in a recent episode of the [SUNUP video series](#),

highlighting the risk of diseases and insects.

For that reason, Vance said federal and state officials urge recipients to not open or try to destroy the materials themselves but instead follow key instructions:

If the package has already been opened, place all contents – seeds, envelopes and packing material – in a zip-lock bag, write your name and city on the bag and then send an email to vance@ag.ok.gov with that information.

- If the seeds have been planted, they should be dug up and shaken for loose soil before following the previous step.

Once the seeds are secured, they can be disposed in three ways:

- Mail the bagged contents in another package to Vance at the Agriculture Department, 2800 N. Lincoln Blvd., Oklahoma City, 73105.

- Carry the seeds in person to the front desk at the department.

Bring the materials to a local [OSU Extension county office](#).

John Holman, Extension director for Murray County, recently spoke with a gardener in his community who received an unmarked package months after filing an online retail order for seeds. Even if the mystery seeds are indeed what he asked for, circumstances now make it too risky to plant – much to the gardener's frustration, Holman said.

Taylor said he expects OSU Extension's community connections will play a key role in addressing the problem.

"We can spread the word really fast through our master gardeners, ag educators and other staff in every county in the state. It's a pretty-far reaching network of Oklahomans looking out for each other," Taylor said.

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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.

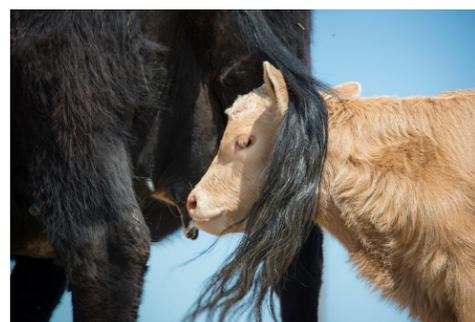
Another thing to keep in mind is the antibiotic status of Ionophores. Ionophores are considered antibiotics, not because they kill

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.

For more information about ionophores, contact your local county OSU Extension Educator for details.



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.

To find out more about how to produce wheat pasture economically visit your local OSU Extension office.

Pond Management Notes

Those Pesky Turtles

The most common turtles, causing unhappiness for pondowners, are commonly called “sliders”. The name comes from their habit of sunning themselves on rocks and sliding into the pond when disturbed. It is usually incorrectly assumed that they are harming fish populations. While they will eat fish on stringers, sliders do not harm other fish. They are primarily a visual nuisance.

How can I get rid of them? Because of their habit of sunning themselves, they can be lured into walking onto boards (Figure 1). If shooting is used, take great caution to avoid ricochets. The greater the angle a projectile makes with the water surface, the more likely it is to enter the water instead of skimming the surface.

[NREM 9206 Common Pond Problems](#)

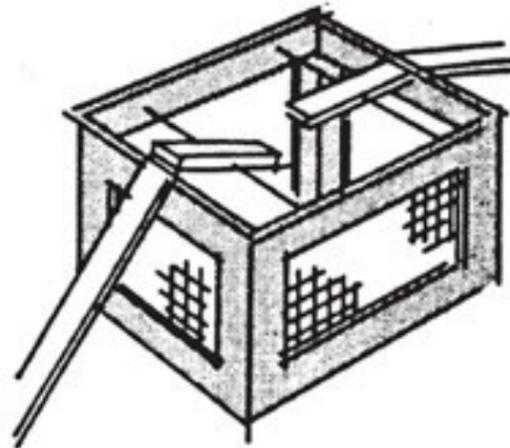


Figure 1. Floating teeter-board traps are commonly used to reduce slider numbers.

Beavers and Dams

Dams are vulnerable to expensive damage from beaver unless you keep an eye out for them. Left to themselves beaver can create dens in the dam’s crown leading to collapse of a section and possible dam loss due to overtopping. Young beaver and many other wildlife species are on the move every year looking for new habitats, including your pond.

Prevention involves looking for signs of them establishing burrows and dens (Figure 2). Their burrow entrances are underwater and usually invisible. Look instead for signs of activity like “slides” - paths in the vegetation on the dam. Sit on your dam during evening hours to see if they can be seen swimming in the pond. Walk the face of the dam looking for other slides and anything else unusual. Take photos to share with your Natural Resource Conservation Service office if in doubt. Early prevention saves the cost of major repair work and dam blowouts. [NREM 9212 Keep Your Pond in Good Condition](#)

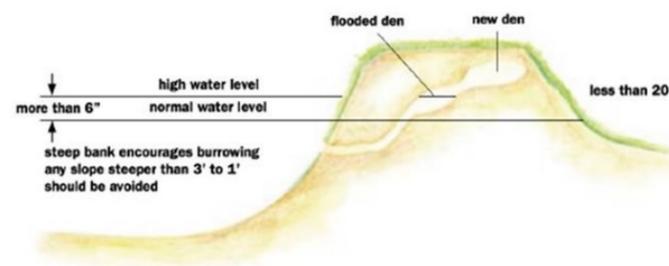


Figure 2. Narrow topped, steep sided dams are the most vulnerable to failure from beaver activity

Fall Gardening

David Hillock

Gardening is a year-round activity. Those who garden develop an appreciation and a desire for fresh, nutritious vegetables and fruits. In many situations, the best way to obtain fresh vegetables is to grow them at home.

Some of the best quality garden vegetables in Oklahoma are produced and harvested during the fall season when warm, sunny days are followed by cool, humid nights. Under these climatic conditions, plant soil metabolism is low; therefore, more of the food manufactured by the plant becomes a high quality vegetable product.

Successful fall gardening begins much earlier than the fall season. Factors to be considered are adequate soil preparation, available garden space, crops to be grown, space for each crop, varieties to use, and obtaining the quantity and varieties of seed. Below are some tables to guide you in when and how to start and plant your favorite fall vegetables. For additional information on fall gardening see OSU Extension fact sheet [HLA-6009 Fall Gardening](#).

Fall Gardening Suggestions

- Seeds left over from planting the spring garden may be used in planting the fall garden if the seed is stored in a cool, dry location or in a refrigerator or freezer.
- Seeds that are stored in the freezer properly should remain viable for many years. Immediately following planting, return surplus seed to the freezer.
- In order to get early established growth, supplemental irrigation is desirable. Most vegetable crops will benefit from supplemental irrigation. Information on drip irrigation may be available from garden centers and county Extension centers. This technique allows an efficient method of irrigation.
- In order to conserve on water usage, water only the furrows or rows and wait for rainfall for general watering.
- Soak seeds overnight for planting (except beans and peas). This will hasten germination and seedling emergence when soil drying is most critical to plant growth.

- Cover seeded rows to reduce soil temperature and drying.
- Discontinue deadheading roses by mid-August to help initiate winter hardiness.
- Water all plants thoroughly unless rainfall has been adequate. It is better to water more in depth, less often and early in the morning.
- 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. ([EPP-7306](#))
- Continue protective insect applications on the fruit orchard. A good spray schedule is often abandoned too early. Follow directions on last application prior to harvest. ([EPP-7319](#))
- Always follow directions on both synthetic and natural pesticide products.

Dividing Perennials

As perennials mature they often need dividing to encourage vigor and continued performance. Luckily the plants provide us a few clues when it is time to divide them - smaller leaves and fewer flowers, weaker stems, the center becomes open and all the growth is on the perimeter of the clump or it may have just outgrown its spot.

The general rule for when a perennial should be divided is opposite its flowering time. So a plant that flowers in the spring can be divided after it flowers, usually in late summer or fall. Late August is a good time to start dividing these types of perennials in Oklahoma. Some plants don't care when they are divided, but in any case care should be taken to ensure survival of the new transplants.

Start by digging a trench around the outside of the clump and then lift the entire clump from the ground. Using a sharp knife or spade begin cutting the clump up into smaller clumps about the size of your fist or a gallon sized perennial. Each section should have at least three healthy buds or shoots.

Towards the end of the month, divide and replant spring-blooming perennials like iris, peonies, and daylilies if needed.



<http://agriculture.okstate.edu/cowboy-journal/issues>

The “positive associative effect” of high protein supplements

Oklahoma has substantial standing forage in many, if not most, pastures as we go into late summer. As the day length shortens, plants become more mature and lower in protein content. However, the protein requirements for growth, milk production, and body weight maintenance of beef cattle do not decrease as the “dog days of summer” arrive.

The micro-organisms in the rumen of beef cows and replacement heifers require readily available protein to multiply and exist in large enough quantities to digest the cellulose in low quality roughages. Protein supplementation of low-quality, low protein forages results in a “*positive associative effect*”. This “positive associative effect” occurs as supplemental protein available to the “bugs” in the rumen allows them to grow, multiply, and digest the forage more completely and more rapidly.

Therefore the cow gets more out of the hay she consumes, she digests it more quickly and is ready to eat more hay in a shorter period of time. Data from Oklahoma State University illustrates this (Table 1, McCollum and Galyean, 1985, J. Anim. Sci). The prairie hay used in this study was less than 5% crude protein. When the ration was supplemented with 1.75 lbs. of cottonseed meal, retention time of the forage was reduced 32% which resulted in an increase in feed intake of 27%. Because hay intake was increased, the animal has a better chance of meeting both the protein and energy requirement without supplementing other feeds.

Table 1. Effect of Cottonseed Meal Supplementation on Ruminal Retention Time and Intake of Low-Quality Prairie Hay

Daily Supplement of Cottonseed Meal

	None	1.75 lb	Change
Rumen Retention Time, Hr	74.9	56.5	-32%
Voluntary Daily Hay Intake, % of body wt.	1.69	2.15	+27%

Because retention time was decreased, one should expect the protein supplementation in this situation also increased digestibility of the hay. This was shown clearly in another OSU trial that indicated that low quality roughage had an increase in estimated digestibility from 38% to 48% when the cattle were supplemented with 1.5 pounds of soybean meal daily.

As producers prepare their late summer, fall, and winter feed strategies, they can see the importance of providing enough protein in the diet of the cows to feed the “bugs” in the rumen. If the forage is low in protein (less than 8 % crude protein), a small amount of supplemental protein such as cottonseed meal, soybean meal, or one of the higher protein by-product feeds, could increase the amount and digestibility of the forage being fed.

This strategy requires that ample forage is available to take advantage of the “positive associative effect”.

As the table above illustrates, properly supplemented cows or replacement heifers will voluntarily consume about 27% more forage if they were provided adequate protein. As long as enough forage is available, this is a positive effect of a small amount of protein supplement.

Cows that are already in excellent body condition in late summer will not benefit from the additional expense, however, young thin cows would be candidates for protein supplementation in late summer and fall. The increase in body condition can be achieved with minimal expense, especially if the spring-born calves are weaned in early fall.

Digital Farm Management Resources

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

In the Estimating Forage with the Oklahoman Grazing Stick video, viewers learn about matching herd size with forage production. The video discusses how to use the Oklahoma grazing stick to calculate forage availability and estimate carrying capacity. Lastly, they learn about evaluating the canopy cover of their forage with this tool.

To view this video and find additional information on pasture and range management, visit: <http://agecon.okstate.edu/efarmmanagement/pasture.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>).

Available Monthly Pecan Information on Zoom

Becky Carroll, Associate Extension Specialist, Fruits and Pecans

With the lack of field days and workshops during the Covid19 quarantine, zoom educational sessions have been held monthly for pecan growers beginning in May. These zoom meetings highlight timely topics for pecan growers or homeowners. Extension educators can also participate and receive in-service credit.

The upcoming session is on August 7 at 1 p.m. Advance registration is required to receive a link to join the meeting. Topics for this month will be how to determine pecan development stages, crop load assessment and thinning, how drought affects nut development and updates on weevil and aphid control. This is open to anyone and there is no charge for the event. Please feel free to promote to your pecan audience.

Dates for upcoming sessions : August 7, September 11, October 2, and November 6.

Each session will require new registration.

Information and recordings of previous sessions are available on the Oklahoma Pecan Management webpage- <http://okpecans.okstate.edu/> or the Oklahoma Pecan Management Facebook page - @okpecans. Email becky.carroll@okstate.edu for advance registration information.

Magic, Sport or Real Skill?

There are three levels to fishing. Kids, and others fishing for the first time experience something akin to magic. They are thrilled to pull fish from “nowhere” much like a rabbit from a magician’s hat. If they are hooked on fishing, they will develop angling skills and become proficient at their sport. Many go no further than this and this is fine, as long as there is someone to manage the fishery. If you fish public waters, there are fisheries biologists who do this for you. But if you own a pond, you need to develop the real skill of managing the fishery.

Where are you on this continuum and how can you help insure fishing continues as an important part of people’s lives? To find out more about being a good manager of a pond fishery read [NREM 9209, Improve Fishing in Your Pond.](#)

- * Relax and de-stress by visiting your pond...often.
- ** Learn what is normal and good so you can recognize changes that may be the start of something bad.
- *** Use it, enjoy it and manage it so you can make memories for your family and friends.

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