

### COSHOCTON COUNTY AGRICULTURE & NATURAL RESOURCES



#### April 17, 2019 Issue

Needs Assessment  
Ag Mailing List Sign up  
BQA Session Slated  
Time for Defensive Driving  
Mud Reduces Beef Performance  
Grass Tetany  
Pasture Weed Management  
Spring Weather Rollercoaster  
Soybean Relative Maturity  
Farm Bill Summit Video  
Rules for Hiring Youth  
2018 Yield Estimates  
365 Day Approach for Transition  
Perennial Planting Workshop  
Spring Wildflower Walk  
Hydrangea Workshop

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Hello, Coshocton County!

Looks like our weather rollercoaster will continue for the remainder of April. However, it appears that May will be much better - see Jim Noel's weather article in today's issue!

Last year's wet weather followed by our wet winter has caused issues for beef producers. Poor quality hay has led to some nutritional issues on a lot of beef farms. The nutritional issues were compounded more by the stretches of sub-zero weather this winter. Poorly conditioned cows had a rougher go during spring calving. Today, I have pulled four articles which beef producers may wish to review. As John Grimes would say "Time for more defensive driving!"

We had a great Fertilizer Certification class last Tuesday and the Bug Detective Class on Thursday had our office buzzing. We have 3 great horticulture workshops on the horizon. See details on the Perennial Planting Workshop, Spring Wildflower walk and the Hydrangea Workshop in this issue.

The Census of Ag was also released last week and we continue to gain farms in Coshocton County. I will be analyzing the Census more in detail and will be sharing details with you over the next few issues. Stay tuned! In closing, I would like to wish you a very Happy Easter Week. Certainly a time to celebrate the greatest gift.

*Sincerely,*

**David Marrison**

Coshocton County OSU Extension ANR Educator



**THE OHIO STATE UNIVERSITY**  
COLLEGE OF FOOD, AGRICULTURAL,  
AND ENVIRONMENTAL SCIENCES

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## Coshocton County Ag & NR Needs Assessment- Your Input is Needed!

OSU Extension is conducting a formal Agriculture & Natural Resources Extension Educator for Coshocton. Farmers, landowners, and others involved in the agricultural industry are being asked to complete this 2-page survey. This survey will be used to help develop the framework of future Ag Extension programming here in Coshocton County. **Would you consider completing this survey?** (if you have already, thanks—no need to respond again) It should only take a few minutes of your time. The survey is included with this week's newsletter or an on-line version of the survey can be accessed at [go.osu.edu/coshoctonag](http://go.osu.edu/coshoctonag). **Survey respondents will also have the opportunity to register to win a donated \$100 VISA gift card by completing the survey.** Thank you and any questions about the survey can be directed to David Marrison at OSU Extension at [Marrison.2@osu.edu](mailto:Marrison.2@osu.edu) or 740-622-2265

## ANR Mailing List

The Coshocton County Extension office invites Coshocton County residents to sign up for our Coshocton County Extension Agricultural & Natural Resources Mailing List. When signing up for the mailing list, you can choose which program areas you wish to be notified about. The programs could include workshops in Agronomic Crop Production, Commercial Horticulture, Farm Management, Farm Safety, Fertilizer & Pesticide Certification and Re-Certification, Home Horticulture, Livestock Management, Local Foods, Master Gardener, Natural Resource Management, Small Farmer Education and Women in Agriculture Programs. Mail back in the enclosed form or access the form on-line at: [go.osu.edu/coshoctonmaillist](http://go.osu.edu/coshoctonmaillist)

## Coshocton County Offering Beef Quality Assurance Training- April 25

Food companies such as Tyson Foods and Wendy's, announced last year their intent beginning in 2019 to only purchase cattle which originate from producers and feed yards who are Beef Quality Assurance (BQA) certified. Therefore, many stockyards and buyers are requiring this training for beef producers who sell to them.

Ohio State University Extension, the Ohio Beef Council, the Ohio Cattlemen's Association and Ohio's cattle auction markets and collection points have been offering BQA trainings in Ohio across Ohio. OSU Extension in Coshocton County is pleased to be offering another training session on **Thursday, April 25** from 6:30 to 8:00 p.m. at the Coshocton County Services Building (Room B100) located at 724 South 7<sup>th</sup> Street in Coshocton, Ohio. There is no fee for this program but pre-registrations are requested by calling the Coshocton County Extension office at 740-622-2265.

Producers may take an in-person class or complete the training online at [bqa.org](http://bqa.org). Producers who participate in training (either on-line or in person) will receive a BQA Certification which is good for three years. More information about the Beef Quality Assurance Program can be found at <http://u.osu.edu/beefteam/bqa/>

**CFAES** OHIO STATE UNIVERSITY EXTENSION

# BEEF QUALITY ASSURANCE

*In-Person Training for Livestock Producers*

**Thursday, April 25, 2019 (6:30 – 8 p.m.)**  
 Coshocton County Services Building- Room B100  
 724 South 7<sup>th</sup> Street  
 Coshocton, OH 43812  
 Cost: Free but space is limited, so please RSVP  
 RSVP: 740-622-2265

## ***Time for Some “Defensive Driving”***

By: John F. Grimes, OSU Extension Beef Coordinator (Published April 3, 2019)

Source: <http://u.osu.edu/beef/2019/04/03/time-for-some-defensive-driving/>

The term “defensive driving” may seem like an odd choice of words to start an article about beef cattle. Stay with me on this one. When I think about defensive driving, I think about watching out for factors such as the surrounding traffic, weather conditions, time of day, driver fatigue, etc. and how they may affect your ability to travel safely from point A to point B. How does this concept relate to beef cattle production?

As we are in the midst of changing both weather and production seasons, now is the time to be analyzing your animals and the environmental conditions around them to make important management decisions that can impact your operation for the short- and long-term. Most of you are painfully aware that the beef herd has faced many challenges through the winter of 2018-2019. As we move into spring with green grass and warmer temperatures, do not get lulled into a false sense of security that any problems that we have been experiencing are going to magically disappear.

We fully realize the current situation. We have experienced months of cold, wet conditions that have resulted in excessive amounts of mud. Unless you have had a laboratory analysis of the forages fed your herd through the winter, we have to assume that forage quality of hay supplies is sub-par. Excessive moisture in the spring and early summer of 2018 simply did not allow for the timely harvest of forages to generate high quality feed. Based on my observations and conversations I have had with producers, veterinarians, and other industry representatives, the weather and feed quality has resulted in large numbers of cows in thin body condition and significant health issues in baby calves.

A large portion of this year’s spring calf crop is on the ground and the remainder will be delivered in the next 60 days. Most cows are in late gestation or the early stages of lactation. Once calving season is complete, the cows must be in body condition score 5-6 (on a 9-point scale) to achieve acceptable conception rates and deliver a healthy calf next year. All of this sounds like business as usual. I fear that the current environment and animal status will make it extremely difficult to achieve conception rates of 90% or higher.

Changing seasons does not automatically improve the situation. Much like producers, cows have grown tired of seeing marginal hay and excessive mud over the past several months. All parties are anxious to see green grass and more solid footing. Early season grass growth may be high in quality but it will be difficult for cows to consume enough nutrients as lush pasture is low in dry matter. Keep in mind that many pastures have been damaged due to animal traffic through the winter. The high moisture content of young grasses and potentially thinner stands will make it nearly impossible for typical stocking rates to meet their nutritional needs.

Producers should honestly evaluate animal body condition and current feed resources to take appropriate action to minimize long-term production issues. Maintain cows in sacrifice areas or in dry-lot situations as long as possible to avoid over-grazing early season pastures. Unless you have a supply of grass-legume mixed hay that is at least 10% crude protein and Total Digestible Nutrients (TDN) of 55% – 60%, be prepared to do some type of grain and/or protein supplementation. Do not ignore the benefits of feeding a high quality, well-balanced mineral as well.

A 1,200-pound lactating beef cow needs 3 pounds of protein and 17.6 pounds of TDN. Under good environmental conditions, she can eat 2.5 percent of her body weight as dry feed or 30 pounds. If the diet contains 10 percent protein and 58 percent TDN, the cow eats 3 pounds of protein and 17.4 pounds of TDN, almost exactly what she needs. Bigger cows will obviously require more nutrients. A 1,400-pound lactating beef cow needs 3.5 pounds of protein and 20.5 pounds of TDN.

The OSU Beef Team’s web site contains several good resources to help answer questions relating to the current situation facing Ohio’s cowherd. Go to: <https://www.youtube.com/user/OSUBeefTeam> where I encourage you to check out three excellent presentations from the 2019 Ohio Beef Cattle School. They are as follows:



\* *Nutritional requirements of the beef female for optimal performance from the last trimester through breeding season.* <https://youtu.be/W5f2ddHXrlk>

**Speaker: Dr. Steve Boyles, OSU Extension Beef Specialist, OSU Department of Animal Sciences**

\* *Impacts of nutrition on heifer development and conception rates of heifers. Impacts of nutrition on days to return to estrus and conception rates of lactating females.* <https://youtu.be/f9AsyMdZLZM>

**Speaker: Dr. Alvaro Garcia Guerra, Assistant Professor, OSU Department of Animal Sciences**

\* *Managing calf health born into stressful situations: Weak calves, importance of amount and timing of colostrum intake, colostrum replacers or supplements, suggested newborn treatments and vaccinations, etc.* <https://youtu.be/M2GhSBu0JBA>

**Speaker: Justin Kieffer, Clinical Veterinarian, Professional Practice, Assistant Professor, OSU Department of Animal Sciences**

The current situation on most Ohio beef cattle operations may not remind you of “rush hour” traffic in a big city. However, similar to that situation, a little “defensive driving” around the farm can pay big dividends in the end.

## ***Mud Reduces Beef Cattle Performance***

By: Alvaro Garcia (Published March 29, 2019)

Source: [http://www.southernlivestock.com/articles/genetics\\_and\\_performance/mud\\_reduces\\_beef\\_cattle\\_performance-13432-sls](http://www.southernlivestock.com/articles/genetics_and_performance/mud_reduces_beef_cattle_performance-13432-sls)

Every late winter and early spring beef producers usually face the same problem. Whether it is pooled water resulting from melting snow or excessive rainfall, they both lead to mud accumulation. Walking through deep mud to take care of cattle requires additional effort by the rancher. Every time we lift a foot to take another step, it seems as if the ground acts as a suction cup and does not want to let go. Beef cows slogging through the mud face a similar challenge, having to move roughly 1,200 pounds through the mud! This movement requires energy expenditure, which reduces the efficiency of feed conversion into body reserves. Cows early in spring have an additional challenge; they are likely nursing a calf, which also requires more energy.

A few years ago, University of Nebraska Lincoln researchers determined how much energy was lost depending on how deep the mud was. Since then however, other research reports considered additional factors for a more accurate prediction. Cows that lie down on cold, wet ground also lose energy through heat conduction. In this scenario, cows also have wet and matted hair coats reducing its insulation properties, and increasing their energy losses through heat convection. The extent of these losses vary depending on ambient temperatures and wind speed. This is particularly important for their young calves since they have less body mass and fat insulation and as a result, their core body temperature drops faster. There is no way to know for sure how long on a given year we will have to rely on stored feed. Since stored forage resources are finite, it makes more sense to reduce first the energy losses, than try to feed our way out of this situation. In other words, if a tank loses water through a leaking pipe do you continuously add more water or do you first fix the pipe?

## **Reducing Energy Losses**

### **CONVECTION**

There are some options in order to cope with this situation. Producers can reduce cattle energy losses by convection by using permanent or moveable windbreaks. These can be tree/shrubs shelterbelts, a metal or wood structure or even stacked round bales (two rows high). Wind shelters can reduce calving losses and speed-up cows' return to normal cycling activity. The windbreak design will depend on its intended purpose, snowdrift protection, wind, etc. They allow some air to go through which makes them more resistant to strong winds. According to research, the optimum open spacing to protect from both wind and snowdrifts is roughly between 25 and 33% of the total area covered by the windbreak. Research also suggests that a windbreak 10 feet high will protect an area of roughly 80 to 100 feet.

## CONDUCTION

There is not much to do in order to reduce energy losses by conduction except to have drier ground. The obvious solution would be to move the cows to a drier lot together and add a portable shelterbelt. Not every rancher has the means to accomplish this. However, putting together a temporary shelterbelt with round bales in a drier spot is an option to explore. If deciding to go that route the shelter should be two bales high, with the bottom bales upright and the top bales horizontal to reduce the chances of them tipping over. Another alternative is straw bedding to provide some insulation from the ground.

### Increasing Energy Supplied

When there is excessive mud cows reduce intake, which results in more wasted feed, particularly of forage. To improve their energy balance, there is a need to offer a feed of higher digestibility. According to research 4-8 inches of mud, reduces intake by 15 percent when compared to drier ground. If mud increases by an additional 50 percent, feed intake drop doubles (30%). For cow-calf pairs early in the calving season, the negative effect on intake affects the cows more, since calves are eating very little forage at the time. The performance of young calves' can also suffer at this stage, since they still rely heavily on the cow's milk as the main source of nutrients and this one drops as a result of less feed intake.

One approach to improve intake is to reduce the distance the cows travel to the feeding area. Similarly, access to relatively close, clean water improves intake. Providing access to fresh trace mineral supplements also enhances feed digestion and intake. When left on the ground, rain, snow, and pooled water washout white salt and essential minerals from mineral blocks and reduces their acceptability by cattle.

Supplemental forages for beef cows are usually high in fiber and as a result low in energy and borderline to low in protein. Examples of such are mature grass hay, ditch hay, cereal grain straws, and corn stalks. In addition, even if an analysis of the roughage in question contains borderline adequate percentages of crude protein (i.e. 10 %) and energy as TDN (i.e. 58%), remember cows do not eat "percentages" but "pounds" of nutrients. A 1,200-pound lactating beef cow needs 3 pounds of protein and 17.6 pounds of TDN. Under good environmental conditions, she can eat 2.5 percent of her body weight as dry feed or 30 pounds. If the diet contains 10 percent protein and 58 percent TDN, the cow eats 3 pounds of protein and 17.4 pounds of TDN, almost exactly what she needs.

Today's commercial beef cows can produce around 20-25 pounds of milk daily at peak lactation, with high concentration of protein and fat. Her intake under 8" of mud can decrease by 15 percent which, in this example, will be around 26 pounds of dry feed, 2.6 pounds of protein, and 15 pounds of TDN. If we do not fulfill the greater protein and energy needs of early lactation, forage fermentation drops and as a result so does energy uptake, delaying the return to normal breeding cycles. Cows fed these forages will greatly benefit from high protein cubes or tubs. There are several offered in the market some with minimums of 20, 32, and 38-40 percent protein. In this example with 8" of mud, since the cow diet is deficient in 0.4 pounds of protein ( $3 - 2.6 = 0.4$ ), it would be enough to offer 1.5 pounds of a 32 percent cube per head daily (0.48 pounds of protein supplemented). This supplementation will encourage the cow to eat more forage, better digest the fiber, increasing the TDN of the overall diet.

Muddy conditions do not just mean dirty looking beef cows. If not adequately, supplemented nutrient uptake will not meet the requirements of the cow in early lactation. Under these conditions, not only calf growth but also rebreeding are negatively impaired affecting the farm bottom line.

## 32% RANGE CUBES

### GUARANTEED ANALYSIS

Crude Protein, not less than .....	32.00%
Crude Fat, not less than .....	2.25%
Crude Fiber, not more than .....	12.00%
Calcium, not less than .....	1.10%
Calcium, not more than .....	1.30%
Phosphorus, not less than .....	1.00%
Salt, not less than .....	0.60%
Salt, not more than .....	0.80%
Potassium, not less than .....	0.90%
Vitamin A, not less than .....	20,000 I.U./lb.

**INGREDIENTS:** Plant protein products, processed grain by products, cane molasses, calcium carbonate, dicalcium phosphate, monocalcium phosphate, salt, vitamin A supplement, manganese sulfate, zinc sulfate, copper sulfate, ethylenediamine dihydriodide, cobalt sulfate, sodium selenite and selenomethionine.

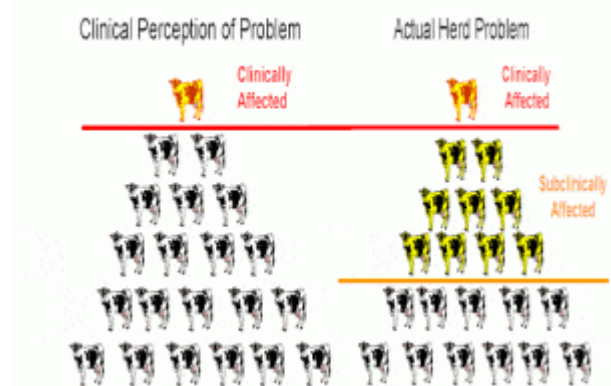
## Grass Tetany

By: Dr. J.D. Green, Extension Weed Scientist, University of Kentucky (Published February 27)

– Michelle Arnold, DVM (Ruminant Extension Veterinarian, UKVDL); Dr. Jeff Lehmkuhler, Extension Beef Cattle Specialist, University of Kentucky; Dr. Cynthia Gaskill, Veterinary Toxicologist, University of Kentucky Veterinary Diagnostic Laboratory

Source: <http://u.osu.edu/beef/2019/02/27/grass-tetany-start-preventive-measures-now/>

**What is “Grass Tetany” and when are cattle most likely to have it?** Grass tetany, also known as spring tetany, grass staggers, wheat pasture poisoning, winter tetany or lactation tetany, is a condition due to a low level of magnesium (Mg) in the blood. The disorder in adult cattle begins with muscle spasms and quickly progresses to convulsions, respiratory difficulty, and death. The amount of magnesium in the blood is completely dependent on the amount obtained from the daily diet. Deficiencies occur most often in beef cows when they are nursing a calf and grazing young, green grass in early spring. Fast-growing spring pastures are high in potassium (K+) and nitrogen (N+) and low in magnesium (Mg++) and sodium (Na+). Affected cattle often have low blood calcium concurrently. Fall calving cows may also experience grass tetany during the winter months.



**Will Feeding Plain White Salt to Cows Prevent Grass Tetany?** This claim is shared every spring and, indeed, there are producers who do not have grass tetany that only feed salt. How can that be? Simply put, for those few lucky producers, the minerals available in their soils and forages are enough to meet the needs of their cows. A number of complex factors contribute to the ability of magnesium to be absorbed through the rumen (stomach) wall. Primarily there is a “pump” mechanism that actively transports the dissolved form of Mg across the rumen wall to the bloodstream. This pump does not work when potassium in the rumen is high and sodium is low because this changes the electrical potential necessary to drive it. Adding salt to the ration will improve magnesium transport to the bloodstream only when sodium is low in the overall diet. Too much salt will increase urination and cause magnesium to be lost in urine. Salt, as with any substance, can be dangerous and even fatal at high levels.

Research has shown that the negative effects of high potassium in early spring grass cannot be overcome by simply adding large quantities of salt. However, a second, passive transport system for Mg exists which is not influenced by potassium. This transport system only works when Mg in solution in the rumen fluid is high. High magnesium mineral mixes prevent grass tetany by allowing magnesium to passively flow into the bloodstream of the cow without the need for the active transport pump.

**Has Limited Amounts of Salt in Trace Mineral Mixes led to an Overconsumption of Minerals?** Regional soil types, soil fertility and diverse forage species result in different mineral needs for grazing livestock on every farm. A blanket statement disregarding these factors is oversimplifying a very complex situation. Trace minerals such as copper, selenium, and zinc are all essential nutrients vital for proper growth, production, and immune system function. Trace mineral deficiencies are common and can predispose animals to serious and sometimes fatal disease conditions. Interactions occur between all of the various metals, minerals, and other elements in the diet, and optimal amounts of all elements are essential for proper nutrition. Trace mineral mixes are formulated to meet the needs of cattle, including the need for salt. The keys to using a free-choice product are to ensure cattle have access to mineral 100% of the time, use a palatable, quality product and make sure they are consuming it at the expected level. Remember a 50-pound bag of hi-mag mineral to be fed at 4 ounces per head per day will only last 4 days in a 50 cow herd. If the cows have calves that also eat mineral, a bag may only last 3 days.

***Does Grass Tetany Only Occur in the Spring?*** No! “Winter tetany” in beef cattle is caused by consumption of a diet low in energy and an insufficient intake of magnesium over a period of time. It may also be observed when feeding wheat or rye baleage during the winter since these forages are often high in potassium and nitrogen but low in magnesium. Affected cattle have borderline low blood magnesium concentration then clinical signs of grass tetany are triggered by a stressor such as a severe cold snap.

**Hypomagnesemia is often referred to as an “iceberg” disease because only a few clinical cases occur but there are many unobserved or subclinical cases that may become problems after a stressful event such as a weather change.**

***How Can Grass Tetany Be Prevented?*** Prevention is based on providing magnesium in the diet during times when conditions are right for grass tetany. As long as the active transport pump for magnesium is working well and driving magnesium across the rumen wall, grass tetany problems should not develop. However, when factors prevent this pump from working (such as when potassium is high in lush spring grass), the second or “backup” pathway depends on increasing levels of magnesium in the diet with a high magnesium mineral mix. A high rumen magnesium level will allow magnesium to passively flow into the bloodstream of the cow without the need for the active transport pump. **Supplementation with high magnesium mineral should begin at least 30 days prior to calving.** Cows require 20 grams of magnesium daily or 4 ounces per day of a 15% magnesium mineral mix, especially during the late winter and early spring if pregnant or lactating. Mineral feeders should not be allowed to be empty because consistent intake is important for clinical disease prevention. Do not offer additional loose salt or salt blocks at the same time! High magnesium mineral may be discontinued in late spring once the grass is more mature, the water content of the forage is decreased, and daily temperatures reach at or above 60°F.

***Does the form of magnesium used in the mineral matter?*** Absolutely. The feed industry utilizes magnesium oxide (MgO) to supply magnesium but there is tremendous variation in quality and bioavailability. UK Beef Integrated Resource Management (IRM) mineral recommendations for free choice supplements for grazing beef cattle include 15% salt and 14% magnesium in the complete mineral mix and all magnesium from magnesium oxide (no dolomitic limestone or magnesium mica). Current recommendations also include a minimum 50% of the MgO should be of the Martin Marietta AniMag prilled form. “Prilling” is a method of processing ruminant animal feed that decreases degradation by ruminal microorganisms and allows absorption further down the digestive tract. These complete mineral mixtures also supply the necessary sodium in the form of salt to aid in combatting high potassium intakes. Consumption should be monitored because cattle will not eat enough trace mineral if using poor quality products. In addition, feeding an ionophore (such as monensin or lasalocid) has been shown to improve magnesium absorption efficiency.

***Are there management changes that reduce the risk of grass tetany?*** Yes. These include: 1) Soil test and apply fertilizer based on soil test results and use no more potassium than recommended since grasses are luxury consumers of potassium; 2) Legumes are high in magnesium and will help offset the problem although their growth is often limited in late winter; 3) Feeding hay to cattle on lush pasture during susceptible periods or limit grazing to 2-3 hours per day will slow the rate of passage through the digestive tract and allow more time for absorption; 4) Graze the less susceptible or non-lactating animals (heifers, dry cows, stocker cattle) on the highest risk pastures.

In summary, increasing magnesium intake by supplementing with magnesium oxide, offering adequate salt to prevent sodium deficiency, and increasing total energy intake with good quality forage or supplemental feed are all effective tools in preventing grass tetany. These are exceptionally important when moving from winter rations to young spring grass pasture, especially in lactating cows. Grass tetany is considered a true veterinary emergency requiring prompt treatment with magnesium to prevent death.

## ***Pasture Weed Management Considerations Following a Wet Winter***

By: Dr. J.D. Green, Extension Weed Scientist, University of Kentucky

Source: <http://u.osu.edu/beef/2019/04/10/weed-management-considerations-following-a-wet-winter/>

Extensive wet weather conditions during the past fall and winter have resulted in pasture fields that have bare soil and thin vegetative cover, particularly in areas that have been used for winter feeding. Fields with thin stands of desirable pasture species are more likely to contain winter annual weeds such as chickweed, henbit, purple deadnettle, and mustard species. As these cool-season weeds die back, warm-season weeds such as common cocklebur and common ragweed will likely emerge this summer and take their place.

The first step in determining weed management options is to do a critical evaluation of pasture fields in the late winter/early spring. Scout fields looking for any developing weed problems. The primary question then becomes – does the existing stand of desirable forages appear to be healthy and potentially competitive against any emerging weed problems? If the forage stand is acceptable and weed pressure is light, then the best course of action may be to wait before making any herbicide applications this spring, but focus on other routine pasture management practices to promote the growth of desirable forage species. However, if you do see developing weed problems then you may want to take action in early spring to begin to correct these problems. In some cases, there may not be any good solutions that will correct all weed problems observed.

Highlighted below are some points to consider as you make those decisions.

After evaluating the field, you must decide whether or not to 1) overseed or drill more forages into an existing pasture to improve the stand of desirable forage grasses or 2) spray to control emerging broadleaf weeds. In most cases you will not be able to do both practices in the spring since most broadleaf herbicides have the potential to injure newly emerging forage grasses and legumes. For pasture herbicides containing only 2,4-D it is generally recommended to wait 4 to 6 weeks after spraying before reseeding forage crops.

Other broadleaf herbicide products may require a 6 month waiting period between application and seeding forage legumes and grasses (consult the label of specific herbicide products used). As a rule of thumb, if you decide to spray this spring you will need to wait until late summer or fall before seeding additional forages. If you reseed first, then it is recommended that you wait until the new seedlings have become well established before making a herbicide application this summer. It is important to also note that broadleaf type herbicides cannot be used in fields where clovers or other legumes have been seeded.

Another alternative to consider is the use of a partial pasture renovation technique to control or suppress growth of the weedy vegetation followed by interseeding more forage grasses or legumes. This assumes that the field is not needed for grazing animals until the newly seeded forages become well established. In this approach a herbicide product containing paraquat (eg. Gramoxone) can be applied to kill back winter annual weeds. Leaves of actively growing forage grasses will also be “burned back” by the paraquat application, but established plants are not likely to be killed. Desirable forage grasses and legumes which have a good root system should regrow and resume active growth within a few days after treatment. Since paraquat has no soil-residual activity, desirable forages can be interseeded into the soil immediately after herbicide application.

Paraquat is a “Restricted Use” pesticide, whereby only licensed and certified applicators who have completed training are allowed to purchase and apply it. Weedy plants such as curly dock, chicory, or Canada thistle with perennial roots or other weeds with established taproots (such as musk thistle) will likely survive this treatment. If your course of action is a “wait and see” approach, keep in mind that smaller weeds are easier to control than after they increase in size. Specific details on herbicides labeled for use on grazed pastures and hay fields and their effectiveness on target weed species can be obtained from your local county Extension office.



## Spring Weather Roller Coaster Ride

By Jim Noel (Published: April 15, 2019)

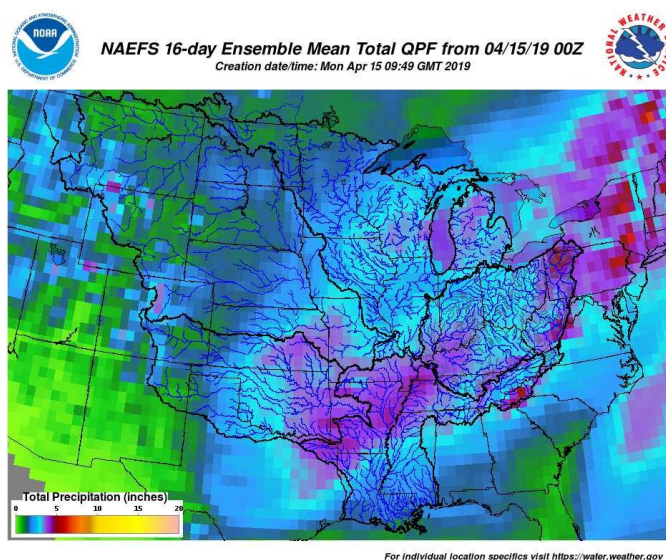
Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2019-09/spring-roller-coaster-continue>

We are in a more active weather pattern now that will last the rest of April. We expect a storm system every 3-4 days. Overall, rainfall events will be classified as moderate in nature. But with the high frequency we expect rain for the rest of April to be slightly above normal. As shown on the attached 2-week rainfall graphic, expect 1.5-3 inches of rain for the most part for the rest of April. Isolated totals to 4 inches can't be ruled out. Normal rainfall is 1.5-2.0 inches.

As for temperatures, expect typical spring big swings. Highs will range for the most part from the 50s to 70s and lows 30s to 50s. Normal highs are now mostly in the 60s and lows near 40. A few mornings of frost or marginal freeze conditions are still possible for the rest of April but no hard freezes in the mid-20s or below are expected.

One thing to note, with the storm later this week as the storm goes by there will be a dump of cold air this weekend. This could cause the light rain showers to possibly mix with a bit of wet snow flakes in some western and northern areas about Saturday. However, it will be insignificant if it did occur.

Looking into May, conditions are expected to improve for planting with temperatures slightly warmer than normal and precipitation normal or slightly below normal. Even if the rest of April is not ideal for planting it does appear a window will open up for planting in May. The latest forecasts can always be gotten at: <https://www.weather.gov/>.



## Effect of Soybean Relative Maturity on Grain

By Laura Lindsey & Wayde Looker (Published April 15, 2019)

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2019-09/effect-soybean-relative-maturity-grain-yield>

Fall 2018 was extremely wet, and as a result, small grain and cover crops throughout the state were planted late. Some farmers are interested in planting soybeans with an earlier relative maturity to facilitate timely harvest and establish a small grain or cover crop. But, what is the yield trade-off? In 2017 and 2018, we conducted trials in Wood County and Clark County, Ohio to examine the effect of soybean relative maturity on grain yield.

In Wood County, we tested sixteen soybean cultivars ranging in maturity from 0.3 to 3.8 (Figure 1). Soybean yield increased with increasing relative maturity until 2.9. At a relative maturity of 2.9, soybean yield plateaued. Although, soybean grain yield was the same for the 2.9 through 3.8 cultivar, the cultivar with the 2.9 relative maturity reached physiological maturity (R8 growth stage; 95% pods mature color) approximately seven days earlier.

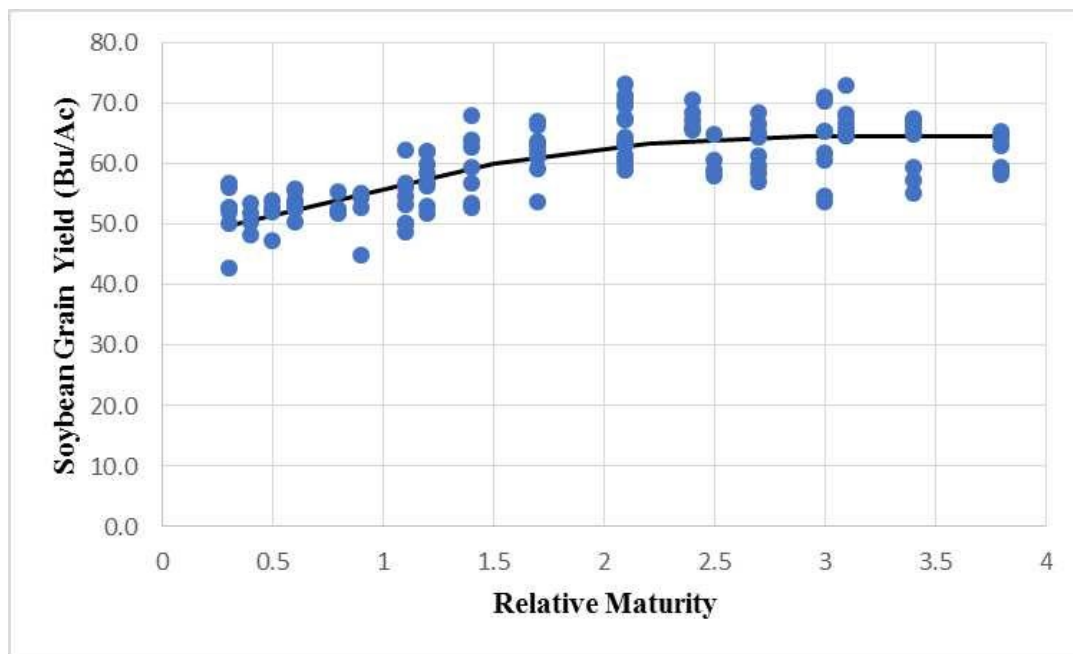


Figure 1. Effect of soybean relative maturity on grain yield in Wood County, Ohio, 2017-2018.

In Clark County, we tested sixteen soybean cultivars ranging in maturity from 1.1 to 4.6 (Figure 2). Soybean yield increased with increasing relative maturity until 3.2 (Figure 2). At a relative maturity of 3.2, soybean yield plateaued. Although, soybean grain yield was the same for the 3.2 through 4.6 cultivar, the cultivar with the 3.2 relative maturity reached physiological maturity approximately fifteen days earlier.

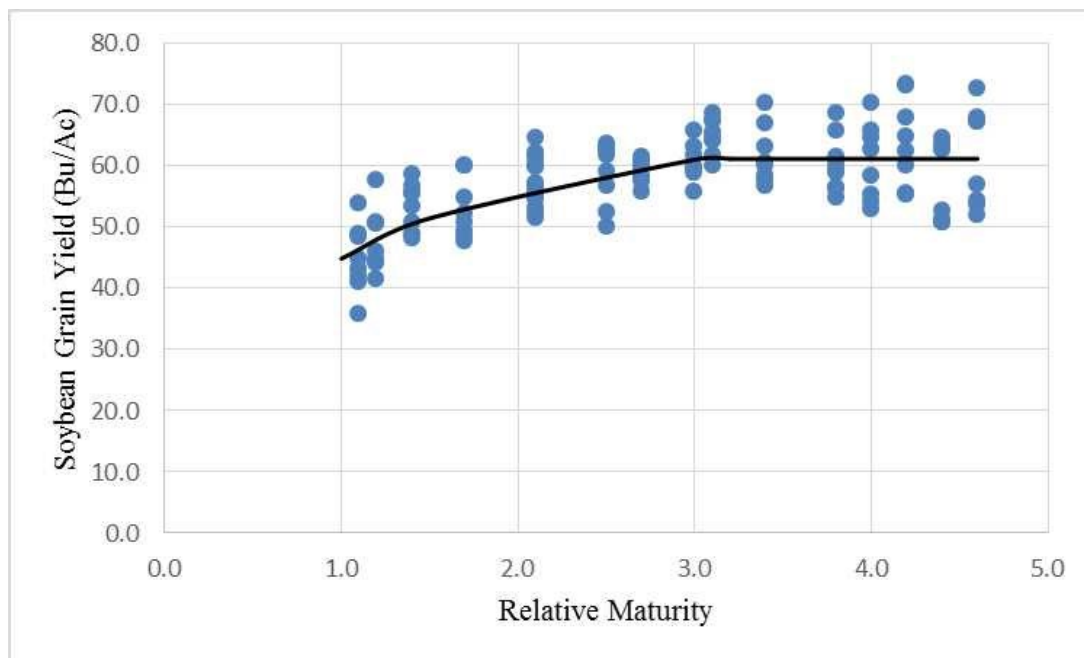


Figure 2. Effect of soybean relative maturity on grain yield in Clark County, Ohio, 2017-2018.

The Ohio Agronomy Guide states, “Relative maturity has little effect on yield for plantings made during the first three weeks of May...” Data from our research trials support this statement.

## ***Farm Bill Summit Video Available***

By: Sam Custer

Source: <https://u.osu.edu/ohioagmanager/2019/04/16/farm-bill-summit-video-available/>

The 2018 Farm Bill, passed by Congress and signed by President Trump, now awaits implementation by United States Department of Agriculture (USDA), agencies like the Farm Service Agency, Natural Resources Conservation Services, Risk Management Agency and many others. The passage of the farm bill authorizes funding for many of the federal programs producers utilize throughout the growing season. This bill is considered to be mostly evolutionary not revolutionary, but there are still changes that will be important to producers and agribusinesses.

The Ohio State University, the Purdue Center for Commercial Agriculture, the University of Kentucky and Farm Credit Mid-America hosted a Farm Bill Summit on Thursday, April 11, 2019 at the Versailles High School in Versailles, Ohio. The program featured presentations by three of the nation's top ag policy professionals: Keith Coble from Mississippi State; Jonathan Coppess from the University of Illinois; and Patrick Westhoff from the University of Missouri's Food and Agricultural Policy Research Institute.

The three keynote speakers spoke on their areas of expertise and covered the three largest agricultural titles in terms of spending within the farm bill: commodities (Patrick Westhoff), conservation (Jonathan Coppess) and crop insurance (Keith Coble).

Could not make it to the Farm Bill Summit last week? Check out the recording here:

<http://go.osu.edu/farmbillvideo>

More detailed meetings and explanation on how to use developing tools will be coming as the rules are released.

## ***Guidelines for Employing Youth on Your Farm***

By Chris Zoller

Source: <https://u.osu.edu/ohioagmanager/2019/04/15/guidelines-for-employing-youth-on-your-farm/>

Students will be wrapping up their school year in a few short weeks and you may have a young person contact you about a summer job. Young people often have an interest to work on a farm and many are excellent employees. However, as an employer, there are rules and regulations you must understand before hiring minors to do work on your farm.

The Fair Labor Standards Act (FLSA) has established certain provisions to protect the safety of minors. In 1967, the U.S. Secretary of Labor determined certain agricultural jobs as hazardous to youth less than 16 years of age. There are two exemptions to these regulations:

1. The list of hazardous agricultural occupations does not apply to youth under 16 years of age working on a farm owned by their parents or guardians; and
2. The list of hazardous agricultural occupations does not apply to youth under 16 years of age who have completed an approved Tractor and Machinery Certification course. Such course allows youth who are 14 or 15 years of age to operate tractors over 20 horsepower for hire to someone other than their parents.

For most Ohio laws, anyone under 18 years of age is considered a minor and the Ohio Revised Code (ORC) prohibits minors from working in hazardous occupations. There are certain sections of the ORC that do not apply to minors, including obtaining an age and school certificate (unless you employ children of migrant workers), keeping a list of minor employees, and paying the minimum wage.

Agricultural occupations considered hazardous to youth under 16 years of age include:

- Operating a tractor of more than 20 PTO horsepower, or connecting or disconnecting implements from such tractor;
- Operating a combine, corn picker, hay mower, harvester, hay baler or potato digger;
- Operating a feed grinder, grain dryer, forage blower, auger conveyor or the unloading mechanism of a non-gravity type self-unloading wagon or trailer;
- Operating a trencher, earth moving equipment, fork lift, power-driven circular, band or chain saw;
- Working in a yard, stall, or pen occupied by a bull, boar or stud horse; or sow with suckling pigs or cow with newborn calf;
- Felling, bucking, skidding, loading or unloading timber with butt diameter of greater than six inches;
- Working on a ladder at a height of more than 20 feet;
- Driving a bus, truck or automobile or riding on a tractor as a passenger;
- Working in a forage, fruit, or grain storage facility; an upright silo within two weeks after silage has been added or when a top unloading device is operating; a manure pit; or a horizontal silo when operating a tractor for packing purposes;
- Handling or applying pesticides with the words or symbols "Danger", "Poison", "Skull and Crossbones", or "Warning" on the label;
- Handling or using blasting agents;
- Transporting, transferring, or applying anhydrous ammonia

There may be restrictions to the number of hours and when a minor can perform farm work. See the table for a summary:

	<b>14-15 years old</b>	<b>16-17 years old</b>
<b>School in Session</b>	Cannot work before 7am or after 7pm. Cannot work more than 3 hours in a school day. Cannot work more than 18 hours per school week. Cannot work during school hours unless employed in a certified vocational training program.	Cannot work before 7am or 6am if not employed after 8pm the previous night. Cannot work after 11pm Sunday through Thursday. No limitations in hours per day or per week.
<b>School not in Session</b>	Cannot be employed before 7am or after 9pm. Cannot work more than 8 hours per day. Cannot work more than 40 hours per week.	No limitation on starting and ending time. No limitation in hours per day or per week.

Federal regulations require employers of youth under 16 years of age to maintain records about each employee. Minors employed by a parent or guardian are exempt from this requirement. The Ohio Revised Code exempts agricultural employers from record keeping requirements for minors. However, the Ohio Revised Code does require an agreement as to wages for work to be performed be made between the employer and minor before employment begins. The agreement should be in writing and signed by both parties.

Additional information about the employment of minors in agriculture is available from this OSU Extension Fact Sheet: <https://farmoffice.osu.edu/blog/fri-04122019-340pm/ohio-agricultural-law-blog-navigating-ohio%E2%80%99s-line-fence-law>



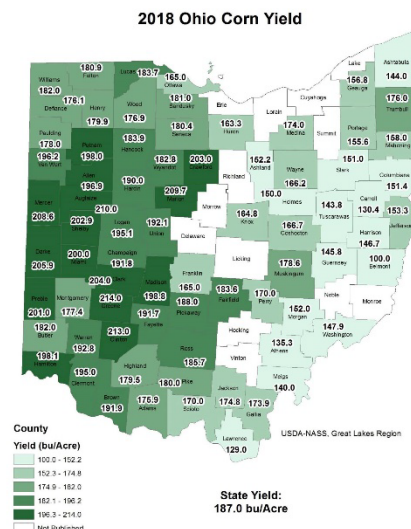
## 2018 County Yield Estimates

By: Bruce Clevenger

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2019-08/2018-county-yield-estimates-available>

The 2018 Ohio county estimates for crop yields were recently published by the USDA-National Agricultural Statistics Service. This annual report provides a look back to the previous production year and give an average of planted and harvested acres as well as the county yield in bushels per acre and a total estimated production for the county. The report additionally groups counties into nine reporting districts and provides an overall state yield estimate for corn and soybean. Ohio county estimates for the 2018 wheat crop were released back in December of 2018.

Western Ohio continues to lead the state in both corn and soybean yields and production. The counties leading the corn yield estimates were Greene, Clinton and Auglaize Counties reporting 214, 213 and 210 bushels per acre, respectively. The State corn yield estimate for Ohio is 187 bushels per acre with a total production estimate at 6.17 million bushels. The counties leading the soybean yield estimates for 2018 were Mercer, Auglaize, and Van Wert Counties reporting 67.5, 66.3 and 65.7 bushels per acre, respectively. The State soybean yield estimate for Ohio is 58.0 bushels per acre with a total production estimate at 2.88 million bushels.



County	2018 Corn Acres Harvested	2018 Corn Yield Estimate	2018 Soybean Acres Harvested	2018 Soybean Yield Estimate
Coshocton	24,000	166.7	19,100	50.9
Muskingum	17,300	178.6	15,000	54.4
Tuscarawas	16,000	143.8	14,400	52.7

The Ohio county estimates are valuable to farmers, crop insurance, economists, and USDA. Revisions to this data can be given at a later date by USDA. The complete data can be viewed online in the searchable Quick Stats or the County Estimates reports. Corn data is available from 75 Ohio counties whereas soybean data is available from 72 Ohio counties. All the current data is available online at:

[https://www.nass.usda.gov/Statistics\\_by\\_State/Ohio/](https://www.nass.usda.gov/Statistics_by_State/Ohio/) or questions can be directed to the Ohio Field Office at 8995 East Main Street, Reynoldsburg, OH 43068 or call 614-728-2100.

## A 365 Day Approach to Passing on Your Family Farm

By: David Marrison

Written for the Farm & Dairy Newspaper (Dairy Excel Column) on April 18, 2019

Hello, Northeast Ohio! During the past winter, one of the farm management workshops OSU Extension conducted across Ohio was the **“Passing on the Family Farm”** series. These workshops were a great way for families to grow together by developing a farm succession plan and to begin to have crucial conversations about the farm’s future.

Each farm family is different in regard to its goals for succession planning. Family dynamics, physical resources, financial position, and managerial styles vary from operation to operation. One of the most difficult issues is determining how to be fair to off-farm heirs without jeopardizing the future of the heirs who have remained with the family business. Other decisions include deciding who will manage the business in the future, how to distribute assets, how and when the senior generation will retire, and how the family will deal with the unexpected.

One of the biggest mistakes we make is putting off these discussions until tomorrow. After all, we are going to live forever, right? I would encourage you to make a 365 day pledge. So what is this pledge? Pledge to transfer one piece of knowledge per day to the next generation. Think of it in the context of if you were to die tomorrow, what management knowledge would your family need to know to continue to run the business at a successful level? Just imagine how better equipped your son or daughter will be a year from now if you follow this pledge.

When my dad was diagnosed with pancreatic cancer in 2010, we only had seven weeks with him before he passed away. I can tell you a lot of learning was done by our family in those seven weeks. Wouldn't it be easier to teach one thing a day over a series of years?

Your 365 day pledge could include lessons on financial record keeping, maintenance on equipment, tax and employee management, reading soil tests, making cropping and animal nutrition decisions, and much, much more. A great strategy to follow through with your 365 day challenge is to write your daily "lesson" on a calendar or in a journal. Have a plan and purpose for teaching the next generation.

Your 365 day pledge could also include teaching where all the property borders and underground electric, water lines, and drains are. I found out where the underground electric line at the farm was the hard way! Yep, we hit it with a backhoe digging up a waterline. The location of this electric line was one thing I was not able to learn from my dad before he passed. After all, we never had a problem with it, so we never discussed it.

Make sure to ask your children for their opinion on the responsibilities they believe they should or shouldn't have. What knowledge needs to be communicated for their success? Are there changes that need to be made for them to have a continuing interest in the business? You might be surprised on the good ideas that your kids might have for you. Have you taken the time to ask them and to listen? What are you waiting for?

For my successors, I am developing two notebooks. My estate notebook includes copies of my advanced directives, will, trust, life insurance policies, property deeds and copies of all my financial accounts. OSU Extension has a great guide titled "Getting Your Affairs in Order" to help you know what should be in this notebook. If you would like this PDF-writeable document, just email me at [marrison.2@osu.edu](mailto:marrison.2@osu.edu) and I would be happy to send it to you.

The second notebook that I am creating is a farm resource book. This notebook includes maps, pictures, and measurements of where all the different water, electric, drainage and septic lines are. Included in this notebook are the tile maps for the farm as well as specifics on the history of the barns, farm equipment, and water wells.

While the majority of our "Passing on the Family Farm" are held during the winter, we are scheduling a few workshops for this summer across Ohio. One of regional interest will be a two day workshop scheduled for July 19 and 26 in Wooster, Ohio. This workshop will help you get a jump start on your succession plan and learn the estate planning tools which farm families can use. For more information about this workshop, just call the Wayne County Extension office at: 330-264-8722. If you can not make this workshop but are interesting attending one of our future workshops, please email me at [marrison.2@osu.edu](mailto:marrison.2@osu.edu) and I will put your name on our list to receive information about other upcoming workshops. These workshops will also be promoted at <http://ohioagmanager.osu.edu>

To close today's column, I would like to share a quote Billy Graham who stated, "The greatest legacy one can pass on to one's children and grandchildren is not money or other material things accumulated in one's life, but rather a legacy of character and faith. Have a good and safe spring planting season!"

## ***Planting a Perennial Garden Hands-on Experience on Thursday, April 25***

Join the Coshocton County Master Gardener Volunteers for a hands-on learning event where we will be **PLANTING PERENNIALS** in the newly established Perennial Teaching Garden at Clary Gardens! All are welcome to participate on Thursday, April 25th, from 5:30-7:30 p.m.

Some of the questions which will be answered during hands-on workshop include: When is the correct time to plant your perennials? How many should you plant? How close together? How do you give them the best chance? Should they bloom the first year? Perennials? Annuals? Why? and Do you have perennials that you have questions about?

Several popular varieties will be planted on site during the workshop. Bring garden gloves and your favorite gardening trowel if you would like (but not necessary). Last year the MGVs and Clary Gardens collaborated on two 3' x 60' perennial beds that we will be teaching from during this experience. Come if you can and bring a friend - there is **NO CHARGE** to attend this event. We will meet in the upper most parking lot (top left) at Clary Gardens, but guests may park in any of the lots. No RSVP is required, but questions may be addressed by contacting Clary Gardens at: [events@clarygardens.org](mailto:events@clarygardens.org) or (740) 622-6524 or the Coshocton County OSU-Extension Office at (740) 622-2265.

## ***Spring Wildflower Walk on Saturday, April 27***

Come out for a Spring Wildflower Walk on Saturday, April 27 at Clary Gardens with the Coshocton County Master Gardener Volunteers. The walk will start at 10:00 a.m. and participants will take a guided tour of the spring-blooming wildflowers on the Clary Gardens Woodland Trail. Meet at the upper parking lot by the Tan House. Clary Gardens is located 1/4 mile west of Coshocton on SR 541, across from Sprout Garden Center.

Good walking shoes are a must and please dress for the weather. Feel free to bring your favorite wildflower ID book. The walk will be held rain or shine- barring severe weather or thunder! Cancellation will be announced on WTNS 99.3 FM. This is a free public program. For more information, call OSU Extension Office at 740-622-2265 or Clary Gardens at 740-622-6524.

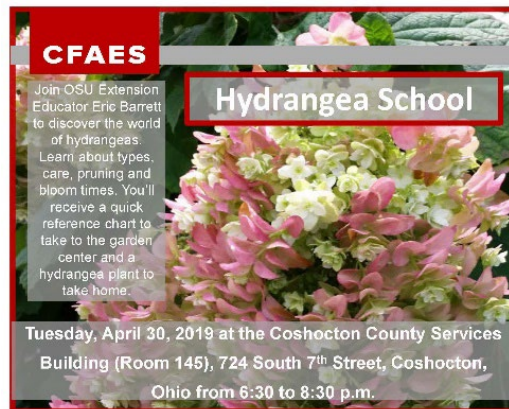


## ***Hydrangea Workshop Slated for April 30***

OSU Extension in Coshocton County is pleased to be offering a **Hydrangea School** on Tuesday, April 30, 2019 at the Coshocton County Services Building - Room 145 located at 724 South 7<sup>th</sup> Street in Coshocton, Ohio from 6:30 to 8:30 p.m.

Join OSU Extension Educator Eric Barrett to discover the world of hydrangeas. Learn about types, care, pruning and bloom times. You'll receive a quick reference chart to take to the garden center and a hydrangea plant to take home. The registration fee for this workshop is \$30 per person. Please make checks payable to OSU Extension. Mail to Coshocton Extension office, 724 South 7<sup>th</sup> Street, Room 110, Coshocton, Ohio 43812.

Registration includes handouts, light refreshments and a hydrangea plant to take home for your landscape. Due to space limitations, this program will be limited to the first 50 registrants. Call the Coshocton County Extension at 740-622-2265 for more information. A registration flyer can also be found at: <http://go.osu.edu/coshoctonevents>







**CFAES**

OHIO STATE UNIVERSITY EXTENSION

# Join the Master Gardeners on a **Wildflower Walk** **April 27 (10 a.m.)**

**Location:**

Clary Gardens  
588 West Chestnut Street  
Coshocton, OH 43812

**Cost:**

Free and open to the public!

**Contact information:**

OSU Extension: 740-622-2265  
Clary Gardens: 740-622-6524

Join the Coshocton County Master Gardeners for a Spring Wildflower Walk on Saturday, April 27 at Clary Gardens. The walk will start at 10:00 a.m. and participants will take a guided tour of the spring-blooming wildflowers on the Clary Gardens Woodland Trail. Good walking shoes are a must and please dress for the weather. Bring your favorite wildflower ID book. The walk will be held rain or shine—barring severe weather or thunder!



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**CFAES**

OHIO STATE UNIVERSITY EXTENSION

# Planting a Perennial Bed

*April 25, 2019 from 5:30 to 7:30 p.m.  
Led by Master Gardener Volunteers*

Join the Coshocton County Master Gardener Volunteers for a hands-on learning event where we will be **PLANTING PERENNIALS** in the newly established Perennial Teaching Garden at Clary Gardens. All are welcome to participate! Bring garden gloves and your favorite gardening trowel if you would like. Last year the MGVs and Clary Gardens collaborated on two 3' x 60' perennial beds that we will be teaching from during this experience.

**Location:** Clary Gardens  
588 West Chestnut Street  
Coshocton, OH 43812

**Cost:** Free and open to the public!

**Contact information:**

Clary Gardens: 740-622-6524

OSU Extension: 740-622-2265

**Have you thought  
about planting a  
perennial bed, but  
just don't know  
where to start?  
This is for you!**



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**CFAES**

Join OSU Extension Educator Eric Barrett to discover the world of hydrangeas. Learn about types, care, pruning and bloom times. You'll receive a quick reference chart to take to the garden center and a hydrangea plant to take home.

## Hydrangea School

**Tuesday, April 30, 2019 at the Coshocton County Services Building (Room 145), 724 South 7<sup>th</sup> Street, Coshocton, Ohio from 6:30 to 8:30 p.m.**

**REGISTRATION INFORMATION.** Registration includes the program, light refreshments, and handouts. Please mail completed registration form to OSU Extension, 724 South 7<sup>th</sup> Street, Room 110, Coshocton, Ohio 43812. Due to space limitations, this program will be limited to the first 50 registrants. First come, first served basis.

Name \_\_\_\_\_

Address \_\_\_\_\_

Email \_\_\_\_\_

Phone \_\_\_\_\_

**Registration includes handouts and a hydrangea plant to take home for your landscape.**

\$30 per person to register \$ \_\_\_\_\_

**Total Enclosed \$** \_\_\_\_\_

Please make checks payable to OSU Extension and mail to OSU Extension, 724 South 7<sup>th</sup> Street, Room 110, Coshocton, Ohio 43812. For more information, call 740-622-2265



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The following is an **Agricultural & Natural Resources Needs Assessment** for OSU Extension in Coshocton County. The purpose of this survey is to gain insight into how our office can better serve the needs of the agricultural industry in Coshocton County. Completion of the survey is voluntary and all responses will remain anonymous. All data will be reported in aggregate.

I am a... ☐ Full-time Farmer ☐ Part-time Farmer ☐ Hobby Farmer ☐ Ag Industry Professional ☐ Other \_\_\_\_\_

My City or Township is: \_\_\_\_\_

I grow the following crops & livestock (please list acreage and numbers of animals raised each year)

#### CROPS

- ☐ Row Crops (corn, soybeans) \_\_\_\_\_ acres  
☐ Fruits/Vegetables \_\_\_\_\_ acres  
☐ Greenhouse/Nursery \_\_\_\_\_ acres  
☐ Hay/Forage/Pasture \_\_\_\_\_ acres  
☐ Timber \_\_\_\_\_ acres  
☐ Other \_\_\_\_\_ (describe) & \_\_\_\_\_ acres  
☐ Do Not Raise Any Crops

#### LIVESTOCK

- ☐ Beef Cattle \_\_\_\_\_ #  
☐ Dairy Cattle \_\_\_\_\_ #  
☐ Equine \_\_\_\_\_ #  
☐ Poultry \_\_\_\_\_ #  
☐ Sheep/Goats \_\_\_\_\_ #  
☐ Swine \_\_\_\_\_ #  
☐ Other \_\_\_\_\_ (describe) & \_\_\_\_\_ #  
☐ Do Not Raise Any Livestock

What types of Extension programs would be of interest to you? (Check all that apply).

#### Crop Management

- ☐ Row Crop (corn, soybeans, wheat)  
☐ Fertilizer / Nutrient Mgmt  
☐ Forage / Hay / Pasture  
☐ Weed / Insect / Disease Mgmt  
☐ Not Applicable or No Interest  
☐ Other \_\_\_\_\_

#### Commercial Horticulture

- ☐ Grape Production  
☐ Greenhouse / High Tunnel  
☐ Tree Fruit Production  
☐ Small Fruit / Bramble Production  
☐ Vegetable Production  
☐ Weed / Insect / Disease Management  
☐ Not Applicable or No Interest  
☐ Other \_\_\_\_\_

#### Consumer Horticulture

- ☐ Annual Flowers  
☐ Bee Keeping / Pollinators  
☐ Bramble / Small Fruit Production  
☐ Community & School Gardens  
☐ Composting / Soil Mgmt  
☐ Greenhouse / High Tunnel  
☐ Lawns  
☐ Nuisance Wildlife  
☐ Perennial Flowers  
☐ Shrubs & Trees  
☐ Tree Fruit Production  
☐ Vegetable Gardens  
☐ Not Applicable or No Interest  
☐ Other \_\_\_\_\_

#### Farm Management

- ☐ Agritourism  
☐ Budgeting  
☐ Business Planning  
☐ Direct Food & Ag Marketing  
☐ Estate / Succession  
☐ Insurance / Risk Management  
☐ Leasing / Custom Rates  
☐ Legal Issues

#### Farm Management (continued)

- ☐ Marketing / Outlook  
☐ Record Keeping  
☐ Tax Management  
☐ Not Applicable or No Interest  
☐ Other \_\_\_\_\_

#### Livestock Management

- ☐ Beef  
☐ Dairy  
☐ Equine  
☐ Goats / Sheep  
☐ Poultry  
☐ Small Scale Livestock (backyard)  
☐ Swine  
☐ Not Applicable or No Interest  
☐ Other \_\_\_\_\_

#### Natural Resources

- ☐ Aquaculture  
☐ Oil & Gas  
☐ Pond Management  
☐ Water Quality  
☐ Wildlife Management  
☐ Woodland Management  
☐ Not Applicable or No Interest  
☐ Other \_\_\_\_\_

#### Specialized Programs

- ☐ Agronomy School  
☐ Farm Safety  
☐ Fertilizer Certification & Recertification  
☐ Landowner/ Tenant Relationship  
☐ Local Foods / Farm Markets  
☐ Master Gardener Program  
☐ New Technologies  
☐ Ohio Certified Volunteer Naturalis Program  
☐ Pesticide Certification & Recertification  
☐ Regulatory Updates  
☐ Small Farmer Education  
☐ Tractor Safety Certification  
☐ Women in Agriculture  
☐ Other \_\_\_\_\_

**When would be the best time during the day to attend a program? (Check all that apply).**

- ☐ Morning ☐ Afternoon ☐ Evening ☐ Does not matter

**What days of the week would you prefer to attend programs? (Check all that apply).**

- ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday  
☐ Friday ☐ Saturday ☐ Sunday ☐ Does not Matter

**What are the best ways to distribute information to you? (Check all that apply).**

- ☐ Direct Mailing ☐ E-Mail ☐ Facebook ☐ Instagram  
☐ Newspaper ☐ Radio ☐ SnapChat ☐ Twitter  
☐ Webpage ☐ Other \_\_\_\_\_

What do you value or enjoy about the current Coshocton County Extension **Agriculture** programs and services?

What specific programs, events, trainings and/or communications would **strengthen** OSU Extension's image and mission in our community?

Name one or more subject areas of **agriculture/natural resources** that you believe OSU Extension could better address. How could this be accomplished?

What are some **barriers** that may be keeping OSU Extension from being more effective?

Please provide any additional suggestions or comments below.

Please sign me up for the Coshocton County Ag email list \_\_\_\_\_

Yes, please enter my name into the drawing for a donated \$100 VISA Card

Name \_\_\_\_\_ Phone \_\_\_\_\_ Email \_\_\_\_\_

**Please return survey to:**

OSU Extension – Coshocton County  
724 South 7<sup>th</sup> Street, Room 110, Coshocton, Ohio 43812

**Coshocton.osu.edu**  
**740-622-2265**

**An On-Version is Available at:**  
[go.osu.edu/coshoctonag](http://go.osu.edu/coshoctonag)