

**CFAES**

OHIO STATE UNIVERSITY EXTENSION

# Morrow County SCARLET & GRAY News

Volume 17 Issue 2 • April/May 2021

## Family & Consumer Sciences: the art & science of living well in a complex world

### Living Well in a Challenging World

Today, our society is faced with unprecedented challenges: from record rates of obesity and chronic disease, to staggering consumer debt and the ever-evolving future of work, to the complexities of navigating family life. Americans are faced with more hurdles to success than ever before.

While these challenges are daunting, a solution is already well within reach: Family & Consumer Sciences (FCS).

### What is FCS?

In short, FCS is the key to success in today's complex and challenging world. FCS provides the tools, the know-how and the resilience to meet any challenge head-on. From learning the value of a dollar, knowing how to prepare healthy meals and having the confidence to seek out and grasp opportunities, a foundation in FCS is a foundation for a successful life.

From the classroom to the boardroom, and everywhere in between, FCS professionals use an evidence-based approach to help people lay the groundwork for long, healthy and successful lives.

### Our Success is Your Success

FCS professionals are the coaches helping people overcome real-world obstacles. We are mentors making common sense out of complex issues. We are preparing people today for tomorrow's challenges. We are architects of resilience and builders of success. We are FCS.



Raising Voices, Visibility & Value  
of Family and Consumer Sciences  
**#FCSsuccess**

A CAMPAIGN BROUGHT TO YOU BY AAFCO

## OSU Extension-Morrow County Family and Consumer Sciences – Feedback Survey

By Candace J. Heer,  
Extension Educator,

Family and Consumer Sciences

<https://go.osu.edu/surveymorrowextensionfcs>

This survey is open through June 30, 2021.

We are interested in obtaining your feedback about Family and Consumer Sciences (FCS) awareness and interest in programs through Morrow County Extension. An anonymous survey, at this link <https://go.osu.edu/surveymorrowextensionfcs>, will take approximately 5 minutes to complete. The link to the survey can also be found on our website at [morrow.osu.edu](http://morrow.osu.edu).

If you would like help in completing the survey, please call our office at 419-947-1070 and someone will assist you. In the survey, you will also have an opportunity to provide your email to be placed on our FCS Program Information and Invitation list and your responses will not

be linked to your information. This survey is open through June 30, 2021.

If you have questions about this survey or Family and Consumer Sciences in general, please contact me at [heer.7@osu.edu](mailto:heer.7@osu.edu) and at the OSUE-Morrow County office number 419-947-1070.

Thank you for completing this survey. Your feedback will help guide future FCS programming in Morrow County.



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

Ohio State University Extension  
5362 US Highway 42  
Suite 101  
Mt. Gilead, OH 43338

## Trash Bash 2020! Thank you 4-H volunteers!



Stats from the  
2020 Trash Bash:

**1,524.5**  
pounds

41 volunteers

**21**  
miles of road-  
ways

23 hours of time

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YouTube Channel - OSU Extension – Morrow County

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# AGRICULTURE



## What a year it has been!

By Carri J. Jagger, Agriculture & Natural Resources Extension Educator

It's been a year since the craziness of the Covid-19 pandemic started and we all had to start living and working a little bit differently. It caused a lot of frustration and heartache because we had to cancel things and learn to do our jobs differently. For me it was how can I reach my clients and help them while I'm working from home and not able to visit them? This was very frustrating for me as I enjoy going and visiting with the folks of Morrow County. I enjoy having in person classes where we can learn together from each other by sharing our experiences of successes and failures on our own properties.

During this time I created a weekly Agriculture, Horticulture and Natural Resources newsletter that is sent out via email. The newsletter contains educational information and

educational opportunities that are happening in Morrow and surrounding counties. If you would like to sign up for the weekly email please visit <https://u.osu.edu/morrowcountyag/> and subscribe to receive the weekly email of updates.

I also wanted to continue to offer educational programs to the folks of Morrow County, so I created video lessons and posted them to our YouTube page:

OSU Extension Morrow County  
<https://www.youtube.com/channel/UCiUQ7f1lLTGmdGEBaSHU2A>.

Please visit the page to see all of the educational videos we have shared over the past year. As summer nears we are hopeful that things are starting to change and we can get back to some sort of normal again. Continue to follow OSU Extension to see what exciting things we bring to 2021.

THE OHIO STATE UNIVERSITY  
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The Ohio State Phenology Calendar

[Home](#)
[Weather](#)
[Glossary](#)
[Summary](#)

Change Date & Zip: 3/21/2021 43338 Go

[View Full Calendar](#)

Silver Maple 34  
first bloom

Corneliancherry Dogwood 40  
first bloom

Silver Maple 41  
full bloom

The GDD for 3/21/2021  
Mansfield  
is: 44

Red Maple 44  
first bloom

Speckled Alder 52  
first bloom

Northern Lights Forsythia 58  
first bloom

Using this calendar

European Fruit Lecanem Scale 707

Event's GDD

Name of what's being affected by event. May be a plant, insect, or chemical. Plants appear in darker gray, insects in medium gray, and chemicals in lighter gray.

Picture of what's being affected by event if applicable; not all affected will have pictures

## Growing Degree Days (GDD)

By Amy Stone

Growing Degree Days (GDD) are a measurement of the growth and development of plants and insects during the growing season. Development does not occur at this time unless the temperature is above a minimum threshold value, or what is also referred to as the base temperature. This base temperature can vary for different organisms and is determined through research and experimentation.

The actual temperature experienced by an organism is influenced by several factors and these factors will ultimately affect that organisms growth and development. We can probably all agree that depending on the weather, an organism's temperature may be a few degrees more or less than that recorded. For example, an organism in direct sunlight will likely experience higher temperatures, than those in full shade, and of course somewhere in the middle if the organism is located in dabbled shade, or both sun and shade at some point throughout the day. What is comes down to is the actual location can result in those temperature differences.

Fertility and nutrient levels in the soil can also affect the growth rate of insects and plants. The presence of weeds and precipitation may indirectly influence development as well. Due to these factors and some other scientific considerations, a base temperature of 50 degrees Fahrenheit is considered acceptable for all plants and insects, and what is used on the Ohio website.

GDD is a tool that should be in each green industry professional's "tool-box", and can be beneficial for consumers too. In Ohio, we are very lucky to have a GDD website that was developed as a result of work that Daniel Herms, Denise Ellsworth, Ashley Kulhanek and other contributors including Ohio Master Gardener Volunteers over the years. Check out the website for more information: <https://www.oardc.ohio-state.edu/gdd/>

The website uses GDD that ultimately provides a biological calendar that 'marries' a list of plants at their first and full bloom, and insect activity. This calendar is a sequence of events that includes both plants and insects and ties to each organisms to the GDD.

It is important to say that while the actual number associated with GDD is based on weather stations across Ohio, there can be some differences based on microclimates, but the sequence of activity is always in the same order. As you use GDD, it is always recommended to get outdoors and compare what the website is telling you what should be happening, and what you are seeing. For example, the first plant on the Ohio list is first bloom of silver maple at 34 GDD. Check out the website, type in your Ohio zip code, see what the website says your GDD is, and then head out to the field and make the seasonal observations that is included in the list. Are you seeing silver maples blooming in your area?

## Beef Quality Assurance Re-Certification and Certification offered April 22 at 6 p.m.

In today's market, it is important to take advantage of any and all opportunities that make our cattle more desirable to the buyer sitting in the stands. As of now, Wendy's Restaurant, Tyson Foods and multiple auctions have announced that they will require producers to be certified in BQA in order to market their cattle or serve their product. To learn more and become certified or re-certified, join us April 22 at 6 p.m. at the OSU Extension Morrow County 2nd Floor Conference Room, 5362 US Hwy 42, Mt Gilead, OH 43338

Please RSVP to the OSU Extension Office 419-947-1070 or [Jagger.6@osu.edu](mailto:Jagger.6@osu.edu) by April 20.



## Everyone Can Garden!

### Vegetable Gardening for People with Physical & Other Limitations

5-session evening webinar series // 6-7:30PM EST // FREE // Open to Public

Do you have a physical limitation such as mobility issues, chronic pain, arthritis, and/or skin sensitivities that constrain outdoor activity? Do you want to learn how to enjoy gardening despite these challenges? In this series we will cover gardening basics: everything from planning your garden space, planting and maintaining it, preserving your harvest, and how to prep for the next year's garden, all with accommodating physical limitations in mind. Each webinar is stand-alone, attend as many or few as you want!



#### March 18<sup>th</sup>, 2021 / Planning Your Vegetable Garden

Learn the basics of garden planning and Universal Design—an approach that works for many people with physical limitations.



#### April 1<sup>st</sup>, 2021 / Planting your Garden

Prepare your soil and veggie seeds. Learn planting tricks using accessible, ability-tailored tools



#### June 1<sup>st</sup>, 2021 / Garden Maintenance

Maintain your garden's health using ability-tailored tools and strategies. Learn how to managed garden pests using Integrated Pest Management.



#### July 20<sup>th</sup>, 2021 / Canning & Preservation Basics

Learn to preserve the food you have grown in your garden while minimizing the pain associated with working in the kitchen.



#### August 31<sup>st</sup>, 2021 / Garden Clean-Up & Prep for Next Year

Reflect on what worked and what didn't—and plan & prep for the next season.

For more info and to register: <https://go.osu.edu/everyonecangarden>

If you have questions about accessibility or wish to request accommodations, please contact Alicia Baca ([baca.31@osu.edu](mailto:baca.31@osu.edu)). Typically, a two weeks' notice will allow us to provide seamless access. Please direct all other inquiries to Dr. Leo Taylor ([taylor.3408@osu.edu](mailto:taylor.3408@osu.edu)).







# AGRICULTURE



## Spring is in Sight

This has been a long, cold winter. Thank goodness spring is in sight, Saturday, March 20 marked the first day of spring. With this being said, it's time to start thinking about planning vegetable gardens. If starting a new garden, soil testing the site where the garden will go is a good idea. If it is an existing garden and the soil has never been tested, now would be a good time to think about testing it. OSU Extension - Morrow County can help with soil testing. We can come out, take the samples, and send them to Spectrum Analytic to have them analyzed. The testing costs \$15.00. The fee covers the shipping and soil analysis.

Another gardening task to be thinking about is seed starting. Growing plants from seed is a lot of fun and now is the time to be doing this. Below is a chart from The Old Farmer's Almanac that will help determine when to start seeds indoors, transplant seedlings outdoors, and when to start seeds outdoors.

Taking a look at the chart at right, notice that some of the vegetable crops we like to plant in the garden can handle cooler temperatures and those are recognized as cool season crops. Some of those include:

- Cole crops (or brassicas) which are an amazingly large and varied family, whose edible portions span from leaves to flowers to roots. This includes broccoli, cauliflower, kale, cabbage, radishes, turnips, kohlrabi, arugula, Asian greens, and mustard greens (Brussels sprouts, a brassica, are planted in the cool season but take many months to mature).
- Peas (both edible-podded and shelling) are another familiar cool-season crop.
- Lettuce is yet another group that has a huge number of varieties.
- Spinach is also included the cool season assembly.

Now that we have talked about testing the garden soil, starting seeds and cool season crops. We need to think about the frost-free date in Morrow County. According to the old farmer's almanac the frost-free date is May 10th for Morrow County. However, I caution folks of follow-



ing this date. I like to use Memorial Day as a frost-free date in central Ohio because the last several years have presented us with a frost and or freeze near Mother's Day. Mother's Day has always been a good rule of thumb for safely planting vegetables and flowers outside, but I caution folks to watch the weather and think about planting around Memorial Day, all threat of frost should be gone by then.

I know the temptation is always there to start earlier especially if we are experiencing 65 and 70 degree days. That is why it is important to follow the planting guide above. If you have raised beds or microclimates under cold frames the soil might warm up quicker allowing you to start a little earlier. Ideally cool season crops would like soil temperatures to be above 40 degrees and warm season crops would like soil temperatures to be at or above 55 degrees.

If you do jump the gun and plant before Memorial Day your crops can potentially be protected from frost with old blankets, cardboard and row covers.

Whether you are starting transplants from seed or purchasing them, watch the weather forecast to ensure your little plant babies are protected. Have a fun and successful spring.

If you have questions call the Extension office and Carri Jagger, the Agriculture and Natural Resources Educator, will be happy to help you. 419-947-1070

PLANTING DATES			
Crop	Start Seeds Indoors	Transplant Seedlings	Start Seeds Outdoors
Beans			May 17 - June 7
Beets			April 26 - May 17
Broccoli	March 29 - April 12	April 19 - May 10	
Brussel Sprouts	March 29 - April 12	April 12 - May 3	
Cabbage	March 15 - 29	April 12 - 26	
Cantaloupe	April 12 - 19	May 24 - June 14	May 24 - June 1
Carrots			April 5 - 19
Cauliflower	March 29 - April 12	April 12 - 26	
Collards	March 29 - April 12	April 12 - May 3	
Corn			May 10 - 24
Cucumbers	April 12 - 19	May 24 - June 14	May 24 - June 1
Eggplants	Feb. 28 - March 15	May 24 - June 14	
Kale	March 29 - April 12	April 12 - May 3	
Lettuce	March 29 - April 12	April 26 - May 24	
Onions			April 12 - May 3
Peas			March 29 - April 19
Peppers	Feb. 28 - March 15	May 24 - June 14	
Potatoes			May 3 - 24
Pumpkins	April 12 - 26	May 24 - June 14	May 24 - June 1
Radishes			March 15 - April 5
Spinach			March 29 - April 19
Sweet Potatoes	April 12 - 19	May 24 - June 14	May 24 - June 1
Squash	April 12 - 26	May 24 - June 14	May 24 - June 1
Swiss Chard	March 29 - April 12	April 19 - 26	May 24 - June 1
Tomatoes	March 15 - 29	May 17 - June 7	
Turnips			April 12 - May 3
Watermelons	April 12 - 19	May 24 - June 14	May 24 - June 1

## Educational Dairy Tour

**Berg Farms**  
3100 Parsons Road  
Bellville, Ohio 44813  
8.3 Miles South of Lexington  
11.3 Miles North of Chesterville

**Saturday July 10<sup>th</sup>**  
**10:00 a.m. – 2:00 p.m.**

Spend the morning and early afternoon with the Morrow County Dairy Association at a Working Dairy Farm where you will get a FREE hands on educational tour. This tour is open to the world.

Delicious Dairy treats will be provided.

**This educational tour will answer all of your questions about the dairy industry.**

**Join us to learn about feeding, care, milk testing, nutritional food values and much more.**


**Please join us to learn about how and where the dairy products you buy at the store come from.**

**Sponsored By:**  
**Morrow County Dairy Association,**  
**Smith's Foods, Farm Bureau,**  
**OSU Extension, AgCredit,**

**Please RSVP by June 25<sup>th</sup>**  
**to OSU Extension**  
**Morrow County**  
**419-947-1070**

**ATTENTION!**  
**MORROW COUNTY**  
**LOCAL**  
**PRODUCERS**

Do you live in Morrow County?  
Do you grow, raise or produce a food product to sell in Morrow County?



OSU Extension — Morrow County would like to invite you to follow this link:  
<https://go.osu.edu/morrowlocalfood>,  
scan the QR code to fill out a short survey  
or call our office 419-947-1070  
to be added to the Morrow County Local Foods List.

The list will be available online and in hard copies at OSU Extension — Morrow County and other Morrow County agencies.

This is a great way to let folks in the county know about your business.



# AGRICULTURE



## Grass Tetany Hypomagnesemia: Start Preventive Measures Now

**By Dr. Michelle Arnold, Ruminant Extension Veterinarian, University of Kentucky Veterinary Diagnostic Lab**

*A special thanks to Dr. Jeff Lehmkuhler for his contributions to this article.*

**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 resulting from a low level of magnesium (Mg) in the blood. Maintenance of blood magnesium depends on the amount obtained from the daily diet since the magnesium present in teeth and bones and is not easily mobilized in times of need. Magnesium is required for proper nerve and muscle function so low levels in the blood result in “tetanic spasms” where muscles contract uncontrollably. The disorder in an adult cow begins with separation from the herd and going off feed. The ears are often erect and twitching and the cow is alert, hyperexcitable and may be aggressive. The symptoms quickly progress to muscle spasms, convulsions, difficulty breathing, and death. Often the affected animal is found dead with evidence of thrashing and struggle on the ground around her. 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+) ions. 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 some producers, the minerals available in their soils and forages are enough to meet the nutritional needs of their cows. Regional soil types, soil fertility, diverse forage species and differing cattle requirements based on age and stage of lactation result in different mineral needs for grazing livestock on every farm. A blanket recommendation to just feed salt ignores these factors and oversimplifies 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 very common and predispose animals to serious and sometimes fatal disease conditions. Commercial trace mineral mixes are formulated to meet the needs of cattle, including their daily need for salt. Because interactions occur between all the various metals, minerals, and other elements in the diet, optimal amounts of all elements are essential for proper nutrition.

Several complex factors are in play for magnesium to be absorbed through the rumen (stomach) wall and into the blood. Primarily there is a “pump” mechanism that actively moves the dissolved “soluble” form of Mg across the rumen wall to the bloodstream. If potassium in the rumen is high and sodium is low, this setup changes the electrical potential needed to drive the pump. Research has shown that the negative effects of high potassium in early spring grass cannot be overcome by simply adding more sodium in the form of salt. In fact, 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. Fortunately, a second, “passive transport” system for Mg exists which is not influenced by potassium.

This transport system only works when soluble Mg in the rumen fluid is high and Mg will then flow into the bloodstream without having to be pumped. High magnesium mineral mixes prevent grass tetany by increasing the amount of dietary magnesium concentration in the rumen, allowing this passive movement of Mg to take place.

**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, usually over winter. It may also be observed when feeding wheat or rye baleage 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.

**How Can Grass Tetany Be Prevented?**

Prevention is based on providing magnesium in the diet during times when conditions are right for grass tetany. If the active transport pump is driving magnesium across the rumen wall, grass tetany problems should not develop. However, when factors prevent this pump from working (for example, high levels of K+ in lush spring grass), the second or “backup” pathway depends on increasing levels of magnesium in the diet. Supplementation with high magnesium mineral should begin at least 30 days prior to calving. Cows require magnesium daily or 4 ounces per day of a 12% magnesium mineral mix, especially during the late winter and early spring if pregnant or lactating. The keys to using a free-choice trace mineral 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. Mineral feeders should not be allowed to be empty because consistent intake is important for clinical disease prevention. Provide adequate access for cows and calves, for example 1 mineral feeder per 15 cow/calf pairs. Do not offer additional loose salt, salt blocks, or sources of salt 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?**

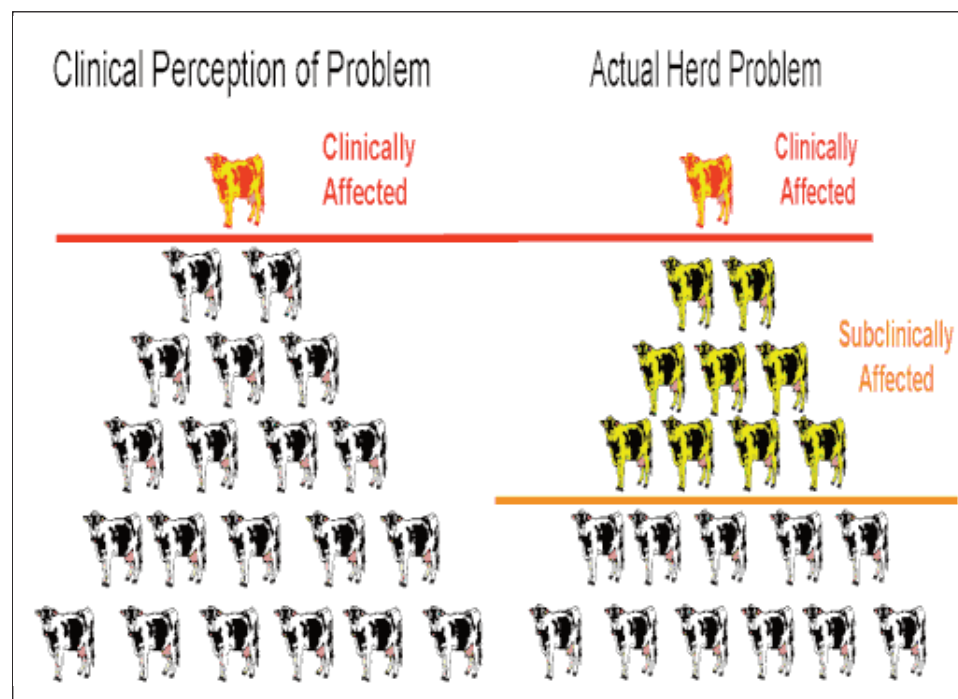
Absolutely. The feed industry utilizes magnesium oxide (MgO) to supply magnesium but there is tremendous variation in quality and bioavailability. Magnesium oxide is bitter and unpalatable to beef cattle. Recently the UK Beef IRM mineral recommendations were updated to reflect current market conditions. The more palatable form of magnesium known as “prilled MagOx” has been removed from the Beef IRM mineral guidelines because it is unavailable at the present time. The granular or powder magnesium

oxide has a greater surface area resulting in the potential for a decrease in palatability, therefore the magnesium oxide level was reduced to 12% from the previous recommendation of 14%. UK Beef Integrated Resource Management (IRM) mineral recommendations for free choice supplements for grazing beef cattle now include 15% salt and 12% magnesium in the complete mineral mix and all magnesium from magnesium oxide (no dolomitic limestone or magnesium mica). 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 or if any additional free-choice salt is available. Only put out 1-2 weeks’ worth of mineral at a time. If feeding grain to cattle, MagOx can be added to grain to ensure magnesium consumption. For example, with approximately 60% Mg in MagOx and if feeding 2 lbs grain / cow, then adding 50 lbs MagOx / ton of feed will provide about 14 g Mg to the cow.

**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 slow in late winter; 3) Offer hay to cattle on lush pasture during susceptible periods or limit grazing time to 2-3 hours per day to slow the rate of passage through the digestive tract and allow more time for magnesium absorption; 4) Graze the less susceptible or non-lactating animals (heifers, dry cows, stocker cattle) on the highest risk pastures. Be aware that the use of poultry litter as a feed supplement or fertilizer has frequently been associated with an increased incidence of grass tetany.

In summary, increasing magnesium intake by providing a free choice, high magnesium trace mineral mix and no alternative forms of salt, and meeting energy needs with good quality forage or supplemental feed are necessary to prevent development of grass tetany. Both are exceptionally important when moving from winter rations to young spring grass pasture, especially in early lactation cows. Grass tetany is considered a true veterinary emergency requiring prompt treatment with magnesium to prevent death. Response to therapy is not always good and depends largely on the length of time between onset of symptoms and treatment. Cattle that do recover take at least an hour which is the time it takes for magnesium levels to return to normal. Many of these cows will relapse and require more treatment within 12 hours. Administering oral magnesium gel once the animal has regained good swallowing reflexes, drenching with magnesium oxide or magnesium sulfate, or administering a Mg enema will reduce the rate of relapse. If grass tetany has occurred within a herd, an effort should be made to immediately increase the intake of magnesium to other herd members to prevent further losses.



*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.*





# AGRICULTURE



## Time is now to purchase the right nozzles for your spraying needs

By Erdal Ozkan

This is the time of the year you must complete shopping for nozzles because the spraying season is just around the corner. Each part of the application equipment plays a critical role in achieving maximum performance from the sprayer. Therefore, each component must be selected carefully and must perform successfully the tasks associated with it. Although nozzles are some of the least expensive components of a sprayer, they hold a high value in their ability to influence sprayer performance. They help determine the gallon per acre intended application rate. They also influence the droplet size, which plays a significant role in achieving improved penetration into crop canopy and better coverage on the target pest, both affect the efficacy we expect from pesticides applied. Wrong choice of nozzle may hurt us in several ways, but here are the three most obvious ones: We may end up with streaks of untreated areas causing non-uniform pest control; or simply complete failure or ineffective pest control which require repeat applications; and finally, we may end up losing a significant part of the pesticides applied in the form of spray drift. Sometimes, the choice of nozzle may be determined by the requirements given on the pesticide label.

Selecting the best nozzle requires careful consideration of many important factors including: sprayer operation parameters (such as application rate, spray pressure, travel speed); type of chemical sprayed (herbicides, insecticides, fungicides); mode of action of chemicals (systemic, contact); application type (broadcast, band, directed, air assisted); target crop (field crops, vegetables, vineyard, shrubs and trees, etc.); and spray drift risk. I will briefly cover some of these topics in this article. For detailed information on nozzle selection, I strongly recommend you read a new Ohio State University Extension Publication, entitled "Selecting the Best Nozzle for the Job". In this publication, you will see step-by-step guidelines for selecting the most appropriate spray nozzle for a given application situation. The publication is available online at following web site: <http://ohioline.osu.edu/factsheet/fabe-528>

### Which nozzle type is best for your situation?

When I get a question like, "what is the best nozzle I can buy?", my answer is: it depends on the job on hand. The nozzle selection is a two-step process. First, we need to determine the type of nozzle best for a given situation. Next, we need to determine the appropriate size of that nozzle that will be capable of providing the desired gallons per acre application rate under various operating conditions such as travel speed and spray pressure. Each nozzle type is designed for a specific type of target and application. For example, a nozzle designed for broadcast spraying is not good for spraying pesticides over a narrow band. While one nozzle may be best for a given situation, it may be worst choice for another. For example, we at Ohio State University

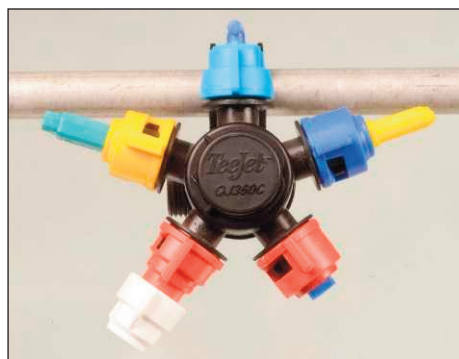
have conducted field experiments to determine which nozzles to choose for two different application situations: soybean diseases such as rust and white mold, and wheat diseases such as head scab and stem rust. We included 6-8 different nozzles in the experiments. We found out that while a twin-fan pattern nozzle was best for controlling wheat head scab, the same nozzle turned out to be the worst choice to protect soybeans against rust and white mold when the soybean canopy is tall and dense. So, before buying the nozzles and putting them on the boom, check the nozzle manufacturers' catalogs which have charts showing which nozzle type will be best for a specific job. Check the websites of nozzle manufacturers to reach their catalogs.

### Nozzle size

Once you determine the type of a nozzle you need to buy, you also must buy the right size of that nozzle which will satisfy the application rate (gallons per acre or gpa) you wish to use as you do your spraying at different travel speeds. Nozzle catalogs are filled with tables and charts showing application rates, given a nozzle's flow rate (gallons per minute or gpm) delivered at various pressures (psi) and travel speeds (mph). However, the charts are only for a limited number of travel speed and nozzle spacing situations. Most nozzle manufacturers have developed Apps for smart phones that provide you the exact nozzle flow rate required for any given set of application parameters, and identify a specific set of nozzle recommendations for the given application parameters. To find these Apps, simply visit the App Store in your smart phone or tablet and do a search under "Spray Nozzle Calculator", or some other key words related to nozzle size selection.

### Keep several types of nozzles on the boom

Remember that one specific type of nozzle will not be best for all applications. For this reason, it is best to have several types and sizes of nozzles on the boom so that you can switch to the "best" nozzle choice for a given spraying job. As shown in the pictures below, there are various types of sprayer components and setups you can buy to configure your boom so the new set up allows you to easily switch from one nozzle to another instantly.



### Keep spray drift in mind when selecting nozzles

Spray drift (movement of pesticides by wind from the application site to an off-target site) is



a serious problem for many reasons. Extensive information related to factors influencing creation of spray drift, is provided in the Ohio State University Extension publication Fabe-525 (<http://ohioline.osu.edu/factsheet/fabe-525>). After wind speed and other weather-related conditions, choice of nozzles is the second most influential factor affecting drift. Research conducted at The Ohio State University and elsewhere clearly indicate that nozzles labeled as "low-drift" significantly reduce spray drift. If drift is, or becomes a concern, it may be best to switch from a conventional nozzle to a "low-drift" version of the same type nozzle with the same flow rate. This is another good reason to have more than one type of a nozzle on the boom.

### Give special attention to choice of nozzles when applying pesticides containing 2,4-D and Dicamba

The labels of 2,4-D or Dicamba herbicides include specific requirements on which nozzle or nozzles must be used when spraying these products. The requirements also include a range of operating pressures for each one of these nozzles. These strict requirements are put on the labels to avoid off-target movement (drift) of spray droplets. Simple interpretation of these requirements is: you would be violating the pesticide label, therefore the law, if you use any other type and size of nozzle and operate these nozzles outside the pressure ranges. Remember, the label is the law! So, it is your responsibility to comply with the requirements on pesticide labels. You can reach a list of currently approved nozzles and their operating pressure ranges on labels of the several commonly used 2,4-D and Dicamba products at this web site: <https://pested.osu.edu/sites/pested/files/imce/ApprovedNozzles.pdf>

The table at this site is provided mostly for information purposes and may not be up to date. So, check the manufacturers' websites, and read the product label for the most current informa-

tion. Do not assume that you do not have to worry about checking the label because you had applied the same product in a previous year. A nozzle required for the same product last year may not be on the label this year, or the operating pressures might have been changed.

### Some final thoughts

Nozzles are typically the least costly items on a sprayer, but they play a key role in the final outcome from a spraying job: achieving maximum efficacy from the pesticide applied while reducing the off-target (drift) movement of pesticides to minimum. Pesticides work well if the rates on labels are achieved during application. This can be achieved only if the right nozzle type and the proper size of the nozzles are on the sprayer, and the sprayer is operated properly.



**Crop Observation and Recommendation Network** C.O.R.N. Newsletter is a summary of crop observations, related information, and appropriate recommendations for Ohio crop producers and industry. C.O.R.N. Newsletter is produced by the Ohio State University Extension Agronomy Team, state specialists at The Ohio State University and the Ohio Agricultural Research and Development Center (OARDC). C.O.R.N. Newsletter questions are directed to Extension and OARDC state specialists and associates at Ohio State.





# 4-H NEWS



## Maybe your 4-H spark is baking?

Try these county 4-H projects!  
1002 - Pies

1005 - Candy  
1007 - Cookies

*Find your spark!*

## READY TO FIND YOUR SPARK? JOIN 4-H TODAY!

Clubs and more information here!  
<https://go.osu.edu/howtojoinmorrow4h>  
419-947-1070



## Attention Teachers

By Amanda Staley,  
OSU Extension 4-H Educator

Want a small break from your everyday teaching? Perhaps you need a little help teaching a subject that you're just not quite confident teaching? Today is your lucky day! Call or email me with your ideas and we can work together to develop lessons plans that will be hands-on engaging activities to help our youth learn. My main focus areas are STEM and workforce preparation.

Potential programs include but we are not limited to:

### ChickQuest: A Classroom Journey Through the Life Cycle of Chickens

Designed for youth in grades 3 or 4, this program challenges youth to use science, technology, engineering, and math skills to investigate the life cycle of an embryonic chicken egg. From monitoring living eggs to observing fluffy chicks, these lively activities pique curiosity, encourage collaboration and communication, and provide young scientists with unforgettable experiences. Youth will be provided a logbook to record the data of what they are observing.

All equipment and fertilized eggs are provided. Youth will be able to observe the eggs for the entire 21 day cycle and even get to watch the eggs hatch in their classroom.



viding the least amount of disruption to the soil as possible.

### Rockets Away

Designed for youth in grades 4-8, Rockets Away is for youth to have fun with physics and to experience the general relationships between forces and a change of motion through activities with rockets. Youth will have the opportunity to build and launch a bottle rocket!

### How Germs Spread

Germs...they are everywhere! So are all germs bad? Do we need to be scared of them? How are they spread? We'll talk all about germs as the kids participate in an activity that will demonstrate how easily germs are spread by using "fake germs" on their hands. Kids find this activity fun and fascinating! Designed for youth in grades k-5.

### Weather

Designed for youth in grades K-4, the weather program touches on weather basics. What should you do when bad weather occurs? What are the different cloud types and what do they mean? Activities include making a tornado in a bottle, creating storm cloud with shaving cream, and making snow.

Other programs cover kinetic energy, computer coding, 3D Printing, the Honeybee Challenge and more! Contact Amanda Staley, [staley.35@osu.edu](mailto:staley.35@osu.edu) or 419.947.1070, if interested in bringing new programming into your classroom. All programs and the supplies needed are free within the schools of Morrow County.



### Healthy Soils

Designed for youth in grades 4-7, this activity teaches youth that healthy soils are essential for a sustainable future. Farmers have the job of ensuring that the soil they are utilizing for their crops is kept healthy. One part of this includes using no-till farming practices whenever possible. Youth will be challenged with using HexBugs to building a tractor and planter that will be able to navigate through soil while pro-

## A Reminder of 4-H Membership Eligibility

Just a reminder and clarification on membership eligibility for 4-H members.

\* Youth may join the cloverbud program (Non Competitive) when they are in kindergarten and five years old as of January 1, 2021.

Youth may begin taking 4-H projects when they are 8 years old and in the 3rd grade AND

any youth age 9 or above is eligible for projects, regardless of grade level as of January 1, 2021.

The last year of 4-H eligibility is the year in which a youth turns 19 years old (example: if you turned 19 years old on July 12, 2020 your last year in 4-H was in 2020).

OHIO STATE UNIVERSITY EXTENSION

## Career Exploration Workshop

### Construction and Automotive Trade Careers

CFAES

Take the guess work out of whether you want to work in a construction trade or automotive technology trade career! Youth spend the day doing skills used in these trade fields to see if they like them.

During this hands-on workshop, youth complete the tasks listed below (activities are subject to change).

#### Automotive Technology

Automotive Safety Inspections  
Lube, Oil and Filter Change  
Tire Dismount, Mount, Balance and Rotation  
Basic Electrical Circuit Diagnostics and Repair  
Automotive Scan Tool Operation

#### Construction Trades Academy

Basic Construction – Build a small project to take home!  
CNC Router Usage  
Heavy Equipment Demonstration - Operation & Safety  
Small Tool Safety  
Wall Framing (parts of a wall and how to construct it)

For more information and to register, go to:  
[www.go.osu.edu/careerexploration](http://www.go.osu.edu/careerexploration)

**Who** - Youth in grades 5-12

**When** - May 8, 2021

9:00 A.M. - 3:00 P.M.

**Where** - Tri-Rivers Career Center, Marion

**Cost** - \$15 Morrow & Marion County Residents  
\$35 Non-Morrow or Marion County Residents

**Registration Due** - April 30, 2021

**Questions?** Contact Amanda Staley  
[staley.35@osu.edu](mailto:staley.35@osu.edu), 419.947.1070

#### Comments from past participants:

*"Best day of my life!"*

*"It was a fun day and I learned a lot."*



Each youth goes home with a toolset to continue their learning!



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







# 4-H NEWS



## 4-H General Information

### Lindsey Gallik to be new Jr Fair Coordinator

Hello, my name is Lindsey Gallik and I am excited for the opportunity to serve as the Morrow County Jr. Fair Coordinator. Originally from Morrow County, as a youth I was an active participant in 4-H, the Northmor FFA, Jr Fair Board, and served as a Jr. Fair Board Jr. Advisor. In 2020, I had the privilege to volunteer as a Junior Fair Advisor.

After high school, I worked my way into an Industrial Sales Manager position. This position afforded me the chance to travel. Even though I really loved what I was doing, about three years ago I decided to make a change and find a more local fit. I am now an active Realtor with Haring Realty. The biggest motivation for this was our decision to start a family, and my desire to be present at home.

Lisa Duckworth is continuing on in her role of Assistant Coordinator this year and as a team, we plan to challenge our members in developing critical thinking and effective decision-making skills, while promoting communication and recognition of the value of ethical competition and individual achievement. Our objective is for the youth to learn how to accomplish their goals through hard work and dedication. We look forward to serving the members of Morrow County.

Lindsey Gallik, Jr. Fair Coordinator: 419-



Lindsey Gallik

560-7046

Lisa Duckworth, Assistant Coordinator: 419-560-7101

Office phone: 419-947-1567

E-mail: [morrowcountyjrfair@gmail.com](mailto:morrowcountyjrfair@gmail.com)

Office Hours: Thursdays 1 p.m. to 6 p.m.

### 2021 Quality Assurance (QA) Update

(Quality Assurance is good from October 1, 2020 to September 31, 2021)

**Morrow County Rules:** All youth project members taking livestock (market and breeding) and horses are required to attend a quality assurance session annually or test out when eligible. **Quality Assurance must be completed by July 16 to show at the Morrow County Fair. State Fair first deadline will be June 6th and will depend on the specie shown.**

Parents/Guardians are required to attend the first 2 years of a project member's required QA sessions.

**\*\*Test out opportunities are only for youth in their 3rd year or beyond and 12 years old and older as of January 1, 2021. Test out age groups 12 to 14 and 15 and older. Youth who pass the test at age 15 or older will not need to test nor attend a quality assurance again.**

#### **Test Out Opportunities:**

County – April 19th, 6 pm, Ag Credit Building 2nd Floor Lrg. Conference Room, RSVP by 12 noon

Cardington H.S. – Listen for school announcements

Mt. Gilead H.S./M.S. – Listen for school announcements

Northmor - Listen for school announcements  
Highland - Listen for school announcements  
**Morrow County Quality Assurance Sessions and/or options:**

**A. County Opportunities** - We are still in the

planning stages of sessions. Stay tuned for dates to be announced for May and June.

**B. State/Other Counties Quality Assurance Opportunities (Optional)** Ohio Cattlemen's Best Program (face to face only), Dairy Palooza, Pork Quality Assurance (face to face, 14 and older only), BQA (face to face and approved program) or other counties.

**C. Youth for the Quality Care of Animals (YQCA)** <http://yqca.org/>

Youth who intend to show their project animal(s) at exhibition (e.g., county or state fair) have the option to complete an on-line YQCA session. For the training to meet the Ohio Youth Food Animal QA requirement for the project year:

The on-line module completed **MUST** be for the correct 4-H age for the youth.

1st and 2nd year members parents must attend an in person or zoom QA

The on-line session must be completed at least 45 days prior to the start of exhibition. July 16 for Morrow County.

Youth can go to the following website to take the age-appropriate on-line module for \$12: <https://yqca.learnrow.io/Account/Login>

- 4-H Youth will need their 4HOnline login and password or they can create their own login and password. Youth **MUST** register using 4HOnline for their results to automatically show up in 4HOnline. Please send Becky your certificate of completion [barker.157@osu.edu](mailto:barker.157@osu.edu)

### 2021 Jr. Fair Revisions

The following revisions have been made for the 2021 Morrow County Junior Fair:

- Overweight rabbits (over 5.5lbs) and poultry (Broilers over 8lbs) to go through the sale ring, but not be eligible for Grand Champion or Reserve Grand Champion.

- Exhibitor's can no longer wear sashes, farm names, or name tags while showing in the show ring.

- Jr. Fair Junior Advisors - There will be a max of eight Jr Fair Junior Advisors and must have been a member of the junior fair board, the year prior.

- The Beef and feeders will be combined into one department

- Only the 1st and 2nd place cattle will return for the final champion drive.

- Rule changes in beef carcass class, added to match hog carcass class.

- \*Animal must be one that is shown in the Jr. Fair

- \*Entry must be made on exhibitors fair entry, no exceptions

- \*A poster will be hung in the barn to confirm entry

- Revision to article XI in the Jr Fair Constitution: An individual will no longer be eligible as a member of the Jr Fair Board or Fair Royalty, if they are an expectant parent.

Previously – Any Jr. Fair Board member or royalty (male or female) may not be or have been married or be a parent.

Now – Any Jr. Fair Board member or royalty (male or female) may not be or have been married, an expectant parent or be a parent.

- Horse Pre-Entry will now be mandatory for the horse show

### What is a 4-H Spark?

Projects help 4-H members find and nurture their spark. When you try something for the first time, you may be inspired to keep learning as much as possible about it. You might even want

a career related to that new interest. 4-H projects often spark young people to follow their passions, interests, and talents on a new path to career development, enjoyment, and belonging.

### OHIO 4-H IS A GATEWAY TO OPPORTUNITY AND VOLUNTEERS LIKE YOU ARE NEEDED!

#### Ohio 4-H Clubs:

- Minimum of 5 members from 3 different families.
- Members must be 8 years old and in 3<sup>rd</sup> grade or 9 years old and in any grade. Cloverbuds can be 5 and in kindergarten until 2<sup>nd</sup> grade.
- Must conduct at least 6 meetings per year. We recommend that a meeting lasts no longer than an hour, but meetings can take up to 2 hours.

#### Morrow County Volunteer requirements:

- Application
- Interview
- Background Check
- 1 Advisor training per year

Morrow County 4-H is looking for great volunteers and we need you! Applying to volunteer is at no cost to you, and you will gain the information to help youth develop new skills that will help grow them into strong leaders! If you have any questions or would like to volunteer, please contact us!

Ohio State University  
Extension  
Morrow County  
5362 US Highway 42  
Suite 101  
Mt. Gilead, OH 43338  
419-947-1070  
[Barker.157@osu.edu](mailto:Barker.157@osu.edu)  
[Morrow.osu.edu](http://Morrow.osu.edu)



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AND ENVIRONMENTAL SCIENCES

Call Ohio State University  
Extension for more  
information or visit us  
online at [morrow.osu.edu](http://morrow.osu.edu)



Have more  
questions? Want to  
start the process?  
Contact Becky at  
[barker.157@osu.edu](mailto:barker.157@osu.edu)  
or 419-947-1070

Join 4-H  
TODAY!





# 4-H NEWS



## 4-H General Information

### Terrific Teens



**Collin Bowman**  
*from Next Generation 4-H club*

"Collin serves on Jr. Fair Board as well as yearly completes a very informative demonstration to the club. He continues to go to State Fair with his incredible woodworking projects."

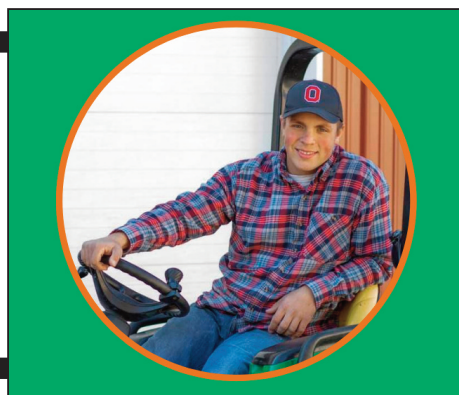
-4-H Advisor Missy Kidwell

### Myles Jordan

*from Next Generation 4-H club*

"Myles works hard as a leader and older member in our club and on Jr. Fair Board. His Self-Determined project last year was amazing!"

-4-H Advisor Missy Kidwell



### Tess Ruehrmund:

"Someone should join 4-H because it offers so many opportunities and it is truly an organization for everyone, not just those heavily involved in agriculture. Without 4-H I never would have gotten the opportunity to start riding horses and I was even able to buy my horse on my own with the money I had made from selling my market rabbits. I have made so many friends by attending fairs and camps. Some of my best memories I wouldn't have experienced if I weren't involved in 4-H. To me 4-H is so much more than a youth organization, it is a part of my life that has shaped me into the person I am today."



### Kayla Carlyle:

"I think everyone should get the experience of 4-H because it teaches youth skills that help them be better citizens. As well as 4-H can gift you opportunities far beyond what you could imagine. To me, 4-H is like having an extended family with the same determination as you. 4-H is much more than an organization to me. It has taught me many things that I will forever be grateful for."



### Parents: Why your kids should experience 4-H

Dear Parents, Your kids should experience 4-H and here is my story to tell you why!

**By Sara Deakin,**

**OSU Student Intern and 4-H Alumni**

When I first joined 4-H I knew only the advisor, I was a very shy and quiet kid, so I had to break out of my shell to make friends which was very difficult. I went to my first 4-H meeting with my dog, and I was nervous, I only talked to a few people briefly. My mom asked me how I liked it, and I was honest, I didn't enjoy it that much. When it was time for the next meeting, I didn't want to go but looking back now I'm very glad I did. I met people that have since become some of my best friends through 4-H and I would not have had that opportunity if I did not attend my second club meeting.

After two years of being in 4-H, I went to the county fair for the first time and as a dog club member we did not show at the fair we showed at a separate location as dogs were not allowed on the fairgrounds. When I did finally attend, I again didn't know anyone, but one 4-H friend and I walked around and I met a lot of new people. That same year I applied to be on the Franklin County Jr. Fair Board to get more involved. The following year I attended 4-H camp as a camper and found my love for camp, I got to experience new challenges like team building, pushed myself to do things I had never done before like high ropes and ziplining, and continued to meet more people. I became a 4-H camp counselor the next year and had an amazing time with all my new friends. I wanted to be a counselor because I was asked to take on a few counselor responsibilities as a camper due to being a bit

older than most campers. As I got older and learned about the opportunities for teens in 4-H I did my best to experience these opportunities. In 2016 I was selected to attend Ohio 4-H State Leadership camp and in 2018 I returned to be a camp counselor at this camp because of the experiences I gained there. In 2017 I attended Citizenship Washington Focus in Washington D.C. This was another amazing opportunity that I would recommend to everyone.

Through 4-H I had the opportunity to care for and raise livestock. As someone who grew up in the city with little to no knowledge about livestock, this was huge for me. I had friends who had a farm and over the years I would go help them with chores when they needed it, but I finally got the opportunity in my last few years to have my own livestock, so I went all out. At first, I just had a hog project, then the following year, my last year in 4-H, I took a market hog, goat, rabbits, and a beef feeder. These were by far my favorite projects in my 4-H career.

4-H has taught me a lot about how to be a leader, has greatly improved my leadership skills and public speaking skills as well as sparking my interest in many different fields. With my experience in 4-H, I discovered that I truly love this organization and want to continue working with 4-H youth as a career, which is why I will be graduating in May with a degree in Extension Education. I will forever be grateful for all the friends I have made, and all the things 4-H has taught me. What started out as something I didn't want to do turned into a lifetime love and a career opportunity.

### 4-H Communication Contests

The 4-H Illustrated Talks or Demonstrations, Health and Safety Public Speaking, and the Public Speaking – LEGO Edition contests will take place June 15 at the Ag. Credit Building. Registration for the contests are due June 8. Marketing contest items are also due to the OSU Extension office by June 8. For contest times, please refer to the calendar on the back page of this newsletter.

In 2020 we offered a new category, and it is back for 2021, Public Speaking – Lego Edition.

For this category youth are asked to create a LEGO masterpiece! They use their imagination and engineer amazing creations. The goal of this competition is for youth to have fun building their LEGO masterpiece and then be able to give a speech about it comfortably since they will be talking about a positive, fun experience.

For more information, including rules and prizes, about all the communication contests go to: [go.osu.edu/speakingcontest](http://go.osu.edu/speakingcontest) or contact Amanda Staley, [staley.35@osu.edu](mailto:staley.35@osu.edu).

### Still Project Judging Dates!

Mark your calendar! We have set the following dates for still project judging. As like last year we will require youth to schedule an appointment for that day. Details to come. Factors for choosing our dates: Camp is July 9-13 (fingers crossed) and State Fair Judging will begin July 28th (we are trying to give members more prep time). Thanks everyone!!

Early Judging (only if needed) – Monday,

June 21st, 6 p.m., RSVP by June 11th

Agriculture, Small Animal, Family and Consumer Sciences and STEM Judging – Thursday, July 15th

Food and Nutrition Judging – Friday, July 16th, morning

Clothing and Quilt Judging – Friday, July 16th, afternoon, style show at 7:00 p.m.





# 4-H NEWS



## 4-H General Information

### Thinking of Showing at State Fair?

Make sure you are enrolled in that livestock project, even if you are not taking it to the Morrow County Fair!

Example would be breeding gilts too old for Morrow County Jr. Fair but could be taken to State Fair. The youth would still need to be en-

rolled in the swine breeding project in Morrow County 4-H or FFA. OR A youth wanting to take Market Turkeys to State Fair and not to Morrow County because of the age difference.

Questions? Please call Becky

### 2021 Trash Bash

In 2020, 24 4-H Clubs cleaned our county and township roads!! Let's keep it going!

**Feb 5 – May 15, 2021:** On-line Registration - <https://forms.gle/K5N2STey96ThVvHPA>

**Spring 2021:** Teams clean up litter along Morrow County roads \*look for supply pick-up info

**June 1, 2021:** Last Day to submit Data Collection Sheet

Contact Morrow County Recycling/Keep Morrow County Beautiful at (419) 946-6400 or [recycle@co.morrow.oh.us](mailto:recycle@co.morrow.oh.us)

\* Required

### “What is Litter?” Poster Contest

Litter continues to be a major challenge in Morrow County. It can be found along roadsides, in our parks, parking lots...well just about everywhere we look. It is time to bring awareness to this litter problem! It is hard to believe that in just a one-year time span, 14.9 TONS of Litter was collected (April 2018-April 2019)! Last year (2020), we were honored to have 41 dedicated volunteers continue to support clean-up efforts even during the pandemic! These volunteers collected over 1500 pounds of litter, averaging 37 pounds of litter picked up by each individual.

Morrow County Recycling/Keep Morrow County Beautiful encourages all Morrow County residents to create a poster that encourages people to think about what is litter and the impacts litter has on our community. Prizes will be awarded. The winning individual will receive \$50 in prize money and the winner's school/organization will receive a \$100 scholarship to advance environmental awareness and programming. Up to two honorable mentions will be selected with consolation prizes. The grand prize also includes having the winning poster used as the primary marketing campaign to combat litter in 2021. Top poster contest entries will be displayed on the Keep Morrow

County Beautiful and the Recycle Morrow County, Ohio Facebook pages.

#### CONTEST RULES:

1. The poster contest is open to anyone who resides in Morrow County.
2. Posters should be on 8.5x11 inches paper. Only one entry per person.
3. Poster includes theme message What is Litter? 3. Do not fold or roll posters. No glitter or 3-dimensional items.
4. Attach an official entry form (or include the information) to the back of the entry; must be filled out completely and legibly.
5. Mail or deliver entries to: Morrow County Trash Bash Poster Contest, c/o Keep Morrow County Beautiful, 80 North Walnut Street – Suite C, Mt. Gilead, Ohio 43338. All entries must be received by **4:00 PM Monday, May 10, 2021**. Digital format images will also be accepted as a .jpg or .pdf format to [recycle@morrowcounty@gmail.com](mailto:recycle@morrowcounty@gmail.com)
6. All entries become the property of the Keep Morrow County Beautiful committee and will not be returned to artist.
7. Only original artwork with positive themes will be accepted. Artwork may be modified to suit marketing purposes.

#### Official Morrow County TRASH BASH 2021 Post Contest Entry Form

Name \_\_\_\_\_  
 School Name (if applicable)/Organization: \_\_\_\_\_  
 Address \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Teacher Name (if applicable): \_\_\_\_\_



Mail or deliver entries to: Morrow County Trash Bash Poster Contest, c/o Keep Morrow County Beautiful, 80 N Walnut St - Suite C, Mt Gilead, OH 43338. OR email (.jpg or .pdf) to [recycle@morrowcounty@gmail.com](mailto:recycle@morrowcounty@gmail.com)  
 Awards, prize money and scholarships funded by Keep Morrow County Beautiful Board  
 Funding provided by Ohio Environmental Protection Agency

### EXHIBITING A RACTOPAMINE-FREE SWINE PROJECT

**RACTOPAMINE-FREE SWINE PRODUCTION IS NOW A MARKET SPECIFICATION/REQUIREMENT THROUGHOUT MUCH OF THE U.S. PORK PACKING INDUSTRY. BECAUSE SHOW PIGS HAVE THE POTENTIAL TO ENTER INTERNATIONAL PORK MARKETS, THEY MUST BE RACTOPAMINE-FREE.**

**EXPECT YOUR FAIR TO SECURE A SIGNED AFFIDAVIT FROM A PARENT OR LEGAL GUARDIAN STATING THAT THE PIGS EXHIBITED BY THEIR SHOWMAN HAVE NEVER BEEN OFFERED RACTOPAMINE.**



#### WHAT IS RACTOPAMINE?

A beta-adrenergic agonist that when fed according to label directions can improve pig growth rate, carcass composition, and feed conversion efficiency. Product trade names include: Paylean®, Optaflexx®, Engain®, Actogain®, and other generic derivatives.



#### WHAT DOES RACTOPAMINE-FREE MEAN?

The pig has never been fed or exposed to ractopamine sources from the time of birth to the time of harvest.



#### AREAS OF FOCUS TO ENSURE YOUR PROJECT IS RACTOPAMINE-FREE

##### 1. YOUR PIG

Understand the status of any pig(s) you purchase or raise on your own farm and comply by not feeding or exposing your pigs to ractopamine.

##### 2. YOUR FEED SUPPLY

Work directly with your feed supplier to assure that the feed you use is free of ractopamine.

##### 3. YOUR FEEDERS

Feeders and containers should be thoroughly disinfected and dried prior to adding new feed. This will prevent cross-contamination.

##### 4. YOUR BARN

Pens, bedding, fans, etc. should be thoroughly disinfected as they have a risk of containing ractopamine if you have fed it in the past.

##### 5. YOUR TRAILER

Do a complete disinfection and drying of trailers and vehicles between loads of pigs.

##### 6. EXHIBITION

Don't offer ractopamine if the rules indicate it is not acceptable for the fair or exhibition.

This message is brought to you by:



### Reminder!

### Morrow County Fair Ractopamine Free!

Recently, ractopamine-free swine production became a market specification through much of the U.S. pork packing industry. Although ractopamine (sold under the trade names Paylean® or Engain® for swine) is an approved product used to increase lean growth rate, it has been banned in many international pork markets. In short, ractopamine-free means that a pig has never been fed or exposed to ractopamine – from the time of birth to the time of market.

Because ractopamine has been banned in international markets, swine exhibited at the **Ohio State Fair Swine and Morrow County Fair/All Livestock are required to be ractopamine-free.** To ensure that exhibitors follow this proto-

col, the Ohio State Fair and the Morrow County Fair will secure a signed affidavit from a parent or legal guardian which states that the pigs exhibited by their showman have never been offered ractopamine.

Morrow County Jr. Fair exhibitors will be filling out a form at fair time but at this time please be aware that swine are to be ractopamine free from birth to market.

See fact sheet in this newsletter and more information at the following website. If you will be buying swine there is a producer affidavit at this website you can utilize for your records.

<https://ohiopork.org/ractopamine-free/>





# FAMILY & CONSUMER SCIENCES



## Supporting grandparents who are parenting again

<https://insights.osu.edu/life/kinship-care-givers>

Grandparents raising their grandchildren face a variety of challenges, many of those difficulties unique because of the caregivers' own health or financial well-being.

Ohio State experts say kinship caregivers' many challenges are complex and have been made even more difficult in the past year because of the COVID-19 pandemic. Kinship caregivers are family members, such as grandparents or aunts and uncles, who are the primary caregiver for a child in place of biological parents.

"This is a population that needs support, and we shouldn't overlook them," said Angela Provenzano, a second-year student in the doctorate of occupational therapy program at Ohio State.

### An unseen issue

Still, the topic of kinship caregiving doesn't generate much public attention — even though about 100,000 grandparents in Ohio are currently raising their grandchildren, with 39% of those households not having a parent present.

"The main problem is most people don't even recognize it as an issue," Provenzano said. "It's

like, 'Oh, they're just taking care of their family. It's not a big deal; that's what they're supposed to do.' But it's really so much more than that."

Provenzano has spent the past 10 months working to help kinship caregivers, most of them grandparents, in a weekly online support group that she formed in partnership with the Ohio Grandparent/Kinship Coalition.

Ohio State named Provenzano a 2020-21 Columbus-Athens Schweitzer Fellow for her idea to create the support group, which has grown to include an email list of 50 kinship caregivers in Ohio and an average of 10 to 12 participants in weekly Zoom meetings.

"What I've heard from the caregivers," Provenzano said, "is how this support group has been really helpful for their mental health, because they have nowhere else to go and no one else to talk to about their day-to-day struggles."

Provenzano has also had guest speakers in the one-hour group meetings share their expertise and resource information. She has created a website that addresses topics and issues that the caregivers have raised in discussion.

"There are so many topics to cover because taking the role of a kinship caregiver comes with so many complex layers," Provenzano said. "To start off with, when grandparents take in their grandchildren, there is normally a traumatic situation involved with the parents and the child. There is often drug addiction or neglect or just instability. It stems from a place of brokenness. That's one of the issues you might not think about at the forefront."

The caregivers, by nature, are tempted to forget about their own needs while raising their grandchildren or other family members.

"Being the givers, they default to meeting the needs of the child and worrying about them," Provenzano said. "They're doing this while struggling with physical or mental health themselves. I try to emphasize in support group meetings that you have to take care of yourself before you can give to someone else."

### A pandemic challenge

How to deal with home-schooling the children during COVID-19 has been the issue grandparents have most often raised in their group meetings, Provenzano said.

"Having kids at home all day is really exhausting," Provenzano said. "This is on top of

needing to meet their educational needs and all of their sensory needs. And on top of that, some caregivers have to work. It's such a barrier.

"I know some grandparents who are caregivers have had to leave their jobs because their job hours don't fit with the kids' hours being home from school, and they can't afford child-care. There's no easy solution."

Grandparents who are raising grandchildren sometimes face custody issues, which Provenzano said relates to another major problem expressed by the kinship caregivers: how to navigate the legal system.

"It's something that's never broken down to caregivers," Provenzano said. "They feel lost because it is so foreign to them. We've had lawyers come in and show the caregivers options, and that has been really empowering for them. They feel like they have more control or understanding in that realm."

### Providing a support system

Empowerment is also needed for kinship caregivers in a more general sense. Provenzano's work helps grandparents find communities who can offer friendship, support and understanding.

"They're usually kind of isolated from their own peer group and also from the peer group of the parents in the school system," Provenzano said. "Grandparents might not know how common it is to be a kinship caregiver until they meet other people who are and realize that they're not facing their issues alone. It's not necessarily them doing something wrong or facing a challenge unique to them."

That understanding has come to life in Provenzano's online support group. She has witnessed a community spirit develop among the regular attendees over the past 10 months.

"I can stay quiet the whole meeting," Provenzano said. "They're all supporting one another without me even having to step in or guide the conversation at all. That's been really cool to see, and it's the biggest marker of success."

"We have new people come in, and they feel it's a comfortable environment because they see how well people are connecting and how open they are to sharing. People definitely see value in it and come back — not for me or for their own knowledge, but they come back for the relationships, to support each other and to be friends. Now it really feels like family."



## Food Safety Manager Training

OSU Extension-Morrow County offers in-person manager level training for food service managers, operators, and owners with accurate, up-to-date information on all aspects of handling food, from receiving and storing to preparing and serving.

Upon successful completion of the course and exam, participants receive a ServSafe® Certificate and an Ohio Department of Health Food Protection Certificate. You must attend the entire training to take the exam.

• In-person Class Series Dates: June 14, 21, 28 from 9 a.m. – 3 p.m.

• Fee per person: \$75 for business located in Morrow County (offset by levy funds) and \$150 for business located outside of Morrow County

• Register online at this link:

<https://go.osu.edu/registration-foodsafety-manager-june2021> OR

Register by contacting our office at: 419-947-1070

• Payment to guarantee your registration is required by: May 31, 2021

• Contact for questions: Candace Heer at 419-947-1070 or [heer.7@osu.edu](mailto:heer.7@osu.edu)

## Make an Appointment for Pressure Canner Testing

Home canning of vegetables, meat and poultry all require processing in a pressure canner to destroy the bacterium *Clostridium botulinum*. Following USDA recommendations, pressure canners with dial gauges should be tested for accuracy each year to ensure safe home food preservation. During each 30-minute appointment, the dial-gauge will be tested against a calibrated Master gauge for accuracy. I will also do a safety check on the canner. Educational materials will be available and I will be happy to answer your food preservation questions.

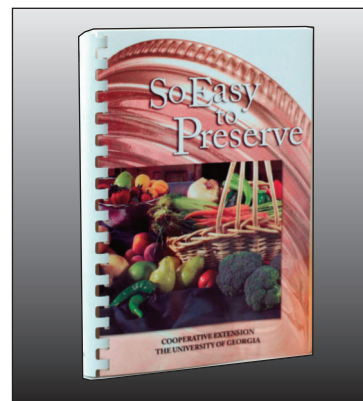
• \$5 fee per canner lid for non-residents of

Morrow County

• No fee per canner lid for residents of Morrow County (levy funds)

Various dates and times are provided for May, June, and July - select appointment times at this link <https://go.osu.edu/cannertestingmorrow2021> or call our office at 419-947-1070 to register for an appointment. The link can also be found on our website at [morrow.osu.edu](http://morrow.osu.edu). Registration will close at 9 AM the day before the event.

Contact Candace at [heer.7@osu.edu](mailto:heer.7@osu.edu) or 419-947-1070 for questions.



## So Easy to Preserve Books available for purchase

OSU Extension - Morrow County has *So Easy To Preserve (Sixth Edition, 2014)* books available from the National Center for Home Food Preservation at the University of Georgia for \$15.00 each.

Call 419-947-1070 to schedule a time to pick up a book today!





# FAMILY & CONSUMER SCIENCES



## 10 tips for building up your resilience

By Bernadette Mazurek Melnyk, Chief Wellness Officer, The Ohio State University

We all face stress — at home and work, in relationships or because of unexpected circumstances.

But did you know that how we react to stress can have immediate effects on our immune systems and lasting implications on our health and well-being?

It's why building up resilience is crucial, said Bernadette Melnyk, chief wellness officer at The Ohio State University.

Melnyk and other Ohio State researchers teamed up with Everyday Health to study resilience. In a 2019 nationwide survey, they found that most Americans overestimate their ability to cope with life's challenges, and less resilient people experience more depression and physical health problems.

Anxiety disorders affect one in three adults, according to the National Institute of Mental Health. Depression is the leading cause of disability around the world, costing the U.S. economy \$210 billion in lost productivity each year.

The good news is that resilience is like a muscle that you can train to be stronger. Grounded in research, Melnyk offers the following 10 tips for those looking to strengthen themselves in preparation for life's challenges.

### 1. Practice self-care.

List all the ways you could improve on your mental, emotional and physical health, and then take action to make one small change at a time. It takes 30 to 60 days for a new health habit to stick, so be patient with yourself.

### 2. See yourself as in control.

Focus on how you, as opposed to external forces, can control the outcome of events. Try this four-step approach to solving problems:

- Identify the problem.
- Identify at least two ways to solve the problem with the pros and cons of each.
- Choose the best solution.
- Act on it right away.

If there is nothing you can do to solve a problem, consider helping someone else. You still have control over how you affect others, and that can boost your spirits.

### 3. Reframe negative thoughts.

Cognitive behavioral therapy experts tell us that how we think affects how we feel and behave. You can retrain your responses to difficulties in your life — both those in your memories and the difficulties you will face in the future. A positive outlook can help you to cope better.

Only 33% of Americans are likely to ask for help or counseling when faced with negative situations, according to The Ohio State University and Everyday Health's 2019 State of Resilience.

### 4. Increase positive thinking.

Optimism can help you feel more in control of your circumstances.

When you feel stressed, anxious, depressed or angry, ask yourself: "What was just going through my mind?" and "Is this thinking helpful? Is it true? Do I have the evidence to back it up?" If the answer to these questions is no, turn the negative thinking around to positive to feel emotionally better.

It might seem difficult to suddenly become an optimist and see the bright side of things, especially if you are facing a rough patch in life. You

do not have to sugarcoat things to be optimistic. Instead, focus on what you can do, and identify positive steps you can take to solve problems.

Evidence shows that when you believe in your ability to handle difficult situations, you will be able to handle them better.

### 5. Learn coping skills.

Find ways to release stress daily and learn techniques to reduce anxiety, such as deep breathing and meditation. Bringing yourself back to a calm place when you are stressed can keep tensions from overwhelming you in the long run.

Spend time with those you care about, and play — yes, grownups — with your children, pets or friends. Exercise boosts happiness, as does participation in activities and hobbies you enjoy.

The key component to all of these is consciously making time for them.

### 6. Practice gratitude.

Make a daily routine of writing down three people or things you're grateful for, and then dwell on the positive feelings that gratitude brings. Reflect on what's going well in your life and how you contributed to it.

You have the power to drive positive emotions within.

### 7. Nurture your network.

Rely on family, friends and co-workers when needed, and continue to grow your social network.

Studies show that even "weak ties" — friendships that don't go very deep — go far in bolstering our sense of well-being. Befriend more people by taking time to say hello, learning their names and spending a moment in friendly conversation.

Reach out to people you've lost touch with, and get to know your neighbors.

### 8. Know your strengths and areas for improvement.

Positive psychology — the scientific study of what makes life worth living — focuses on identifying and building on our strengths.

Knowing what you do well and what stresses you out can help you deal with difficult situations and avoid things that might overwhelm you.

To find your strengths, make a list of some triumphs in your life and how you achieved them. Ask a few friends to list your strengths; you may be surprised at what they see in you.

Also, inventory the things that scare you or that you feel you need to improve. Then, make a plan for how you will deal with or improve them. Look at tough times as character-building experiences.

**While most people surveyed believed that they have high levels of mental and physical resilience, only about 57% really do, according to the State of Resilience study from 2019.**

### 9. Be here now.

Now is a great time to reconsider your interests and passions — and to take on a project or hobby that lets you exercise them. Allow yourself to become completely absorbed in the moment, doing something you love.

Mindfulness techniques such as meditation, yoga and Tai Chi also can help you ground yourself in the present moment. Take time to savor the beauty of nature, a piece of music or artwork that moves you. Slow down and savor some moments throughout the day.

### 10. Find purpose and passion in life.

When you are aligned with your dreams, you have the most energy. If you could have any dream that you could accomplish in the next five years, what would you do?

When you follow your north star, you have energy and you feel positive. Go after what you are passionate about and find meaning in life.

"Be patient with yourself," Melnyk said of making new habits routine. "Inch by inch, it's a cinch. Yard by yard, it's hard."

<https://insights.osu.edu/health/building-resilience>

## Financial Q&A - Ask OSU Extension

Do you have a financial question? You're not alone! Our county-based Family and Consumer Sciences Extension educators are here to answer your questions and are offering FREE financial education and tools to assist families in improving both present and future economic well-being. Submit your question and an Extension educator will respond within 5 business days.

To submit a question, visit [go.osu.edu/AskOSUExtension](https://go.osu.edu/AskOSUExtension)

## Chow Line: Is it food poisoning?

By Tracy Turner,  
[turner.490@osu.edu](mailto:turner.490@osu.edu), 614-688-1067

**I had stomach cramps not long after eating food I typically don't eat. How do I know if I had food poisoning or if it was something else?**

The symptoms of food poisoning vary depending on the type of germ to which you've been exposed, but there are some common signs that can indicate whether you've been exposed to a foodborne illness.

The most common signs include stomach cramps, upset stomach, nausea, vomiting, diarrhea, and fever. Some bacteria, such as *Listeria* can cause flu-like symptoms.

It's important to note that symptoms of food poisoning can range from mild to serious and that some of them can come on as quickly as 30 minutes after you eat or as long as four weeks after you've eaten something that contains a foodborne pathogen, according to the Centers for Disease Control and Prevention.

The time it takes for symptoms of a foodborne illness to manifest really depends on the germ. For example, according to the CDC, if you consume foods that are contaminated with

• *Staphylococcus aureus* (staph), symptoms could appear as soon as 30 minutes to six hours later.

• *Clostridium perfringens*, symptoms could appear as soon as six to 24 hours later.

• Norovirus, symptoms could appear as soon as 12 to 48 hours later.

• *Salmonella*, symptoms could appear as soon as 12 to 72 hours later.

• *Clostridium botulinum* (botulism), symptoms could appear as soon as 18 to 36 hours later.

• *Vibrio vulnificus*, symptoms could appear as soon as one to four days later.

• *Campylobacter*, symptoms could appear as soon as two to five days later.

• *E. coli*, symptoms could appear three to four days later.

• *Cyclospora*, symptoms could appear one week later.

• *Listeria monocytogenes*, symptoms could appear one to four weeks later.

Some people may experience symptoms that last several hours or several days, said Sanja Ilic, the state food safety specialist for Ohio State

University Extension. OSU Extension is the outreach arm of The Ohio State University College of Food, Agricultural, and Environmental Sciences (CFAES).

"While most people experience only a mild illness, people with underlying conditions that weaken their immune system may experience severe outcomes that require them to be hospitalized," she said.

So how do you know if you should see a doctor for your symptoms? The CDC advises people to seek medical attention for severe symptoms, including:

- Blood in your stool.
- A high fever, typically over 101.5 degrees Fahrenheit, measured with an oral thermometer.
- Diarrhea that lasts more than three days.
- Frequent vomiting that prevents you from keeping down liquids, as this can lead to dehydration.
- Signs of dehydration, which can be marked by a decrease in urination, a very dry mouth and throat, or feeling dizzy upon standing.

Sources/Reviewer: Sanja Ilic, OSU Extension, Food Safety



# OSU EXTENSION CALENDAR OF EVENTS

## MARCH 2021

29 CARTEENS, 6:30 pm – Ag Credit 2nd Floor Conference Room

## APRIL 2021

5 Jr. Fair Board, 7 pm  
7 Morrow County Cattlemen's Meeting, 6:30 pm, Ag Credit 2nd Floor Conference Room  
8 Pork Producers, 7 pm, Ag Credit 2nd Floor Conference Room  
12 New 4-H Volunteer Training, 6:30 pm, RSVP Required  
15 Horse and Pony Committee, 7:30 pm  
19 County Quality Assurance Test-out, see article  
19 Livestock Sale Committee, 7 pm, Ag Credit 2nd Floor Conference Room  
20 CARTEENS, 6:30 pm – Ag Credit 2nd Floor Conference Room  
22 BQA (Beef Quality Assurance) Re-Certification & Certification, 6 pm, Ag Credit 2nd Floor Conference Room **Pre-Registration is required**  
30 **4-H Project Enrollments Due!!!!**  
30 REGISTRATION DUE: Career Exploration Workshop – Construction and Automotive Trades

## MAY 2021

3 Jr. Fair Board, 7 pm  
5 Morrow County Cattlemen's Meeting, 6:30 pm, Ag Credit 2nd Floor Conference Room

8 Career Exploration Workshop – Construction and Automotive Trades, Tri-Rivers Career Center, 9 am  
13 Pork Producers, 7 pm, Ag Credit 2nd Floor Conference Room  
20 Horse and Pony Committee, 7:30 pm  
31 Happy Memorial Day - Office Closed  
31 AIM, Adventures In Morrow, Explore our parks begins.

## JUNE 2021

5 Feeder Calves Weigh-In  
7 Jr. Fair Board, 7 pm, Fair Grounds Youth Building  
7 **Jr. Fair Entries Due**  
8 REGISTRATION DUE: 4-H Illustrated Talk or Demonstration, Health and Safety Speaking Contest, and Public Speaking - LEGO Edition Contest  
9 CARTEENS, 6:30 pm – Ag Credit 2nd Floor Conference Room  
10 Pork Producers, 7 pm, Ag Credit 2nd Floor Conference Room  
11 Early 4-H Project Judging Registration due  
12 Horse PAS State Fair Qualifying Show, Fair Grounds  
15 4-H Illustrated Talk or Demonstration, Ag Credit 2nd Floor Conference Room, 6 pm  
15 Health and Safety Speaking Contest, Ag Credit 2nd Floor Conference Room, 7 pm  
15 Public Speaking - LEGO Edition Contest, Ag Credit 2nd Floor Conference Room, 7 pm

17 Horse and Pony Committee, 8 pm, Ag Credit 2nd Floor Conference Room  
20 Ohio State Fair Livestock and Dog entries due  
21 Early 4-H Project Judging, 6 pm, Youth Building  
27 Horse PAS State Fair Qualifying Show, Fair Grounds  
30 Writing 4-H Projects due to the Extension Office

## JULY 2021

5 Jr. Fair Board, 7 pm, Fair Grounds Youth Building  
8 Pork Producers, 7 pm, Ag Credit 2nd Floor Conference Room  
9-13 4-H Camp  
10 Morrow County Dairy Tour, Berg Farms, 10-2 pm (see flyer in newsletter)  
15 Agriculture, FCS, Small Animal and STEM 4-H Project Judging by appointment  
15 Horse and Pony Committee, 8 pm, Ag Credit 2nd Floor Conference Room  
16 Food and Nutrition 4-H Project Judging by appointment, morning  
16 Clothing and Quilt 4-H Project Judging by appointment, afternoon, Style Show at 7 pm  
16 REGISTRATION DUE: Cloverbud Fun Day  
20 CARTEENS, 6:30 pm – Ag Credit 2nd Floor Conference Room  
24 Cloverbud Fun Day, location TBD, 9 a.m.1  
24 Cattle Hoof Trimming, 8:30 am

CFAES provides research and related educational programs to clientele on a nondiscriminatory basis. For more information: <http://go.osu.edu/cfaesdiversity>.

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