LOGAN COUNTY EXTENSION NEWS

Horticulture Tips for April

By: David Hillock Consumer Horticulturist

Fruit and Nut

Don't spray insecticides during fruit tree bloom or pollination may be affected. Disease sprays can continue according to schedule and label directions. (EPP-7319)

Control cedar-apple rust. When the orange jelly galls are visible on juniper (cedar), following a rain, begin treating apple and crabapple trees with a fungicide. (EPP-7319, EPP-7611)

Fire blight bacterial disease can be controlled at this time. Plant disease-resistant varieties to avoid diseases.

Continue spray schedules for disease prone fruit and pine trees.

Tree and Shrub

Proper watering of newly planted trees and shrubs often means the difference between success and replacement.

Remove any winter-damaged branches or plants that have not begun to grow. Prune spring flowering plants as soon as they are finished blooming. (HLA-6404, HLA-6409)

Control of powdery mildew disease can be done with early detection and regular treatment. Many new plant cultivars are resistant. (EPP-7617)

Leaf spot diseases can cause premature death of foliage and reduce plant vigor.

Flowers

Most bedding plants, summer flowering bulbs, and annual flower seeds can be planted after danger of frost. This happens around mid-April in most of Oklahoma. Hold off mulching these crops until spring rains subside and soil temperatures warm up. Warm-season annuals should not be planted until soil temperatures are in the low to mid 60s.

Harden off transplants outside in partial protection from sun and wind prior to planting.

Let spring flowering bulb foliage remain as long as possible before removing it.

Landscape - General

Hummingbirds arrive in Oklahoma in early April. Get your feeders ready using 1 part sugar to 4 parts water. Do not use red food coloring.

Keep the bird feeder filled during the summer and help control insects at the same time.

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April 2020

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April Horticulture Tips

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Lace bugs, aphids, spider mites, bagworms, etc. can start popping up in the landscape and garden later this month. Keep a close eye on all plants and use mechanical, cultural, and biological control options first.

Be alert for both insect pests and predators. Some pests can be hand picked without using a pesticide. Do not spray if predators such as lady beetles are present. Spray only when there are too few predators to be effective.

Lawn

Warm-season grass lawns can be established beginning late April from sprigs, plugs or sod. (HLA-6419)

Fertilizer programs can begin for warm-season grasses in April. The following recommendations are to achieve optimum performance and appearance of commonly grown species in Oklahoma.

- Zoysiagrass: 3 lbs N/1,000 sq. ft./year
- Bahiagrass: 3 lbs N/1,000 sq. ft./year
- Buffalograss: 2 - 3 lbs N/1,000 sq. ft./year
- Buffalograss/grama mixes: 3 lbs N/1,000 sq. ft./year
- Bermudagrass: 4-6 lbs N/1,000 sq. ft./year
- Centipedegrass: 2 lbs N/1,000 sq. ft./year
- St. Augustinegrass: 3-6 lbs N/1,000 sq. ft./year

When using quick release forms of fertilizer, use one pound of actual nitrogen per 1,000 sq. ft. per application; water in nitrate fertilizers. (HLA-6420)

Mowing of warm-season lawns can begin now (HLA-6420). Cutting height for bermuda and zoysia should be 1 to 1½ inches high, and buffalograss 1½ to 3 inches high.

Damage from Spring Dead Spot Disease (SDS) becomes visible in bermudagrass (EPP-7665). Perform practices that promote grass recovery. Do not spray fungicides at this time for SDS control.

Grub damage can be visible in lawns at this time. Check for the presence of grubs before ever applying any insecticide treatments. Apply appropriate soil insecticide if white grubs are a problem (EPP-7306). Water product into soil.

Vegetables

Wait a little longer for it to warm up before planting cucurbit crops and okra.

Plant vegetable crops in successive plantings to ensure a steady supply of produce rather than harvesting all at once.

Cover cucurbit crops with a floating row cover to keep out insect pests. Remove during bloom time.

Watch for cutworm damage and add flea beetle scouting to your list of activities in the vegetable garden.

Be Cautious with Moldy Feed and Hay

Earl H. Ward, Area Livestock Specialist

It is inevitable this time of year for a few producers to call who have moldy feed or hay and wondering if they can feed it. We must remember that all the feed ingredients used in feeds have a shelf life. Many of these ingredients are grains used to make bread and we all know how fast bread can mold when exposed to the elements.

Animals can be affected in two different ways with mold. The first is called mycoses which is a disease state caused by the mold itself and the other is mycotoxicosis which is the disease state caused by a toxin produced by the mold. Mycosis can be in both animals and humans that are breathing in the mold spores and develop respiratory distress or have an allergic reaction to the mold. This is rarely a systemic disease but can cause abortions and blood poisoning in cattle. The mycotoxicosis is typically the concern of most producers. More than 400 mycotoxins have been identified, but only a few are regularly found in grains and seeds used for animal feed. Aflatoxin, Vomitoxin, and Zearalenone are a few that cause issues in livestock.

The mold spores have shown to decrease the palatability of feedstuffs which results in decreased dry matter intake causing a decrease in nutrient uptake. On top of a depressed appetite it has been shown to decrease energy digestibility by about 5%. Mycotoxin in feeds have also shown to decrease milk production by up to 15%.

Hopefully this information has led you to be cautious about feeding a moldy feed to your animals. Not all mold is harmful, but it is hard to determine if the mold is an issue or not until after the damage is done. Feeds can be tested for mold and mycotoxins. Testing for a mold count is moderately inexpensive at $25-$30 per test, but this does not tell the producer if that mold is going to cause a problem. Testing for mycotoxins may cost more at approximately $40 per toxin

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Body Condition Score at Calving Is the Key to Young Cow Success

By: Glenn Selk, OSU Animal Scientist

Research data sets have shown conclusively that young cows that calve in thin body condition but regain weight and condition going into the breeding season do not rebreed at the same rate as those that calve in good condition and maintain that condition into the breeding season. The following table from Missouri researchers illustrates the number of days between calving to the return to heat cycles depending on body condition at calving and body condition change after calving.

Predicted number of days (d) from calving to first heat as affected by body condition score at calving and body condition score change after calving in two-year-old beef cows. (Body condition score scale: 1 = emaciated; 9 = obese) Source: Lalman, et al. 1997

	Body Condition Score Change in 90 Days After Calving						
Condition score at calving	-1	-.5	0	+.5	+1.0	+1.5	+2.0
BCS = 3	189 d	173 d	160 d	150 d	143 d	139 d	139 d
BCS = 4	161 d	145 d	131 d	121 d	115 d	111 d	111 d
BCS = 5	133 d	116 d	103 d	93 d	86 d	83 d	82 d
BCS = 5.5	118 d	102 d	89 d	79 d	72 d	69 d	66 d

Notice that none of the averages for cows that calved in thin body condition were recycling in time to maintain a 12 month calving interval. Cows must be rebred by 85 days after calving to calve again at the same time next year. This data clearly points out that young cows that calve in thin body condition (BCS=3 or 4) cannot gain enough body condition after calving to achieve the same rebreeding performance as two-year old cows that calve in moderate body condition (BCS = 5.5) and maintain or lose only a slight amount of condition. The moral of this story is: "Young cows must be in good (BCS = 5.5 or better) body condition at calving time to return to estrus cycles soon enough after calving to maintain a 365 day calving interval."

Oklahoma scientists used eighty-one Hereford and Angus x Hereford heifers to study the effects of body condition score at calving and post-calving nutrition-on rebreeding rates at 90 and 120 days post-calving. Heifers were divided into two groups in November and allowed to lose body condition or maintain body condition until calving in February and March. Each of those groups was then re-divided to either gain weight and body condition post-calving or to maintain body condition post-calving.

The Figure 1 graph below illustrates the change in body weight of heifers that calved in a body condition score greater than 5 or those that calved in a body condition score less than or equal to 4.9. The same pattern that has been illustrated in the other experiments is manifest clearly with these heifers. Thin heifers that were given ample opportunity to regain weight and body condition after calving actually weighed more and had greater body condition by eight weeks than heifers that had good body condition at calving and maintained their condition into and through the breeding season. However, the rebreeding performance (on the right side of the legend of the graph) was significantly lower for those that were thin (67%) at parturition compared to heifers that were in adequate body condition at calving and maintained condition through the breeding season (91%). Again post-calving increases in energy and therefore weight and body condition gave a modest improvement in rebreeding performance, but the increased expense was not adequately rewarded. The groups that were fed to "maintain" post-calving condition and weight received 4 lb of cottonseed meal supplement (41% Crude Protein) per day. The cows in the "gain" groups were fed 28 lb/day of a growing ration (12% CP). Both groups had free choice access to grass hay (personal communication). The improvement in reproductive performance (67% pregnant vs 36% pregnant) of the thin two-year-old heifers may not be enough to offset the large investment in post-calving feed costs. Pre-calving feed inputs required to assure the heifers were in adequate body condition at calving would be substantially less than the feed cost per head that was spent on the thin heifers after calving.

Figure 1. Post-calving body condition change of heifers with body condition >5 or <5 at calving and fed to gain or maintain weight. 120 day pregnancy rates (%) are indicated on the right side of the graph lines. Bell, et al. 1990

These data sets have shown conclusively that young cows that calve in thin body condition but regain weight and condition going into the breeding season do not rebreed at the same rate as those that calve in good condition and maintain that condition

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Body Condition Score

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into the breeding season. Make certain next winter that the supplement program is adequate for your young cows to be in good body condition next spring.

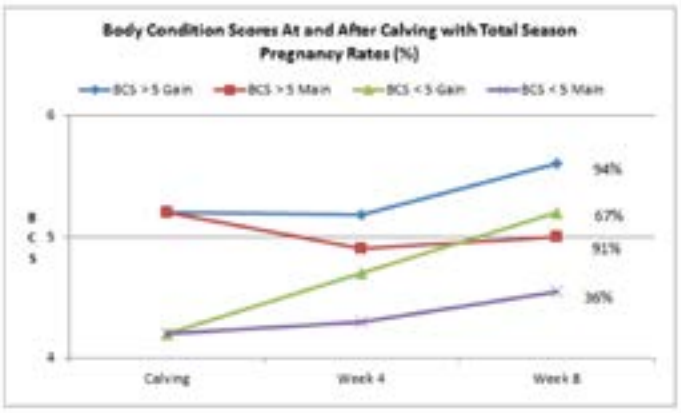

Figure 1

Blue Green Algae

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

This year an Oklahoma a cattle producer in Payne county found 7 dead cows and 1 dead deer in close proximity to a pond. The owner suspected something was wrong with the water. An analysis of the water was performed. According to Oklahoma State University Payne County Ag Educator Nathan Anderson, "the analysis revealed that it was positive for blue-green algae and was above the lethal threshold." This year there has been reports of similar unexplained deaths by ponds. This would not be much of a surprise if these had occurred in late summer, but this incident took place in early spring. This should be a warning to livestock producers to inspect ponds for blue-green algae accumulation when conditions are right no matter what time of the year it is.

Blue-green algae is not really an algae but a bacterium which is referred to as cyanobacterium. The most common species found in the Midwest are Microcystis, Oscillatoria, and Anabaena (Morgan, 2011). The bacterium is found in most bodies of water. However, they become a problem during times of rapid growth which is fueled by high nitrogen and phosphorus content and warm sunny weather. The overgrowth of the bacterium lead to the death of the organism which then floats to the top and forms a "scum" on top of the water. These "scum" layers can be moved about the pond by wind movement. Sometimes this causes certain areas in the pond to be concentrated with the toxic levels of the dead bacterium. Rain or wind disturbance can break up the "scum" and reduce the chance of toxicity, but this is not always the case.

All livestock, pets, wild animals, and humans are susceptible to blue-green algae toxicity. The amount of water consumed needed to cause toxicity depends on the species of animal, concentration of the toxins in the water, and how much water is ingested. Ingestion of 1 quart of highly concentrated water is lethal to cattle (Meehan & Mostrum, 2015).

Most producers do not recognize a problem with blue-green algae until they find dead livestock in the pond or in close proximity to a body of water. Most cattle that ingest contaminated water will die, but occasionally producers may find sick cattle. The clinical signs of blue-green algae toxicity will depend on the type of toxin ingested. The two types of toxins associated with blue-green algae are a neurotoxin (affect the nervous system) or a hepatotoxin (affect the liver).

Typically, diagnosis is based upon exposure to blue-green algae along with clinical signs or sudden death. If a producer suspects blue-green algae is the cause of death in his/her cattle, he/she should immediately collect a pint of water where large amounts of the algae exist. The reason for quickly obtaining a sample is the toxin could be dispersed by the wind. Then the producer should contact a veterinarian to conduct a necropsy. A necropsy will rule out other causes of death. A veterinarian will most likely take tissue samples for more testing and rumen contents may be taken to examine for presence of blue-green algae. The water sample will need to be submitted for analysis. More information for guidance about necropsy or water sampling may be found at the Oklahoma Animal Disease Diagnostic Laboratory at (405) 744-6623 or https://cvhs.okstate.edu/oaddl

Since there is no known antidote, treatment is usually unrewarding. For this reason, producers need to focus on conditions that favor the development of blue-green algae. The algae blooms with sunshine and warm weather. Excessive blooms are associated with ponds located in areas that catch runoff water high in nutrients. Producers should be inspecting ponds anytime these conditions are present. They should be prepared to provide alternative water sources in times of crisis.

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Blue Green Algae

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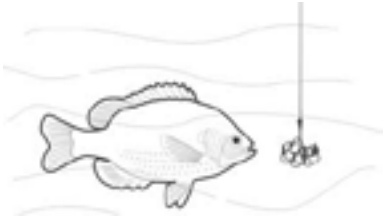
Blue-green algae toxicity is not a new problem for Oklahoma livestock producers but having problems with cyanobacterium early in the spring is new. When weather conditions are right for algae build up, producers need to be constantly observing their ponds for any signs of the blue "scum" on the water. If found, producers need to take action to reduce the problem. An excellent fact sheet is available from Oklahoma State University Extension Service on blue-green algae and how to best manage the problem. The fact sheet can be found at https://extension.okstate.edu/fact-sheets/toxic-blue-green-algal-blooms.html. If a producer has questions about blue-green algae, they should contact their local veterinarian or an Oklahoma State University County Extension Educator.

References

Morgan SE. Water quality for cattle. Veterinary Clinics of North America Food Animal Practice. 2011;27(2):285

Meehan MA, Mostrum M. Cyanobacteria Poisoning (Blue-green Algae). Fact Sheet at https://www.ag.ndsu.edu/publications/livestock/cyanobacteria-poisoning-blue-green-algae/v1136-cyanobacteria.pdf



April Pond Management Notes

Spring brings with it a surge of interest in ponds. The compulsion to help nature along is strong and many anglers think about purchasing fingerlings. If your pond already has bass, do not stock fingerlings on top of your established bass population: they will be quickly eaten.

The best path to improving fishing begins with getting to know more about the fish you have. Many pond owners do not know their fish well. What are the kinds of fish and are they getting enough to eat or are they skinny? Fish the pond using a variety of lures and baits until you build up a good picture of the fish populations. For more on this read NREM 9209, Improve Fishing in Your Pond.

Were there problems in the pond last year? If so, now is the best time to seek out some options to evaluate.

Weeds - Were they getting too abundant last year? It is a safe bet they will be back and get worse this year. Grab a sample and bring it into the Extension Office to be identified and learn some possible things that can be tried before they get as abundant as last year's weeds.

Fishing - Was it poor last year? You need to know all the kinds of fish you have and particularly if any of them are a problem or are a trash species needing to be eliminated. Share a closeup photo if in doubt.

What better way to reduce stress than to walk around your pond? While doing this, take a look at the following:

The dam - It impounds the water in the basin but do you know and recognize the other parts?

The primary spillway - it is the first place the pond overflows- usually a pipe through the dam or a tower.

The auxiliary spillway - A broad, flat channel to the side of the dam.

The watershed - The entire area that slopes toward the pond. Runoff from it fills the pond but can also carry excess fertilizers or sediment. Either causes problems.

In the same way that everyone should know at least a little about the parts of your car and what they do, you need to know the parts of your pond so you can keep an eye on them to catch problems early, while they are cheaper to fix. Your pond structures need your attention. For more on maintaining pond structures, read NREM 9212, Keep Your Pond in Good Condition.

- 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.

Mouldy Hay

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or $260 for a full screen of mycotoxin. Depending on the amount of feed still in storage, this may be a small investment to avoid a disaster.

Once a test has been done and results are back, we can determine to either continue to feed it or perhaps blend this moldy feed with fresh feed to reduce the amount of mycotoxins ingested. If a producer finds themselves with a moldy feedstuff, then it is suggested to discontinue feeding it to any pregnant animals and try to refrain from feeding it to any animal until testing could be done. If you have questions, please contact your county's OSU Extension Educator.

Animals and Covid -19
Keep Yourself and Your Animals Healthy During Pandemic

Coronaviruses are a large family of viruses associated with respiratory illness in birds and mammals. COVID-19 is a member of the coronavirus family. Other coronaviruses can cause illness in certain animals including dogs, cats, cattle, camels, ferrets and bats. Coronaviruses that commonly infect dogs and cats do not infect humans.

There have been no reports of COVID-19 in domestic animals including pets and livestock in the U.S. There has been one report of a tiger with respiratory illness in a New York zoo that tested positive for COVID-19. Vaccines routinely used to help protect animals from coronaviruses offer no protection in humans and should not be used to prevent COVID-19. Do not self-medicate or self-test for COVID-19.

There have been no reports of domestic dogs or domestic cats in the U.S. infected with COVID-19. There have been a very small number of pets, including dogs and cats, outside the U.S. reported to be infected with people with COVID-19. At the time of this writing, there is no known animal-to-human spread of COVID-19 involving pets. Ongoing research to understand how and if different animals could be affected by COVID-19 is being conducted.

The most effective method of disease prevention is to avoid exposure to the virus.

• Avoid close contact—stay at home, putting at least a 6-foot distance between yourself and others.

• Clean hands often—wash your hands with soap and water for at least 20 seconds. Hand sanitizers with at least 60% alcohol may be used if soap and water are unavailable.

• Cover your mouth and nose with a face cover if you must be around others.

• Cover coughs and sneezes by coughing or sneezing into your elbow and sleeve.

• Clean and disinfect—surfaces should be cleaned and disinfected often. COVID-19 is susceptible to most common household disinfectants.

While the primary concern of the COVID-19 pandemic is human health, animal owners should have plans to ensure proper care of their animals in an emergency. As individuals prepare for the unexpected, they should also develop plans for their animals. Pet owners should have more than one option for pet care in their plan in the event the usual pet sitter or boarding facility is unavailable. Animal food, medication, health records as well as transport options should be readily available.

Farmers and ranchers should make similar considerations specific to their operation. Considerations for supplying feed and water as well as routine health care should be planned in advance. All animal owners should coordinate with their veterinarian.

If you are sick with COVID-19 (either sus spected or confirmed) out of an abundance of caution restrict contact with pets and other animals, just like you would around people. It is recommended that people sick with COVID-19 limit contact with animals until more information is known about the virus. This can help ensure both you and your animals stay healthy.

When possible, have another member of your household care for your animals while you are sick. Avoid direct contact with animals until the illness resolves. Do not pet, snuggle, groom or otherwise touch animals unless necessary. If you have a service animal or must care for your animals while you are sick, wash your hands before and after you interact with them. A face cover over your mouth and nose should be considered as well. Any sign of animal illness should be reported to a veterinarian immediately.

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CDC
https://www.cdc.gov/coronavirus/2019-ncov/faq.html#covid19-animals

Private Applicator License Applications Notice

ODAFF has made an emergency exception for private applicator license applications and renewals. Because the testing centers are closed, ODAFF has temporally reinstituted the paper take at home test. If you need to renew your license or apply for a new license, please call University Mailing directly at (405-744-9037) and the new packets will be sent to you. We, at the county office, will not be able to send you packets or take payment. The contents of the packets you will receive from University Mailing are different than those we currently have in the office.

Once you receive your packet complete all necessary documentation and exam and send to ODAFF (with payment) as quickly as possible. We do not know how long the exception will continue.

Do you want to know what Extension is doing in Logan County? Find out on these websites.

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