

COSHOCTON COUNTY AGRICULTURE & NATURAL RESOURCES**July 21 Issue (Edition #104)**

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Coshocton County Extension
724 South 7th Street, Room 110
Coshocton, Ohio 43812
Phone: 740-622-2265
Fax: 740-622-2197
Email: marrison.2@osu.edu
Web: <http://coshocton.osu.edu>

Hello Coshocton County! After last week's wet weather, it is nice to see the drier weather return this week. I saw wheat being harvested and straw being baled yesterday across the region and it looks like some nice second cutting hay will be made this week although we will remain under a hazy gloomy sky due to the wildfires out west.

A lot of discussion is being held about fungicides across the state and our agronomic specialists have written some nice articles which are shared in today's newsletter.

Now is a great time to mow down the weeds which are impacting your pastures. Problem weeds like ironweed can be mowed now which will set their re-growth up for a September herbicide application (for better control).

Last week, we sent letters out on BQA re-certification---some of you may have already completed this on-line (and that is great). If not, consider attending one of our upcoming events. Stay safe and well.

Sincerely,

David L. Marrison

Coshocton County OSU Extension ANR Educator



THE OHIO STATE UNIVERSITY

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AND ENVIRONMENTAL SCIENCES

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Weather Update: A Wet Start to Summer

By: Aaron Wilson

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/23-2021/weather-update-wet-start-summer>

A few months ago, there was some concern that if May did not produce decent rainfall, we would be heading toward a hot, dry summer. However, since the start of summer, a strong heat dome has dominated the weather in the west, leaving an active jet stream and weather pattern across the Ohio and Missouri Valleys (Figure 1). This has brought frequent rounds of showers and storms, some of them locally heavy, and has greatly improved soil moisture and stream flow conditions across the Buckeye State. For some, it has been too much of a good thing. Parts of southwest and northeast Ohio have received 10-15 inches of rainfall over the last 30 days. For the Cincinnati area, this has been the second wettest start to summer (June 1 to present) on record, only behind 1876! Cleveland Hopkins Airport has received 7.18 inches since July 1, the most ever recorded through the first 17 days of July.

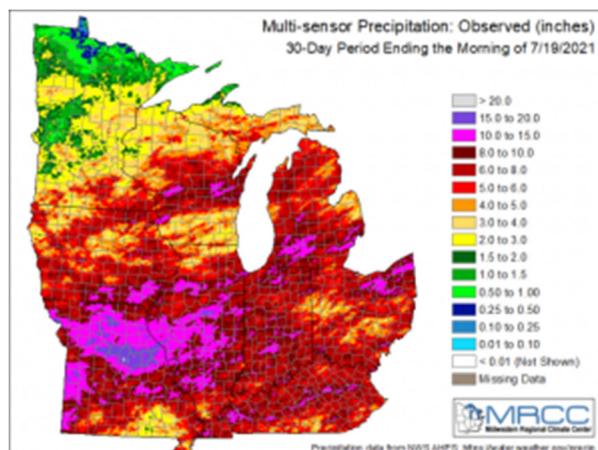


Figure 1. Multi-sensor precipitation estimates for the last 30-days

Forecast- The week ahead looks a bit more benign. Mostly dry and sunny conditions are expected Tuesday through Thursday. Skies will remain a bit hazy due to western wildfire smoke. A weak front moving through on Tuesday could provide a few isolated storms late in the day, mainly across northern counties. Temperatures are expected to run about average this week, with highs in the mid to upper-80s and lows in the mid-60s across southern counties. Upper-70s to mid-80s for highs with upper-50s to low-60s expected on Wednesday and Thursday across the north. A better chance of widespread summertime thunderstorms is expected on Friday through the weekend, with highs in the mid to upper-80s.

The [Climate Prediction Center's](#) 6–10-day outlook for the period of July 27 – August 2 and the [16-Day Rainfall Outlook from NOAA/NWS/Ohio River Forecast Center](#) indicate a shift in the pattern, with above average temperatures and below average precipitation expected (Figure 2). Climate averages for this period include a high temperature range of 83-87°F, a low temperature range of 62-66°F, and average rainfall of 0.70-0.90 inches.

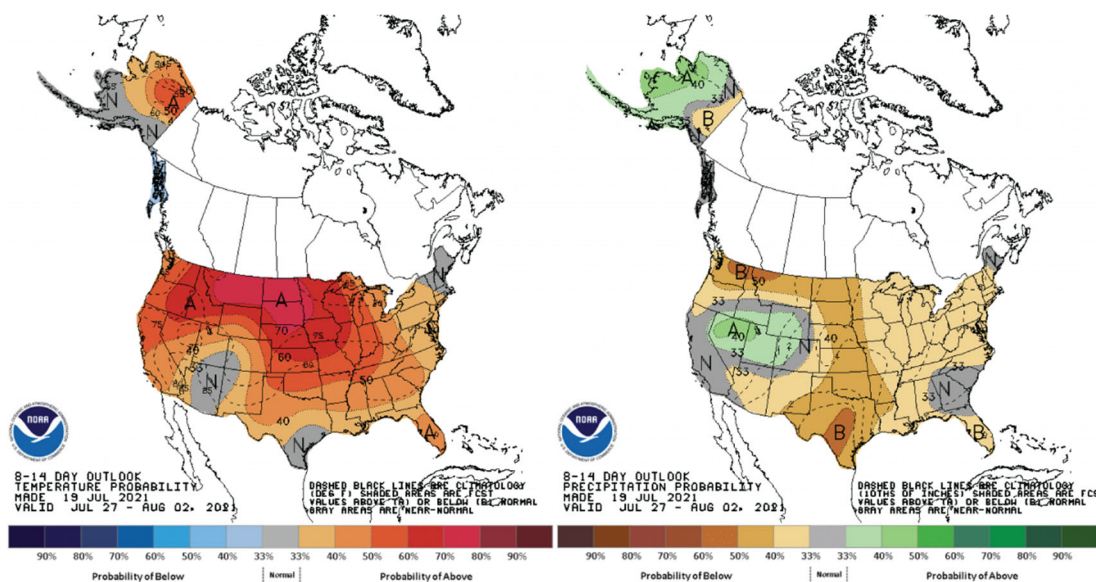


Figure 2. Climate Prediction Center 6-10 Day Outlook valid for July 27 – August 2, 2021, for (left) temperatures and (right) precipitation. Colors represent the probability of below, normal, or above normal conditions.

To Spray or Not to Spray: Foliar Products at R3

By: Laura Lindsey

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/23-2021/spray-or-not-spray%E2%80%A6foliar-products-r3>

The R3 soybean growth stage is a common time to consider foliar application of fungicide, insecticide, and fertilizer. Before we jump into the potential yield outcomes of these products, let's define the R3 growth stage. A soybean plant is at the R3 growth stage when there is a pod at least 3/16 inch long (but less than 3/4 inch long) at one of the four uppermost nodes on the main stem with a fully developed trifoliate leaf. A leaf is fully developed, and the node is counted, when the trifoliate leaf at the node immediately above it is open (Figure 1). Soybean plants within a field may be at different growth stages. Over half of the plants need to be at a certain growth stage for the whole field to be considered that growth stage. For more information on soybean growth stages R3 through R6, see this YouTube video: <https://www.youtube.com/watch?v=Z0A1fkU4oBU>.

Figure 1. Soybean plant at the R3 growth stage.

When should I spray a foliar fungicide?

First, consider the disease triangle. For a disease to develop, there must be a 1) host (Is your soybean variety resistant or susceptible?), 2) pathogen (Is there a history of a certain disease in your field? Do you see any visual symptoms of disease?), and 3) conducive environment. Most foliar diseases, such as brown leaf spot and frogeye leaf spot, are favored by wet conditions.

In the soybean agronomic trials, brown leaf spot and frogeye leaf spot tend to be the two most common soybean diseases (Figure 2). In these trials, we've measured a yield response to foliar fungicide applied at R3 in 9 out of 28 environments, ranging from 4 to 8 bu/acre. At the responsive locations, which tended to be in central and southern Ohio, there was foliar disease present (brown spot and frogeye leaf spot). Additionally, these positive yield responses occurred in years with greater precipitation. Very little to no yield response occurred in dry years and in years when soybeans were flooded. If you have visual symptoms of disease, a conducive environment, and susceptible variety, R3 is a good time to spray a foliar fungicide.

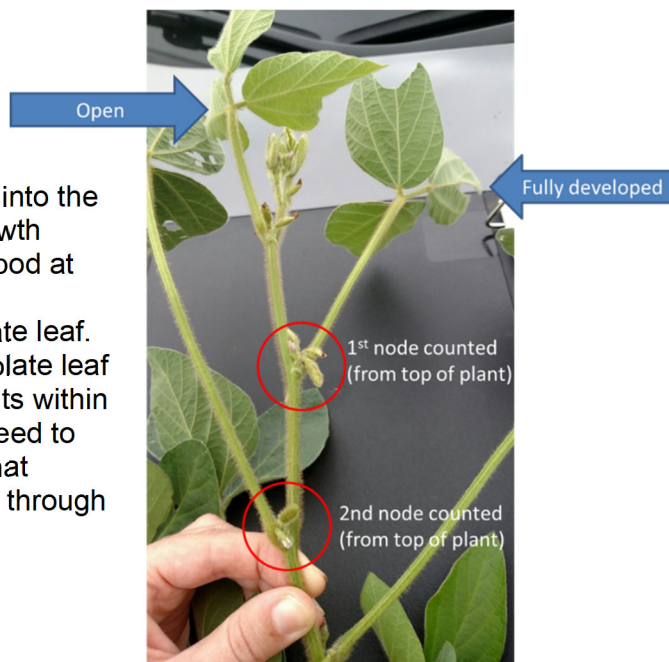


Figure 2. Frogeye leaf spot (left) and brown spot (right).

When should I spray a foliar insecticide?

Often, if a farmer plans on spraying a foliar fungicide, they will tank-mix a foliar insecticide. From last week's article on soybean defoliation, "It is very rare that we reach economic levels of defoliation here in Ohio." (Click here to read the entire article: <https://agcrops.osu.edu/newsletter/corn-newsletter/22-2021/soybean-defoliation-it-takes-lot-really-matter>). Over the past several years, we've tested foliar insecticide in 28 Ohio environments. Out of those 28 environments, we've only measured a yield response (+5 bu/acre) to foliar insecticide applied at R3 one time. In the other 27 environments, soybean yield was unaffected by foliar insecticide with defoliation levels in the mid- to upper canopy at <15%. As mentioned in last week's article, "...treatment is advised when defoliation levels reach 40% in pre-bloom stages, 15% in bloom, and 25% during pod fill to harvest."

When should I spray foliar fertilizer?

In Ohio, the most common micronutrient deficiency is manganese. However, even then, we've only measured a yield response to manganese foliar fertilizer in two out of 20 Ohio environments. Soybeans are most likely to respond to foliar fertilizer when there are visual symptoms of deficiency. Interveinal chlorosis is a visual symptom of manganese deficiency (Figure 3). Manganese deficiency tends to occur in fields with high pH or high organic matter (muck), especially if soils are droughty. In dry soil, manganese is converted to a form that is unavailable for plant uptake.

Recently, soybean agronomists across the U.S. evaluated foliar fertilizers in 46 environments and found no soybean yield increase when the products were applied prophylactically (e.g., no visual deficiency symptoms). For more information on this study, see: <https://www.youtube.com/watch?v=0DtNagk6ghI>. In most situations, foliar fertilizers are unnecessary.

Summary

When soybean plants are yellow due to saturated soil conditions as seen in northern Ohio last week, it can be tempting to apply foliar products to help the plants 'recover' (Figure 4). These fields often already have a lower yield potential and are unlikely to respond to foliar products in the absence of disease, insects, and nutrient deficiency.

Multiple trials in Ohio and across the U.S. have shown that prophylactic applications of foliar fungicide, insecticide, and fertilizer provide no yield benefit. Before applying these products, it's important to scout your fields for disease, insects, and nutrient deficiencies.



Figure 3. Manganese deficiency symptoms include interveinal chlorosis.

Figure 4. No yield response foliar products when applied to flooded field in Delaware County in 2013



Foliar Diseases & Fungicide Decisions in Corn

By: Pierce Paul

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/23-2021/foliar-diseases-and-fungicide-decisions-corn>

This July has been one of the wettest on record, and with the extra moisture, comes concerns about diseases. Gray Leaf Spot (GLS) and, to a lesser extent, northern corn leaf blight (NCLB), have already been reported in some fields, well before tasseling in some cases. Such early disease development could impact grain yield, especially if it continues to be wet and the hybrid is susceptible. GLS is favored by warm temperatures (70 and 90 F) and high relative humidity. NCLB is also favored by wet, but slightly cooler (64 and 80 F) conditions, than GLS. Over the last several days, we have had temperatures within the favorable range for both diseases, and if they continue to spread and damage the ear leaf before grain fill is complete, yield losses could be high.



If making a fungicide application, target R1 and VT growth stages

GLS and NCLB are not the only diseases on the minds of growers this year. Questions are also being asked about tar spot, a relatively new foliar disease that is also driven by wet conditions. Although grain prices may be high enough to justify a fungicide application, it is still important to scout fields to see what is out there and at what levels before making a decision, as this could affect your fungicide choice, your application program, and the price you pay, and as a result, whether or not you see a return on your investment. For instance, GLS and NCLB can be effectively controlled with several of the older, cheaper, and single-mode-of-action fungicides. If these are the diseases of concern, you should not have to spend the extra money to apply one of the newer, more expensive fungicides.

However, if tar spot is what you are most concerned about, you may want to consider a combination fungicide with multiple modes of action, as these tend to be more consistently effective against tar spot. Several of the newer premix fungicides that provide good control of tar spot are also more expensive, but the good news is, they are also effective against GLS and NCLB. Therefore, if you decide to spend the extra money, make sure it is justified by scouting the field to see what is present. However, regardless of which fungicide you choose, it would be a good idea to use a surfactant, unless it is restricted by the label, if the application is made while or shortly before it rains. A surfactant may help to increase the rainfastness of the fungicide. Click [here](#) to view recent CORN article on tar spot in corn.

Based on years of research, we have found that applications made at silking (R1) or tasseling (VT) are the most effective in terms of foliar disease control and yield response in Ohio. But the yield response is much lower and more variable when fungicides are used under low disease pressure or in the absence of foliar diseases, than when a disease is present. If the fungicide program costs \$30 an acre and the grain price is \$5, you will need at least a 6 bushel increase in yield to offset your application cost. You stand a better chance of seeing such a yield response if disease pressure is high (weather is favorable and hybrid is susceptible). On average, the yield response tends to be about 3 bushels and highly variable in the absence of disease, and as such will only be economically beneficial if a cheaper fungicide is used.

There are several very good fungicides to choose from ([Fungicide Efficacy for Control of Corn Diseases Table](#)). However, before making an application, read the label carefully. This is especially important for tar spot as some fungicides have a section 2(ee) label for managing this disease. A section 2(ee) allows limited variations from the guidelines specified on the label, including:

1. "Applying a pesticide at any dosage, concentration, or frequency less than specified on the label, unless prohibited by the label. However, Section 2(ee) cannot be used to increase the dosage,

- concentration or frequency of an application, nor can it be used to decrease the preharvest interval.
2. Applying a pesticide against any target pest not specified on the labeling, to a crop, animal, or site on the label, unless the label only allows use for control of labeled pests.
 3. Employing any method of application not prohibited by the labeling, unless the label states that the product may be applied only by the methods specified on the label. For example, a Section 2(ee) recommendation cannot add a method of application such as chemigation or aerial application if the label specifies only ground applications.
 4. Mixing a pesticide or pesticides with a fertilizer, when such a mixture is not prohibited by the labeling.”
- Source: https://www3.epa.gov/pesticides/regulating/section18_training/module-01/Section%202ee.pdf

Use the information below to help you make your fungicide application decision:

- Susceptible hybrids: If disease symptoms are present on the third leaf below the ear or higher on 50% of the plants examined, a fungicide is recommended.
- Intermediate hybrids: If disease symptoms are present on the third leaf below the ear or higher on 50% of the plants examined, AND the field is in an area with a history of foliar disease problems, the previous crop was corn, and there is 35% or more surface residue, and the weather is warm and humid through July and August, a fungicide is recommended.
- Resistant hybrids: Fungicide applications generally are not recommended.

Rainy Weather & Wheat Straw Quality

By: Pierce Paul

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/23-2021/foliar-diseases-and-fungicide-decisions-corn>

Not only has rain delayed the harvest of some fields for grain, it has also delayed the baling of straw in several fields that have been harvested. In Ohio, wheat straw is sometimes just as important or even more important than grain, as it is used as bedding for livestock, and in some cases, as a feed ingredient. Delayed baling due to excessive rainfall could cause the quality of the straw to deteriorate as a result of mold growth. To fungi (molds), wheat straw is nothing more than dead plant tissue ready to be colonized. Under warm, wet conditions, saprophytic fungi (molds that feed of dead plant materials) readily colonize wheat stubble, resulting in a dark moldy cast being formed. This problem is particularly severe in lodged fields.

Some of the molds growing on the wet straw in the field, including the fungus that causes head scab (*Fusarium graminearum*), also produce mycotoxins such as vomitoxin. This could be a concern when using straw for bedding or as a feed ingredient. In general, vomitoxin levels are much higher in straw than they are in the grain, and even when the straw is used as bedding, a small portion of it is consumed. For instance, depending on the production system, pigs may obtain up to 12% of their total feed intake from straw. Pigs are particularly sensitive to vomitoxin – it causes vomiting (hence the name), feed refusal, and low weight gain. A good way to tell if the straw is colonized by the scab fungus is to look at the color of the mold growing on it – a pinkish-white mold would be a good indication that the straw could be contaminated with vomitoxin.



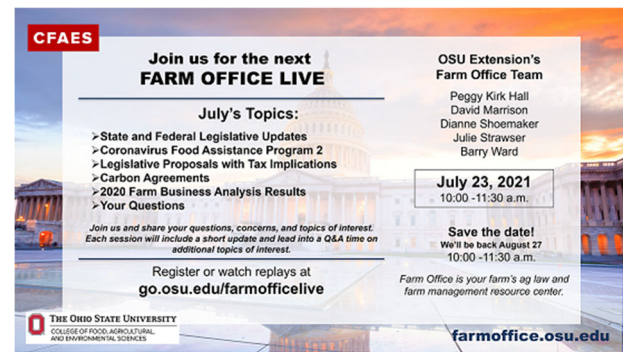
Vomitoxin contamination of straw tends to be highest when the straw is baled from fields with high levels of head scab. In addition, straw from fields that were planted with head scab resistant varieties usually contain less vomitoxin than straw from fields planted with susceptible varieties. Thankfully, head scab levels were very low in most fields across the state this year, as a result, initial vomitoxin levels in the straw may be low. However, straw from scab-free fields can still be colonized by the fungus and contaminated with vomitoxin, especially if it goes through repeated wetting and drying cycles before being baled. This would be even more of a problem for those fields that have not yet been harvested, as both the grain and the straw could be

contaminated with vomitoxin. Moldy straw could also contain other mycotoxins that are harmful to livestock. So, in addition to examining the straw for mold growth (pinkish color), get a sample tested for mycotoxins before using it for bedding or feed.

Farm Office Live is Back

Source: <https://farmoffice.osu.edu/news/farm-office-live-back-1>

"Farm Office Live" returns virtually this summer as an opportunity for you to get the latest outlook and updates on ag law, farm management, farm business analysis, and other related issues from faculty and educators with the College of Food, Agriculture and Environmental Sciences at The Ohio State University. Attend "Farm Office Live" online on July 23, 2021, at 10 AM (EST). To register, please visit <https://go.osu.edu/farmofficelive>



What is That Weed in My Pasture of Hay—Is it Poisonous?

By: L. Tony Nye, Clinton County Extension ANR Educator

Source: <https://u.osu.edu/sheep/2021/07/20/how-to-detect-poisonous-weeds-in-your-pasture/>

On many livestock operations, pastures are a very important part of the production process. Every year I get questions regarding weeds that have been found in and around pastures. The common questions are "What kind of weed is this?" and "Is this weed poisonous to my livestock?"

Several plants that were not intended to be in the pasture and hay fields find their way. Some of these plants are potentially toxic to livestock and are still toxic after being baled into hay. The toxic compounds in plants are usually a defense mechanism against predation and have a distinct, unpleasant odor or a bitter taste and are not preferred by grazing livestock. Consumption of these unpalatable plants will increase under some circumstances, primarily if other forage is not available due to over grazing or droughty conditions.

Recognition and Management- Recognition of poisonous plants and proper management of animals and pastures will help to minimize the potential for poisoning. Understanding the dangers and various management strategies to control toxic plants will also reduce the risk to your livestock. When an animal goes off feed, loses weight or appears unhealthy, poisonous plants may be the cause. Poisonous plants contain toxic compounds which can injure animals. Some contain compounds that can kill, even in small doses. Others contain substances which cause a reduction in performance, such as weight loss, weakness, rapid pulse and unthriftiness.

Poisonous plants should be given consideration as the potential cause, especially if the following situations exist.

1. Forage supply in a pasture is sparse due to overgrazing, drought or poor early season growth.
2. Animals have recently been moved into a new pasture.
3. Animals have been released into a new pasture when hungry.
4. Herbicides have been used to control weeds.
5. Pasture has recently been fertilized with nitrogen.
6. A new forage source has been fed.

Most poisonings occur in the early spring or during a drought when feed is short. Plants that an animal normally would not touch, become a potential source of food and a potential source for poisoning, just because the animal is hungry and in search of food.

Grazing management is a critical component to maintaining pastures free of poisonous weeds. Avoiding overgrazing will help maintain an abundance of desirable forage plants that are able to compete with weeds and reduce the risk of livestock being forced to eat poisonous plants because no other forage options are available. Grazing pressure should be reduced during dry periods as drought can increase consumption of

poisonous plants if there is a decrease of other forage.

Not only in the field but also around the field is important to manage for dangerous plants as some toxic plants, trees and shrubs can hang over fences. A couple of examples of trees to be concerned with outside the fence may be the black cherry or locust tree.

Poisonous weeds can also become more palatable after herbicide application. Understanding herbicides and using proper care when applying herbicides to minimize drift and over spraying. Read the label and follow all grazing restrictions. If poisonous plants are found in the pasture prior to herbicide treatment it is best to leave livestock out until plants have died.

Weed Control- The best way to protect livestock from toxic weeds is to plan for and implement a weed control program. Weed control can be a combination of cultural, chemical, physical and biological management. Two most common methods of control include mowing and herbicide use. Although mowing can help reduce the likelihood of seed development and dispersal of weeds, chemical control may still be needed to eliminate particularly harmful weed populations.

As a livestock producer, it is important to understand plant growth-stages that can influence the palatability and toxicity of certain plants. Remember, climate and time of year can also influence palatability and toxicity. Some plants may accumulate nitrates and can increase in toxicity after rainfall or on cool, cloudy mornings and evenings. Some plants become more palatable, while remaining toxic, after a frost. Many toxic plants have specific growth stages or plant parts that are most toxic. Understanding the conditions under which plants are most harmful and avoiding grazing pastures when plants are most toxic will greatly reduce the chances of livestock being harmed.

Toxic Plants- There are many plants that are potentially toxic to livestock. Following are some examples:

- Plants that can cause nitrate poisoning include redwood pigweed, lambsquarter, dock, knapweed, and common mallow. Growing crops used for forages such as sorghum-sudangrass and corn can also cause nitrate poisoning.
- Plants that can cause cyanide poisoning include hemp dogbane, water hemlock, yellow star thistle, poison hemlock, larkspur, and wild carrot. These plants contain cyanogenic glycosides that are converted to hydrogen cyanide or prussic acid when the plant cells are damaged. Chronic poisoning over time causes loss of nerve function while acute poisoning causes death.
- Plants causing liver disease and sunlight sensitivity include bracken fern, horsetail, scouring rush, tansy mustard, St. John's wort, and cocklebur. Plants causing liver disease and sensitivity to sunlight are often grouped together, as photosensitivity is often a secondary symptom of liver disease caused by these poisonous plants.
- Plants that can cause organ failure include groundsels, comfrey, and tansy ragwort. These plants contain pyrrolizidine alkaloids which are the most common cause of liver damage but also can cause kidney damage, heart failure, cancer, and photosensitization.
- Plants that affect the cardiovascular health of livestock include milkweeds, foxglove, and nightshades. These plants contain cardiac glycosides, and they are the most common toxin affecting cardiovascular health. Generally, all parts of the plant are highly toxic and lethal if eaten in small quantities.
- Plants that can cause irritation to animals include horseweed, buttercup, and hairy vetch. Plants in this group contain compounds that may irritate an animal's digestive tract, mouth or skin if consumed.
- Trees of concern that can be toxic to livestock include yew, oleander (also known as Russian Olive), red maple, black cherry trees and relatives, black walnut, black locust, horse chestnut, buckeyes, oak trees, and acorns.

There are many plants that can have poisonous characteristics such as jimsonweed and common pokeweed, both commonly found in Ohio. Many poisonous weeds are not palatable and are avoided unless no other forage is available.

The best defense is to familiarize yourself with poisonous plants in your area, and to rid your pastures of

them. Also, make sure that your livestock have adequate food at all times so that they won't eat marginal plants out of hunger or boredom.

Cow Day of Summer

Maurice L. Eastridge, Professor and Extension Dairy Specialist- Department of Animal Sciences

We are in the midst of the period of the year often referred to as the “dog days of summer”. This period is characterized by high heat and humidity, along with the associated thunderstorms. Although this time frame has historically been associated with Hellenistic astrology related to the heliacal rising of the star system Sirius, we just associate it with the hottest and most sultry days of summer, typically experienced in July. For the US, the official days of summer are defined as June 20 through September 21. Even though we are less of a third way through summer, some are thinking that summer is about over because they associate it with vacation being over because July 4 has passed and with schools being back in session within the next month. Yet, we are in the midst of the intensity of summer and the climatical characteristics of summer will be with us for several more weeks. Historically, it has become proverbial among farmers that a dry growing season through the dog days is preferable to the trouble of a wet one:

*Dog days bright and clear
Indicate a good year;
But when accompanied by rain,
We hope for better times in vain.*

This quote is attributed to being written in 1883 by Henry Dunwoody who worked for the Army Weather Bureau.

When “dog days” arrive, it a good time to reflect on management aspects on the dairy farm to deal with some possible immediate needs and some short-term needs during the next several weeks and months. Three aspects will be the focus here:

Keeping Cows Comfortable. We are always encouraged to prepare for the comfort of our cows before summer starts, but now is a good time to review how the cows are handling the heat and humidity. As “dog days” arrived, did milk production take a hit? Has there been an up-tick in mastitis cases? Have you been experiencing more problems with the health and production of fresh cows? Have conceptions rates dropped? Observe the cows for comfort and feed intake. You still have time to make some changes in heat stress mitigation with ventilation and cooling in the housing and holding pens and providing a more comfortable lying surface to pay huge dividends.

Assess Forage Needs. By now, the small grain forage has been harvested and hopefully you have harvested at least 2 cuttings of your perennial forages. How were the yields in contributing to your yearly forage needs? If it appears that you may be short in forage supply, you should consider planting some summer annuals (see article at: https://dairy.osu.edu/sites/dairy/files/imce/DIBS/DIBS31-16_Short_Season_Forges_to_Fill_Supply_Gaps_for_Dairy_Farms.pdf).

You also may need to plan on planting some small grains or establish new alfalfa stands in August. Also, look around the neighborhood for some opportunities to purchase standing corn for harvesting as additional silage. If you need straw for bedding and including in rations, NOW is the time to purchase it. Straw has already been harvested in many areas of the State, but some of the northern areas are yet to harvest.

Prepare for Corn Silage Harvest. In some areas of the State, corn will begin being harvested for silage within the next month. Make sure you have all of the supplies you need, including inoculants and other additives and plastics, and that all equipment is well maintained. Check the storage structures for any repair needed. Now is the time to plan on how you are going to transition from the 2020 crop in storage to the 2021 crop. If possible, it is best to permit the silage to ferment for 2 to 4 weeks before beginning to feed it. This approach will reduce the risk of a drop in milk production during the forage transition.

So as you reflect on the misery of “dog days”, as dairy farmers this translates to “cow days” in that we need to be assessing the heat stress on our cows and the forage supply for the next 12 months. These are really critical days that we need to be focusing on the lactating and dry cows. The heat stress can have major impacts on the milk yield in the current and next lactation relative to heat stress in dry cows. The heat stress and nutritional status of cows at present can have long term impacts on reproductive efficiency of the herd and the farm’s profitability. So as you sip on the glass of iced tea or lemonade, you are encouraged to reflect on how you can best manage through these “cow days of summer”.

The Ag Law Harvest

By: Jeffrey K. Lewis, Attorney and Research Specialist, Agricultural & Resource Law Friday, July 16th, 2021

Source: <https://farmoffice.osu.edu/blog/fri-07162021-432pm/ag-law-harvest>

Did you know that Giant Panda cubs can be as small as a stick of butter? A panda mother is approximately 900 times bigger than her newborn cub, which can weigh less than 5 ounces. This is like an 8-pound human baby having a mother that weighed 7,200 pounds – this size difference may explain why so many panda cubs die from accidentally being crushed by their mothers. However, not everything is doom and gloom for the Giant Panda. [Chinese officials have officially downgraded](#) pandas from “endangered” to “vulnerable.” Although the International Union for Conservation of Nature re-labelled, the Panda as “vulnerable” in 2016, China wanted to make sure that the population of its national treasure continued to grow before downgrading the panda’s classification.



Although it seems as though pandas are thriving thanks to conservation efforts in China, not all animal species in China are so lucky. This week’s Ag Law Harvest takes a trip around the world to bring you domestic and international agricultural and resource issues. We take a look at court decisions, Congress’ latest actions, China’s struggle with African Swine Fever, and President Biden’s latest executive order.

Iowa Supreme Court Dismisses Raccoon River Lawsuit. Environmental organizations (“Plaintiffs”) filed a lawsuit against the state of Iowa and its agencies (“Defendants”) asking the court to compel Defendants to adopt legislation that would require Iowa farmers to implement practices that would help reduce the levels of nitrogen and phosphorus in Raccoon River. The Plaintiffs argued that Defendants violated their duty under the Public Trust Doctrine (“PTD”), which is a legal doctrine that requires states to hold certain natural resources in trust for the benefit of the state’s citizens. Defendants argued that Plaintiffs lacked standing to bring the lawsuit. The [Iowa Supreme Court agreed](#) with Defendants and found that a ruling in Plaintiffs’ favor would not necessarily remediate Plaintiffs’ alleged injuries, and therefore the Plaintiffs lacked standing to bring the lawsuit. The Iowa Supreme Court also found that Plaintiffs’ issue was a nonjusticiable political question. The political question doctrine is a principle that helps prevent upsetting the balance of power between the branches of government. Under the doctrine, courts will not decide certain issues because they are better suited to be decided by another branch of government. In this case, the court reasoned that Plaintiffs’ issue

was better suited to be resolved through the legislative branch of government, not the judicial branch. The Iowa Supreme Court decision is significant because, as it stands, agricultural producers in the Raccoon River Watershed will not be required to adopt any new practices but the decision leaves it up to Iowa's legislature to determine whether farmers should be required to adopt new practices under the PTD to help reduce nitrogen and phosphorus in Raccoon River.

U.S. House of Representatives' spending bill increases focuses on climate action and environmental protection. Before the July 4th break, the United States House Appropriations Committee approved the first of its Fiscal Year 2022 ("FY22") funding bills. Included in these bills is the [agriculture funding bill](#), which will be sent to the House floor for full consideration. The bill provides \$26.55 billion in the discretionary funding of agencies and programs within the USDA, FDA, the Commodity Futures Trading Commission, and the Farm Credit Administration – an increase of \$2.851 billion from 2021. In total, the agriculture funding bill includes \$196.7 billion for both mandatory and discretionary programs. The bill focuses on: (1) rural development and infrastructure – including rural broadband; (2) food and nutrition programs to help combat hunger and food insecurity; (3) international food assistance to promote U.S. agricultural exports; (4) conservation programs to help farmers, ranchers, and other landowners protect their land; (5) ag lending; (6) climate-related work to help research and remedy the climate crisis; and (7) enforcement of environmental programs. The agriculture spending bill will, however, have to be reconciled with any spending bill produced by the U.S. Senate.

U.S. House Agriculture Committee advances rural broadband bill. The House Agriculture Committee (the "Committee") unanimously voted to advance the [Broadband Internet Connections for Rural America Act](#) (the "Act"), which would authorize \$4.5 billion in annual funding, starting in fiscal year 2022, for the [Broadband ReConnect Program](#) (the "Program") through fiscal year 2029. The existing Program is set to expire on June 30, 2022. To demonstrate Congress' commitment to expanding rural broadband, the Program was only given \$742 million in 2021. It is unclear whether the Act will be included in the infrastructure package that is currently being negotiated between Congress and the White House. Under the Act, the USDA must give the highest priority to projects that seek to provide broadband service to unserved communities that do not have any residential broadband service with speeds of at least 10/1 Mbps. The USDA will then prioritize communities with less than 10,000 permanent residents and areas with a high percentage of low-income families.

Small hog farmers in China no longer required to seek environmental approval. China is the world's largest pork producer and over the past few years, its hog herds have been decimated. A deadly African Swine Fever ("ASF") has wiped out about half of China's hog herds, especially affecting small farmers. [According to Reuters](#), China relies heavily on small farmers for its pork output, but because of ASF, small farmers have been left with little to no product and mass amounts of debts. Further, Chinese farmers are hesitant to rebuild their herds because ASF is an ongoing risk and farmers stand to lose everything if they continue to raise diseased hogs. Addressing these concerns, China's agriculture ministry will no longer require small hog farmers to get environmental approval from the government before breeding their hogs. China hopes to reduce the costs and red tape for small farmers as China tries to incentivize small farmers to rebuild their hog herds. African Swine Fever is a highly contagious and deadly viral disease affecting both domestic and feral swine. The ASF poses no threat to human health but can decimate domestic hog populations. [Germany has recently reported](#) its first two cases of ASF in domestic hogs. Currently, ASF has not been found within the United States, and the USDA hopes to keep it that way. To learn more about ASF, visit the [USDA's Animal and Plant Health Inspection Service website](#).

President Biden signs executive order to reduce consolidation in agriculture. President Biden's recent [Executive Order on Promoting Competition in the American Economy](#) seeks to address inadequate competition within the U.S. economy that the administration believes holds back economic growth and innovation. The Order includes more than 70 initiatives by more than a dozen federal agencies to promote competition. With respect to agriculture, the Order seeks to break up agricultural markets "that have become more concentrated and less competitive." The Biden Administration believes that the markets for seeds, equipment, feed, and fertilizer are dominated by a few large companies which negatively impacts family farmers and ranchers. The Biden Administration believes that the lack of competition increases the costs of inputs for family farmers all while decreasing the revenue a family farmer receives. The Order directs the

USDA to consider issuing new rules: (1) making it easier for farmers to bring and win lawsuits under the Packers and Stockyards Act; (2) prohibiting chicken processors from exploiting and underpaying chicken farmers; (3) adopting anti-retaliation protections for farmers who speak out about a company's bad practices; and (4) defining when meat producers can promote and label their products as a "Product of the USA." The Order also requires the USDA to develop a plan to increase opportunities for small farmers to access markets and receive a fair return and encourages the Federal Trade Commission to limit when equipment companies can restrict farmers from repairing their own farm machinery. Follow [this link](#) to learn more about President Biden's recent Executive Order.

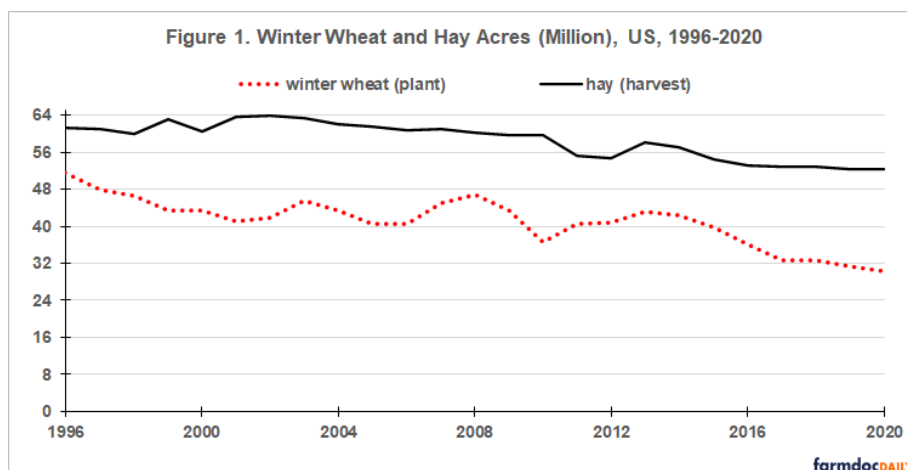
Covered Cropland vs Cover Crops: Broadening the Perspective

By: [Carl Zulauf](#), Department of Agricultural, Environmental and Development Economics
Ohio State University & [Gary Schnitkey](#), [Krista Swanson](#), [Nick Paulson](#) and [Joe Janzen](#)
Department of Agricultural and Consumer Economics- University of Illinois

Source: <https://farmdocdaily.illinois.edu/2021/01/covered-cropland-vs-cover-crops-broadening-the-perspective.html>

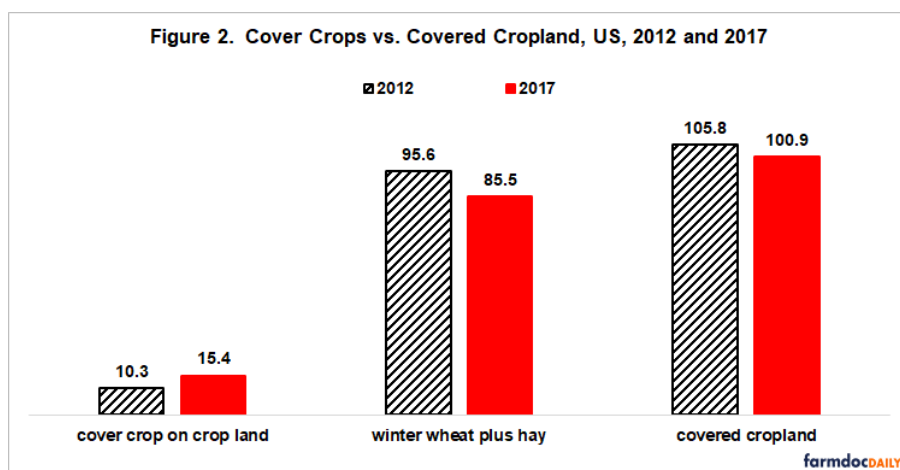
Cover crops have environmental benefits, with many resulting from cover crops that over-winter, thereby absorbing nitrates in the early spring and building organic matter in soils over time. Because they over-winter, winter wheat and hay have many attributes ascribed to cover crops. Even though cover crop acres have increased, the increase has been more than offset by declines in wheat and hay acres, implying a step backward, not forward.

Wheat and Hay Acres: The 1996 farm bill eliminated annual set asides. With a few exceptions, farms were allowed to plant whatever was desired, most likely resulting in the rotation with the highest expected return. Since 1996, acres planted to winter wheat have declined by -41% (-21.0 million) while acres of all hay harvested declined by -14% (-8.8 million) (see Figure 1).



Cover Crops vs. Covered

Cropland: According to the Census of Agriculture, 5 million more acres of cover crops were planted in 2017 than 2012 (see Figure 2 and Data Notes 2 and 3). This 5 million acre increase in cover crops was more than offset by a 10 million acre decline in wheat and hay acres, resulting in a 5 million acre decline in covered cropland. The decline in covered cropland is likely to be even larger. An unharvested small grain planted as a cover crop, such as wheat, is included in acres planted to the small grain. Acres of other fall-seeded crops, such as winter oats and barley, may have also declined.



Concluding Observations

Winter wheat and hay acres have many attributes portrayed as desirable in cover crops. Between 2012 and 2017, acres of winter wheat and hay declined more than acres of cover crops increased. In net, covered cropland acres declined by 5 million and thus took a step backward.

Unlike cover crops, winter wheat and hay generate environmental benefits while earning immediate economic returns. A winter wheat – soybean double crop rotation may generate environmental benefits while enhancing economic returns per acre. This observation led to a policy proposal to change the goal of US public research policy from enhancing yield to “growing 2 commercial crops per acre where 1 grew before” (see [October 28, 2020](#) farmdoc daily article). Seeking to cover more cropland more often with commercial crops potentially offers a rare win-win public policy by increasing US agricultural output while enhancing environmental quality.

The proposal raises important questions, including:

1. What is the optimal rotation of crops in terms of economic returns and environmental benefits, including nutrient loading? For example, are environmental benefits and economic returns greater from planting 2 commercial crops per acre in a year or from planting 1 longer-season commercial crop plus an overwintering cover crop?
2. What differential geographic impacts, if any, result from multiple commercial crops per acre vs. a commercial – cover crop rotation vs. current crop rotations?

Data Notes

- Principal crops are barley, canola, chickpeas, corn, cotton, dry edible beans, hay, oats, peanuts, potatoes, proso millet, rice, rye, sorghum, soybeans, sugar beets, sugarcane, sunflower, tobacco, and wheat. Planted acres include double cropped acres and unharvested small grains planted as cover crops. Harvested acres of hay, sugarcane, and tobacco are used as planted acres.
- The 2017 Census of Agriculture asked: “During 2017, considering the cropland acres on this operation, how many acres were planted to a cover crop? (Cover crops are planted primarily for managing soil fertility, soil quality, and controlling weeds, pests, and diseases.) Exclude CRP.” (Appendix B, page B-30). A cover crop could be the only crop or planted after a harvested crop.
- For more discussion of the cover crop data obtained by the Census of Agriculture, see the farmdoc daily article of [July 24, 2019](#).

References and Data Sources

- US Department of Agriculture, National Agricultural Statistics Service. April 2019. 2017 Census of Agriculture: United States Summary and State Data. Volume 1, Geographic Area Series, Part 51. AC-17-A-51 www.agcensus.usda.gov
- US Department of Agriculture, National Agricultural Statistics Service. 2020. QuickStats. December. Available online: <http://quickstats.nass.usda.gov/>
- Zulauf, C. and B. Brown. “Cover Crops, 2017 US Census of Agriculture.” farmdoc daily (9):135, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, July 24, 2019.
- Zulauf, C., J. Coppess, N. Paulson, G. Schnitkey, K. Swanson and J. Janzen. “Reimagining the Cornerstone of Agricultural Research.” farmdoc daily (10):190, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, October 28, 2020.

BQA Re-certification Sessions Planned

BQA Re-certification Sessions Planned

The Coshocton County Extension office will be offering a series of **Beef Quality Assurance (BQA)** re-certification meetings throughout the remainder of this year as a total of 179 producers will need to obtain re-certification before the end of 2021.

To help producers obtain their certification, we have scheduled a series of re-certification sessions for the remainder of the year. These sessions will be held in Room 145 at the Coshocton County Services Building located at 724 South 7th Street in Coshocton County. Producers can choose the session which best fits their schedule. Sessions will be held on:

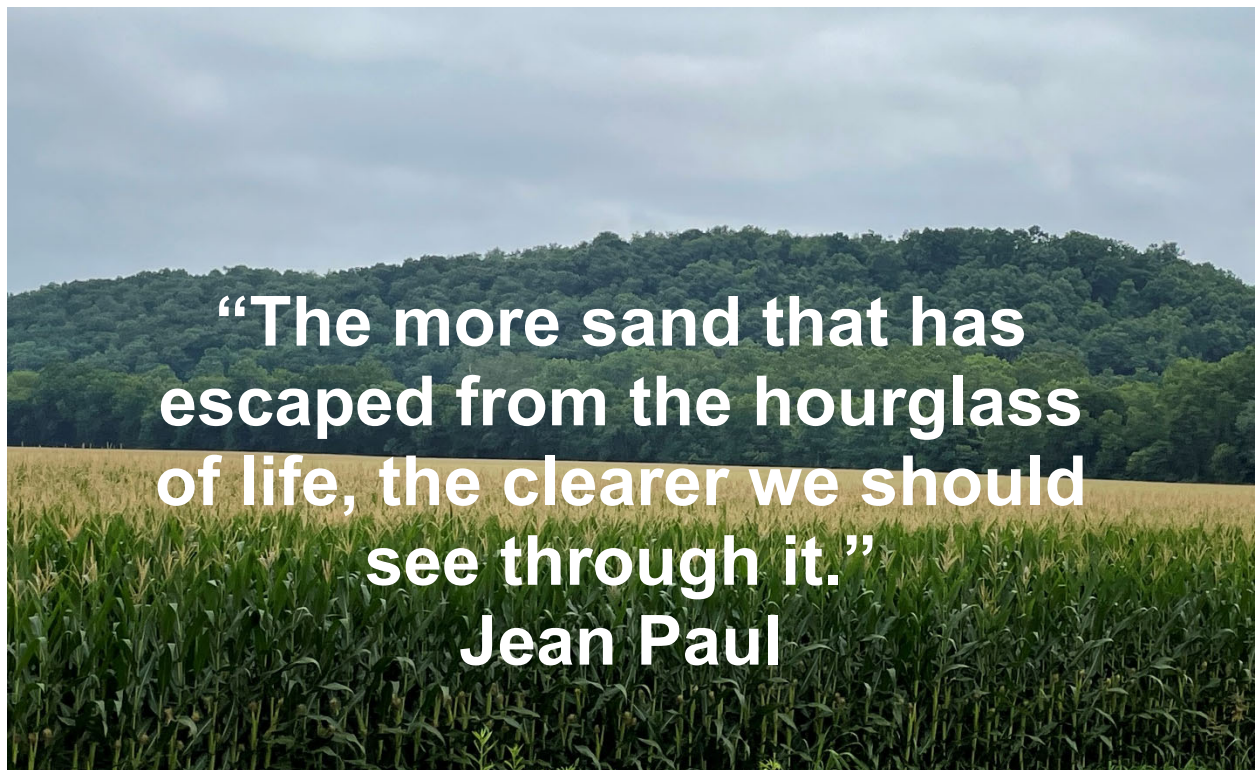


- Monday, August 9 (7:00 to 8:30 p.m.)
- Monday, September 13 (7:00 to 8:30 p.m.)
- Monday, October 11 (7:00 to 8:30 p.m.)
- Wednesday, November 3 (7:00 to 8:30 p.m.)
- Wednesday, December 1 (7:00 to 8:30 p.m.)
- Tuesday, December 14 (7:00 to 8:30 p.m.)

Pre-registration is required for each session as space is limited. There is no fee to attend. Call 740-622-2265 to pre-register. These sessions also qualify for anyone who is seeking a first time certification. A program flyer is also attached to this newsletter.

Other Ways to Re-certify:

- Online certification and recertification is also available and can be completed anytime at <https://www.bqa.org/beef-quality-assurance-certification/online-certifications>.
- Producers can also attend sessions hosted by the Tuscarawas County Extension office at the Sugarcreek Stockyards on July 21 (1 p.m.), July 29 (7 p.m.), August 10 (1 p.m.) or August 25 (7 p.m.). Pre-registration is requested by calling 330-339-2337 or by emailing Chris Zoller at Zoller.1@osu.edu
- Producers can attend a session at the Muskingum Livestock Auction in Zanesville on July 27 (7 p.m.) hosted by the Muskingum County Extension office. More information can be obtained by contacting Clifton Martin at martin.2422@osu.edu or by calling 740-454-0144.





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OHIO STATE UNIVERSITY EXTENSION

BEEF QUALITY ASSURANCE

Re-certification Trainings for Livestock Producers

Coshocton County will be hosting a series of Beef Quality Assurance re-certification programs to allow beef and dairy producers to re-certify their beef quality assurance. Pre-registration is required for each session as space is limited.

Sessions Will Be Held:

July 12, August 9, September 13, October 11, November 3, December 1 & 14
7:00 to 8:30 p.m.

Coshocton County Services Building
724 South 7th Street - Room 145, Coshocton, OH 43812
Seating is limited, so please RSVP
Register by calling: 740-622-2265

Other Sessions are being offered in neighboring counties or can be completed on-line anytime at bqa.org.



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COSHOCTON COUNTY EXTENSION

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OSU EXTENSION – TUSCARAWAS COUNTY

Beef Quality Assurance (BQA) Recertification

Beef and dairy producers who have a BQA certification that expires in 2021 can attend one of the following sessions to satisfy recertification requirements.

- July 21 at 1pm
- July 29 at 7pm
- August 10 at 1pm
- August 25 at 7pm

Location:
Sugarcreek Stockyards
Cost:
No Charge

Pre-Registration is requested in order to have materials prepared.

Please call: **330-339-2337**

Chris Zoller, Associate Professor, Extension Educator, Agriculture & Natural Resources
OSU Extension, Tuscarawas County 419 16th St SW, New Philadelphia, OH 44663
Email: zoller.1@osu.edu Office: 330-339-2337 Direct: 330-365-8159

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