CFAES
OHIO STATE UNIVERSITY EXTENSION

Morrow County SCARLET & GRAY News

Volume 17 Issue 4 • November/December 2021

4-H Project Members win at State Fair!!

Although the State Fair was closed to the general public this year, 4-H members were able to participate in the annual statewide 4-H judging that takes place the end of July. Congratulations to the following 4-H members on their outstanding achievement! Only one 4-H member is selected in the State of Ohio for the Clock Trophy Award per project. Only the top 10% of 4-H members receive Outstanding and Honorable mention awards.

L to R: ***Belladonna Threadgill*** *– Clock Trophy & Outstanding Winner, Leadership Road Trip;* ***Anna Marocco*** *– Clock Trophy & Outstanding Winner, Diversity: Source of Our Strength;* ***Collin Bowman*** *– Clock Trophy & Outstanding Winner, Finishing Up Woodworking;* ***Emma Smith*** *– Outstanding of the Day, Senior Individual Demonstration;* ***Makayla Rhea*** *– Outstanding of the Day, Junior Individual Demonstration;* ***Natori Clevenger*** *– Outstanding of the Day, Measuring Up, Jr. Woodworking;* ***Megan Gardner*** *– Honorable Mention, Cat 2 (age 13+)*

Cattlemen host Family Night

By Elizabeth Leonhard,
2022 Morrow County
Senior Beef Ambassador

The Family Night out with the Morrow County Cattlemen's Association was held on September 18, 2021, beginning at 4:30 p.m. The event was hosted by Kelly Sautter-Tennant and Dave Lehman at LS SimAngus Farm.

The 2021 Morrow County Cattlemen's Association award winners are as follows:

Herdsman: Adult Mary Meimer; **Youth** Porter Beck

Commercial Producer: Adult David Gompf; **Youth** Lane Rizor

Seedstock Producer: Adult KSR Cattle Company/ Karol Skidmore-Roth; **Youth** Colten Beck

Industry Excellence: Adult Roger Beck; **Youth** Mason Powell

Young Cattleman: Adult Jim and Mary Meimer; **Youth** Lane Rizor

Three Beef Ambassadors were chosen. Passing on the Ambassadorship were Juniors Amelia and Mathias Bender. Holly Barga, daughter of Jennifer Barga, is the 2022 Junior Ambassador. Elizabeth Leonhard, daughter of Larry and Emily Leonhard, and Mason Powell, son of John and Heather Powell, are the 2022 Senior Ambassadors.

Congratulations to the 2022 Morrow County Beef Ambassadors, left to right: Elizabeth Leonhard (Senior), Holly Barga, (Junior), and Mason Powell (Senior).

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

Current Resident or

U.S. Postage PAID
Mt. Gilead, OH
Permit #19
Non-Profit Org.

TABLE OF CONTENTS

OHIO STATE UNIVERSITY EXTENSION MORROW COUNTY
5362 US Hwy. 42 • Suite 101 • Mt. Gilead, OH 43338
Phone: (419) 947-1070 Fax (419) 947-1071
OSU Extension-Morrow County http://morrow.osu.edu
Like us on Facebook: Ohio State University Extension Morrow County
YouTube Channel OSU Extension – Morrow County

OFFICE STAFF:
Becky Barker - 4-H Youth Development Educator (barker.157@osu.edu)
Amanda Staley - 4-H Youth Development Educator (staley.35@osu.edu)
Carri Jagger - Ag & Natural Resources Educator (jagger.6@osu.edu)
Candace Heer - Family & Consumer Sciences Educator (heer.7@osu.edu)
Kathy Whitmore - SNAP-Ed Program Assistant (whitmore.5@osu.edu)
Liz Ufferman - Office Associate (ufferman.1@osu.edu)
Barb Hildebrand - Office Associate (hildebrand.2@osu.edu)

AGRICULTURE

Tips to help prevent winter barn fires

By Jason Hartschuh, OSU Extension Educator ANR, Crawford County

(Previously published in Farm and Dairy: November 14, 2019)

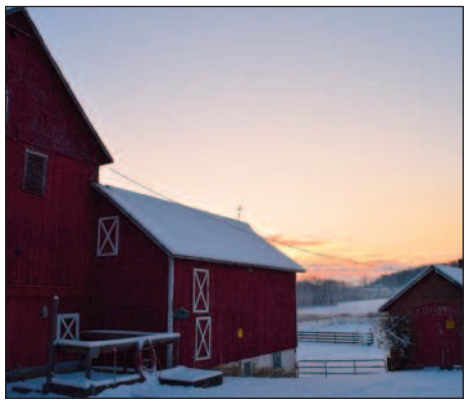
As I dig in the closet to find a few more clothes to stay warm when I go to the barn, it proves winter is rolling in fast and I had better get the barns ready.

Usually, when I think about getting barns ready for winter it is making sure I can keep drafts off the calves. There is one other big thing to think about and inspect as you prepare for winter, are there any fire hazards in your barn?

Heaters

The first fire hazard that comes to mind is the six different barn heaters we run in the winter. During the summer, we shut the gas off to all these heaters to prevent a fire, especially since many of these heaters have a standing pilot light.

When it comes time to light them for winter, the dust is an inch deep — okay, not an inch deep but they are dirty. This is why you need to plan further ahead than the night the barn will freeze to light these heaters.



Take a portable air compressor to the barn, remove any covers you can and blow out the dust — not just in the burner but on the heat shields and wherever dust and cobwebs accumulate.

When you turn the gas on, take the time to smell for gas from the valve to heater in case a joint started to leak over the summer.

It is also recommended that you light the heater in the morning when you plan to be around most of the day to check and make sure it is functioning properly; the worst possible time to light heaters is right before going home for the night.

Electrical system

Open flame heaters are not the only fire hazard present on the farm. When was the last time you inspected the electrical system in your barn — everything from the fuse box, electrical wires, and light bulbs? Inspections should be conducted every year. Dust and cobwebs should be cleaned from the boxes and wires inspected for damage from water or animals chewing on them.

LED lights have come a long way in helping to prevent barn fires, but if you have incandescent bulbs, they should be in globes in case the bulbs break. Any type of bulb that animals can reach needs protected so that they cannot be broken.

Temporary heat lamps

Another common fire starter is temporary heat lamps. Even if they are only used for a couple days each year, they need hung with a chain not twin string. If at all possible, have them plugged directly into an outlet. The more extension cords running through the barn, the greater the fire risk. Lastly, purchase heat lamps that are fully enclosed so that if they fall the bulbs have less of a chance of breaking and starting a fire.

Have a plan

While you rarely think a fire will happen on your farm, having a plan in place in case it does happen someday will save you lots of stress. It only takes three or four minutes for an enclosed barn to be full of smoke, and within six minutes it can be fully engulfed with visible flames.

After fire prevention measures are taken, having fire extinguishers at every entrance to the barn improves your ability to extinguish the flames and save your barn. Remember it only takes three minutes to fill the barn with smoke. Is that enough time to reach a fire extinguisher and make it back?

Barn evacuation

If you don't make it back in time, what is your barn evacuation plan, the animals will need to go someplace besides being turned loose. Loose animals will often run back into the burning barn and can be a hazard to first responders trying to battle the fire and shuttle water. Once animals are moved to a safe location, they should be hosed off if at all possible in case embers landed on the animals and are under their hair.

In order for the fire department to battle the fire, the electric needs shut off to your barn. Can this be done on your farm?

Another good prevention measure is to invite the local fire department to your farm every couple years so that they can make plans for where water will come from and look over the design of your barn in order to have an attack plan before they are paged out to your place.

Hopefully by using prevention strategies you never have to use your plans for a bad day.

Christmas Wreath Decorate and Take

Join the Morrow County Master Gardener Volunteers to learn about design and to creative your own beautiful Christmas wreath to take home.

When: Dec. 6th at 6 p.m. & Dec. 7th at 6 p.m.

Where: OSU Extension - Morrow County Ag Credit Building, 2nd Floor Conference Room, 5362 US Hwy. 42, Mt. Gilead, OH 43338

Cost: $35.00

Please RSVP at 419-947-1070

Fall is for planting garlic

By Carri J. Jagger

Part I - Watch for Part 2 in the spring

If you have ever wanted to try your hand at growing garlic now is the time to think about planting it. Garlic should be planted between Halloween and Thanksgiving and you will want to start with a good seed source from a reputable seed company. Your soil should be a well-drained sandy loam with a pH between 6.0 and 7.0. Garlic needs 1 to 1.25 pounds of 19-19-19 fertilizer per 100 square feet of bed or 1.5 to 2 pounds of 12-12-12 fertilizer per 100 square feet of bed. Only apply ½ of this at planting and then apply the other half in the spring when growth resumes (you will see little green sprouts peeking out of the mulch.)

Once you have your soil worked up and fertilizer worked in you can start to plant your garlic. Garlic comes in bulbs. Depending on the type and variety, the bulbs can have anywhere from 5 - 16 cloves per bulb. Separate the cloves from the bulb when you are ready to plant. Don't worry about pealing the cloves, they will grow fine. Dig a row 2 inches deep and place your clove basal plate (big end) down. Space the cloves 4-5 inches apart and gently press them into the soil to keep them upright.

Once your cloves are set out you can gently cover them up. If you are planting more than one row space your rows 12-24 inches apart. Once your cloves are covered with soil, 4 inches of mulch like clean straw or leaves should be added to the rows to protect the garlic for the winter and also to smother out any winter annual weeds.

Class schedule for Perry Cook Memorial Library

Carri Jagger, Agriculture and Natural Resources Educator will be teaching a monthly horticulture class at Perry Cook Memorial Library, 7406 CR 242, Mt Gilead, OH 43338. Classes are open to anyone who wants to learn!

Thursday, Nov. 18th at 6 p.m.: Wreath Decorate and Take. RSVP to OSU Extension 419-947-1070. Cost $35.00

Wednesday, Nov. 24th at 2 p.m.: Foodscaping

Wednesday, Dec. 22nd at 2 p.m.: Fresh cut tree, live tree and poinsettia care

Wednesday, Jan. 26th at 2 p.m.: Container Gardening

Scan the QR code to sign up for the weekly Ag and Horticulture Blog.

Wednesday, Feb. 23rd at 2 p.m.: Selecting Vegetable Varieties

Wednesday, Mar. 30th at 2 p.m.: Seeding Starting

Wednesday, April 27th at 2 p.m.: Companion Planting

Wednesday, May 25th at 2 p.m.: Creating a pollinator garden with native perennials

Wednesday, June 22nd at 2 pm: Common Garden Insects

Wednesday, July 27th at 2 pm.: Common Garden Diseases

Wednesday, Aug. 24th at 2 p.m.: Harvesting Produce

Follow us on Facebook: Ohio State University Extension - Morrow County

Watch us on Youtube: OSU Extension Morrow County

Contact information: Carri Jagger, ANR Educator, 419-947-1070, Jagger.6@osu.edu

Would you like to become a Master Gardener Volunteer?

The Ohio State University Extension Master Gardener Volunteer (MGV) program provides intensive training in horticulture to interested Ohio residents who then volunteer their time assisting with educational programs and activities for Ohio residents through their local OSU Extension county office.

Volunteers are not required to have gardening skills or knowledge; a passion for learning about gardening and sharing this knowledge with others is a must!

Working with county Extension personnel, Master Gardener Volunteers provide educational services to their communities such as: answering gardening questions from the public; conducting plant clinics; gardening activities with children, senior citizens, or disabled persons; beautifying the community; developing community or demonstration gardens; and other horticultural activities.

OSU Extension Morrow County will be holding a MGV training class in the spring and summer of 2022. If you are interested in becoming a Morrow County Master Gardener Volunteer please call Carri Jagger 419-947-1070 to learn more.

AGRICULTURE

Heifer development beginning at weaning

By Steve Boyles,
OSU Extension Beef Specialist

HEIFER SELECTION: Heifers can be sold at weaning or anytime thereafter. Select at least 20% excess and continue growing the heifers until breeding. A second selection at yearling age is helpful. Let the bull or artificial insemination program select the heifers you keep by maintaining a relatively short breeding season (45 days). Pregnancy diagnosis after the breeding season provides another opportunity for culling. A final selection can be made after heifers wean their first calf. Weaning weight of the first calf is a fairly good, though not foolproof, indicator of future production.

EARLY GROWTH (weaning and yearling weight) AND FRAME: The traditional method for choosing replacements is pick the big ones at weaning. Traditional selection is simple and is not necessarily all bad. If growth is needed, selection on size will provide it. The bigger heifers are generally older, and thus selection is from the earlier calving cows. It also may (or may not) select heifers of heavier milking cows. Heavier and older heifers are more likely to cycle and breed early and be well on their way to having acceptable lifetime performance.

However, there are problems with the traditional method of selection. Some of the heaviest heifers at weaning may be fat and offer the potential of poor lifetime milk production due to fat deposits in the udder. Some big heifers are fast growing due to an endocrine imbalance and are subfertile at breeding.

The biggest problems traditional heifer selection is "frame creep". This is the gradual increase in mature cow size over time resulting from the use of larger frame bulls and retention of their daughters. The larger, higher maintenance dams may be too big for the feed resources. If nutrition does not change, these cows may suffer reproductively.

Selecting heifers for larger actual weight will generally result in a more uniform group capable of reaching pubertal weight at about the same time. So long as their sires and grandsires are not too big, there is little danger that selecting the larger heifers will cause significant "frame creep". Be careful not to mistake frame for weight. Framey heifers with below average body condition may be "hard keepers" later in life.

FRAME SIZE: Matching the development program with genotype: We know that most components of fertility that influence first calving and subsequent reproductive performance are not highly heritable. This suggests that management practices are most likely to influence the majority of factors related to reproductive performance. How we manage replacement heifer calves from the time they are weaned from their dams to the beginning of the first breeding period is extremely critical for their subsequent performance.

Studies indicate that puberty can be expected to occur at a genetically predetermined size among individual animals, and only when heifers reach target weights can high pregnancy rates be obtained. In other words, heifers with the genetic potential to reach a heavier mature weight must attain a heavier prebreeding weight before their first breeding season. Using the standard set by the Beef Improvement Federation for nine frame-size classifications for U.S. breeding cattle (Table 5), producers can estimate body composition and energy requirements per pound of gain at various weights during the feeding period.

Weaning weight and yearling weight are moderately to highly heritable traits (.25-.50). As a rough guide, heifers that have within-herd weaning weight ratios below 90 (herd average 100) should be culled in a commercial herd. One caution to keep in mind is watch for calves that have high adjusted weaning weights and low actual weaning weights. These calves may come from heavy milking cows that are late calvers in the herd. In a purebred herd, the heifer's EPDs for weaning and yearling weight should be used when making selection decisions on growth. If seedstock producers are having trouble keeping their heaviest milking cows (high milk EPDs) in the early part of the calving season, they need to be aware of the impact that the some of these cows could have for their commercial bull buyers.

Yearling weights are a more accurate predictor of growth potential than weaning weights. Yearling hip heights are more accurate for predicting mature size than weaning hip height. Heifers with the heaviest yearling weights tend to be the largest framed. Maximum acceptable frame scores may need to be established to match cow size with feed resources. To remove your personal biases, it is suggested an unbiased 3rd party measure your heifers and categorize them to frame and estimated mature size.

Growth is an important trait in heifer selection but there are other important traits. What are those traits?

MATERNAL/PRODUCTION TRAITS: The traits that are important in replacement heifers are the maternal traits: early puberty, fertility, calving ease, milk, soundness (longevity), temperament and efficiency. Early puberty is highly heritable (H2 = 50%) and related to early first pregnancy. Calving ease is important because it affects the time required for rebreeding. Soundness traits (feet, legs, udders, eye, etc.) are highly heritable and are related to longevity and productivity. Genes for mastitis resistance have been identified; selection for bloat resistance have been accomplished; evidence has been developed indicating genetic differences in the incidence of fescue toxicity.

HEIFER SELECTION WITH CROSS-BREEDING SYSTEMS: Hybrid vigor is important but is not everything. Producers should not overlook good replacement prospects just to gain a little more hybrid vigor. Keeping heifers of terminal sires may cause "frame creep".

TIME WHEN BORN: Adjusted 205-day weights and ratios provide a better estimate of the true genetic differences in preweaning growth of the calves and milking ability of the cow than do actual weaning weights. Late-born calves with light, actual weaning weights can still have excellent adjusted 205-day weights and ratios.

Table 5. Relationship of Frame Score and Hip Height to Estimated Mature Cow Weight[a]

	Hip Height (inches)			Cow Weight
Frame Score	7 Months	12 Months	Maturity	*(estimated, lbs)*
1	35	39	44	880
2	37	41	46	955
3	39	43	48	1030
4	41	45	50	1100
5	43	47	52	1175
6	45	49	54	1250
7	47	51	56	1320
8	49	53	58	1395
9	51	55	60	1470

[a]Hip height (in.) based on Beef Improvement Federation standards. Weights (lb) are expected averages for flesh condition (body condition score 5). Source: Fox, D. G., C. J. Sniffen, and J. D. O'-Connor. 1988. Adjusting nutrient requirements of beef cattle for animal and environmental variations. Journal of Animal Science 66:1475.

MILK PRODUCTION: Caution, some heavy milking cows may not meet nutritional requirements through the available forage. The calving intervals for these cows will generally exceed 370 days. Selecting replacement heifers out of these cows could eventually cause an increase in open cows. Heifers with the heavier actual weaning weights are more likely to cycle early and calve early as 2-year-olds. Therefore, actual weaning weights may do a better job of identifying the heifers and cows that will be the most productive. Seldom should heifers be selected as replacements that have low actual weaning weights, but high adjusted weights and ratios.

Seedstock producers are selling the "genetics" for growth and milk. The adjusted weights and other genetic indicators such as pedigree EPDs become more important. However, seedstock operators should not produce cattle that are not adaptable to their customer's resources. If seedstock producers are having trouble keeping their heaviest milking cows in the early part of the calving season, they need to be aware of the impact that the some of these cows could have for their commercial bull buyers.

DISPOSITION: Research has found differences in chute scores between heifer and steers. It has been found that steers have a lower (more desirable) average temperament rating than heifers. Cattle that are calmer have higher average daily gains than do cattle with excitable temperaments.

Developing a Winter feeding program

By Steve Boyles,
OSU Extension Beef Specialist

Winter feed costs are the largest single expense in most livestock grazing production systems. Extending the grazing to reduce the cost of feeding stored feed will greatly increase profits. Labor can be reduced 25% or more. Rotational grazing takes about three hours per acre per year as opposed to hay production, which takes seven hours per acre per year. The cost for grazing a cow per day is $0.25 compared to $1.00 per day to feed hay to a cow.

The first step is to evaluate the potential, available, existing feed. Crop residue can be an abundant winter feed. Corn stalks can maintain a spring calving cow in good body condition for about 60 days after corn harvest. The feed value will decline quickly after the 60-day period. Cattle will select and eat grain, then husks and leaves, and last cobs and stalks. Strip grazing increases utilization, rations the feed, and reduces the need for supplementation. The crop fields should be grazed so that adequate residue remains soil erosion control.

Stockpiled perennial grasses can be grazed in the late fall/early winter. The general recommendation is to clip or make hay in the field during the end of July and apply 30 to 50 pounds of nitrogen per acre. High-producing, clean, well-drained fescue and orchard grass meadows would be a good choice. Let the forage grow until you need it. Strip grazing will increase utilization.

Winter annual forage crops can be used to provide grazing. Brassicas are easy to establish, fast-growing, high-yielding, and high-quality and can withstand cold temperatures. Turnips can reach maximum quality in as little as 60 days. The tops can tolerate temperatures down to 20 degrees and the bulbs down to 10 degrees. Cows and sheep will eat both the tops and bulbs.

Grazing and presetting round bales prior to feeding can reduce trampling and extend the grazing season. Setting rounds 20 feet on center in the fall when the weather is fit and moving a temporary electric fence to feed them reduces winter feeding time. Hay should be fed away from drainage ways and near livestock watering sources. Feeding hay in low fertility areas will improve the fertility and future pasture quality.

Livestock heavy use areas or pads should be located outside the flood plains. If the pad is located close to a watercourse, run off and manure from the pad should be managed to protect the stream from pollution. These areas should be located at least 300 feet away from neighboring residences and away from wells. A manure management system should be designed to handle any accumulated manure on the pad.

More details on these options can be found in OSU Extension Bulletin 872: Maximizing Fall and Winter Grazing of Beef Cows and Stocker Cattle.

AGRICULTURE

Recognizing the risks of broadleaf weeds in pasture

By Christine Gelley,
Agriculture and Natural Resources Educator, Noble County OSU Extension

It is often said that, "Any plant in the wrong place is a weed."

Well, in a pasture situation, there tend to be quite a few plants that weren't intentionally planted there but thrive there regardless. It can be challenging to determine if these weeds are threatening or adding beneficial diversity to our pasture sward. Broadleaf weeds tend to be easier to identify and control than grassy weeds in a pasture setting, but can still be puzzling depending on lifecycle, growth stage, flower arrangement, and growth habit.

One that commonly confuses land managers in Southeast Ohio is spotted knapweed. Spotted knapweed is a detrimental weed that shares similarities to many less threatening pasture plants. The color of the flower is similar to that of red clover, the growth habit is similar to chicory, and the flower shape is similar to Canada thistle and ironweed. However, the combination of growth habit, color, and flower shape is unique to spotted knapweed. Spotted knapweed may possess as many as 200 pink to purple blooms per plant. The mature seed heads resemble Canada thistle, a tight cluster of seeds with a fluffy pappus attached. The pappus helps the seed move with wind, water, animals, and vehicles.

This weed is similar to a biennial, in that the first year of growth there is no flower, just a rosette of five to twelve irregularly lobed hairy leaves. The plant will flower in the second year and continue to flower in the years following. Mature plants may be one to four feet in height, slender or bushy, and will have a deep taproot. It is quite attractive to a variety of pollinators but should not be propagated or preserved in the landscape for this purpose. Many other wildflowers with fewer risks are equivalent food stocks for pollinators.

Spotted knapweed is a prolific seed producer, so if knapweed is not addressed in year two, a population explosion may occur in year three. It gets the name "spotted" because the flower receptacle bracts have dark brown tips. Knapweed is aggressive because it has few natural predators in Ohio. Allelopathic compounds have been isolated from knapweeds, which are chemical substances that can leach from plants and weaken competitors, but the severity of the allelopathic potential remains under investigation. Animals are unfamiliar with it, so grazing as a control is ineffective and it thrives on marginal soils. It can easily out compete weak stands of desirable plants for nutrients.

There are 21 knapweed species and three hybrid knapweeds present in North America. All of them are exotic. They originally arrived with settlers from Europe and Asia in the late-1800s and early 1900s in contaminated hay. Contaminated hay continues to be one of the leading ways seed spreads throughout ecosystems. It is how we suspect it was introduced in our region as well. Spotted knapweed is just one of six especially problematic knapweeds that now colonize over five million acres of rangelands, pastures, crop fields, and waste spaces across the continent. It is also the most prevalent and has been detected in 46 states as of 2015.

Mowing for control is marginally successful. It does help prevent the development of seed, but the plant is able to flower below the height of a mower deck. Biological control using various insects has proven beneficial in western systems but are difficult to secure in the eastern part of the United States. Chemical treatment with readily available broadleaf herbicides and glyphosate for spot treatment has been successful in grass pastures of our region if timed appropriately. Adequately fertilizing pastures can be helpful for increasing the health and competitiveness of desirable plants against the onslaught of this invader.

Some commonly used broadleaf herbicides that are also effective on spotted knapweed include:

- Aminopyralid
- Aminopyralid + 2,4-D
- Clopyralid 3,
- 2,4-D amine or ester
- Dicamba
- Dicamba + 2,4-D
- Picloram 22K

Others may work as well, but effectiveness is unknown or only considered fair in comparison.

The best control tools for spotted knapweed and many other weeds are early detection and early action. Hand pulling and spot spraying young plants that are few and far between can be effective on new invasions. However, heavy infestations will likely take a more creative and lengthy approach to treat including a combination of management tactics.

If you come across something you suspect might be spotted knapweed or another broadleaf weed that is unfamiliar, please contact your county Extension office for assistance with identification and corresponding treatment, especially for those with toxicity concerns for livestock. Examples of other high-profile weeds include: poison hemlock, the nightshades, pokeweed, cress-leaf groundsel, milkweed, hemp dogbane, buttercup, and more. There are some ways that you can streamline the identification process and improve the swiftness of a determination when seeking assistance.

Step #1 for treatment of pasture weeds is accurate identification. Spotted knapweed (far left) is often confused on first glance with other flowers like red clover, chicory, or ironweed. Growth habits are drastically different between all of these plants. (Photo Sources: Steve Dewey of Utah State University and Christine Gelley of OSU Extension)

If you bring in a plant sample to an office for identification, bring a whole plant- roots, stems, leaves, flowers, and all. Also, take a photo of the environment it was taken from. When submitting a photograph or video sample take a shot from far away including the surrounding location where the plant was found. Then take shots up close and in focus that capture all sides of the specimen- top side, under side, and side view. Also include an "element of scale". This is a common item that everyone should have in their home that can be used to compare size (ex: a ruler, a pop can, a business card, etc.).

In pasture systems, I define a weed as a plant that has the potential to harm livestock either by poisoning, suppressing the growth of desirable plants, destroying fence, causing skin irritation or injury, and those that reduce by-product value by contaminating hair and hide.

In all cases, getting a confirmed weed I.D. is critical for appropriate treatment, early detection will minimize damages, and integrating multiple control methods into the treatment plan will yield the best results.

Spotted knapweed may possess as many as 200 pink to purple blooms per plant. Photo: by author

Cover crop seeding rates

By Alyssa Essman, Mark Loux

Cooler temperatures and maturing crops indicate the start of harvest season. For those growers using cover crops to protect soil and suppress weeds over the winter, it also means the time to establish fall-planted cover crops is imminent. When it comes to cover crops that are used for the suppression of weeds, one species stands alone in effectiveness, affordability, and simplicity of management. Cereal rye is the most popular species planted in the state and in the Midwest for these and many other reasons. Increasingly unpredictable fall weather can delay harvest, and rye can tolerate later fall planting in comparison with some other more frost sensitive species. Rye germinates and grows in lower temperatures than other species and resumes growth with robust biomass production in spring. We know that for the suppression of weeds by cover crops, there are two main drivers – ground cover and biomass production – both of which rye excels at. Beyond planting time and method, rye seeding rate is another factor that requires some consideration when planning establishment. But what is the effect of seeding rate on weed suppression?

If biomass production and ground cover are the main drivers of weed suppression, it would be logical to assume that increased seeding rates would optimize both of these factors and increase the weed suppression potential of a cover crop. Studies have shown that increased seeding rates often lead to higher levels of biomass production. However, the data are less clear in how that translates to differences in weed suppression. When compared to other factors such as spring termination timing, the seeding rate of rye tends to have less of an effect on weed density.

Consider the following:

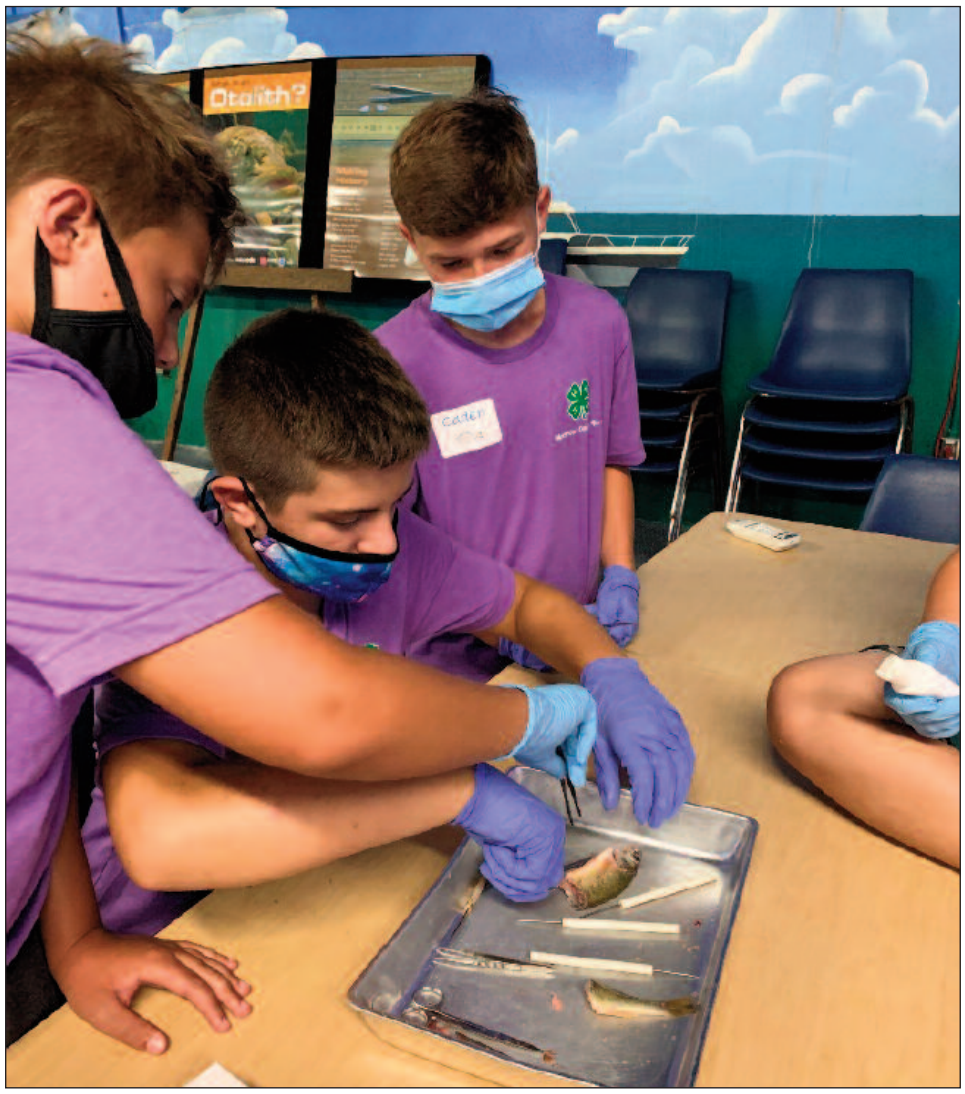
• A study in Ohio comparing spring marestail density in rye planted at 0, 45 or 90 lb/A found an increase in rye biomass at the higher seeding rate and higher marestail density where no rye was planted. However, there was no difference in marestail density between the two seeding rates of 45 and 90 lb/A.

• Similar marestail suppression was provided by a wheat and cereal rye cover crop drilled at 60 and 120 lb/A before no-till soybeans in a Michigan study.

• In Missouri, researchers saw no difference in biomass among rye seeding rates of 30, 50, 70, 90, and 110 lb/A, and only incremental increases in waterhemp suppression at the higher rates, which they contributed to increases in ground cover.

Results of these and other studies in the Midwest suggest that when cereal rye is used to suppress weeds, increases in seeding rate above 50 lb/A may have less influence than other factors such as spring termination timing. Rates lower than 50 lb/A may also suppress weeds well, but the uniformity of the rye stand and biomass can be more variable. Weed suppression may therefore also be more variable.

For more information on cover crops for weed suppression, visit: https://iwilltakeaction.com/news/cover-crop-fact-sheet-series. This series of four fact sheets covers species selection, establishment, herbicide persistence and carryover, and termination, and how these different factors influence the weed suppression potential of cover crops.



Mathew Ruhl, Marshall Hand, and Caden Lewis work together to dissect a fish.

4-Her's spend the day on Lake Erie

By Amanda Staley, 4-H Educator

The 4-H Science Field Trip to Stone Lab was enjoyed by the 23 youth and 3 adults that attended. A two-hour science cruise on Lake Erie was the highlight of the trip. Aboard a research vessel, the youth were given the opportunity to measure the lake's current environmental conditions, sample algae and plankton, and even trawl for fish. The youth then identified all the fish we caught and released them back into the water.

We visited the Aquatic Visitor's Center where we learned about the complex ecosystem of Lake Erie. Fish that populate the lake were in tanks within the center. Most were native to the lake but some were invasive species that have come into the lake that can disrupt Lake Erie's natural ecosystem.

Fishing off the dock was exciting and competitive as we were split into two groups and each group was trying to catch more fish than the other. While fishing we were even able to see one of Lake Erie's water snakes.

Divided into three groups, each group worked together to dissect a fish. They were able to identify all the parts of a fish including its organs. The sea gulls were happy to clean-up our mess after the dissection.

Keep an eye out for what our Science Trip will be for next year!

Brianna Myers showing off one of the fish caught while trawling the lake.

4-H STEM at the fair

By Amanda Staley, 4-H Educator

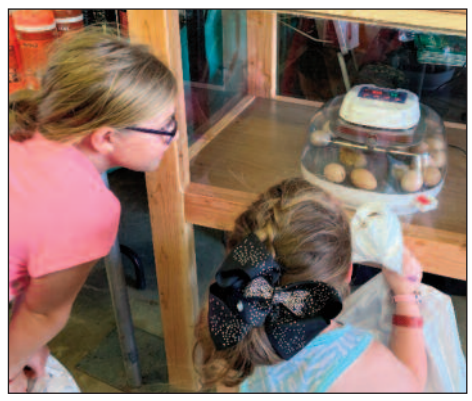
During the Morrow County Fair many 4-H STEM activities took place for youth of all ages! Even some adults enjoyed them.

One of the most popular activities was using polymers to make fake snow. This is the same ingredient used in diapers to absorb liquid quickly. Youth had fun watching the polymer grow from tiny white balls to 600 times their size when water is added.

Another very popular display was the hatching of chicks and ducks. Youth and adults visited the displays often to check on the progress of the hatching. After hatching crowds of people still came to watch the cute chicks and ducklings play in their pens.

Other activity topics included Identifying Wild Animals in Morrow County, Soybean Seed Necklaces – Germination, Let's Talk Chicks, Computer Coding with Meebots, and Computer Coding with Ozobots.

Look at the little boy's excitement as the polymer grows in the water!



Youth wait patiently for the chicks to hatch.

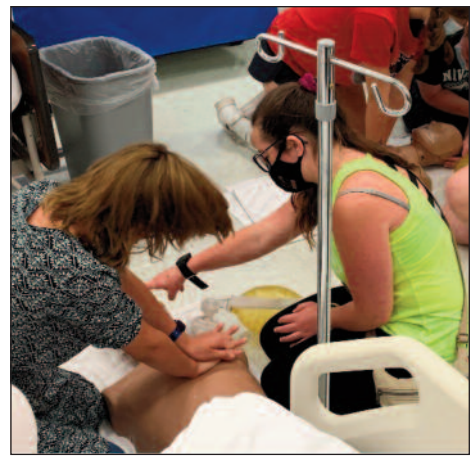
Teens learn about nursing

By Amanda Staley, 4-H Educator

Eight teens participated in in our first Career Exploration Workshop that focused on nursing. We partnered with Marion Technical College and utilized their labs and instructors for the workshop.

Five hands-on sessions were taught which included CPR and first aid; changing dressings; injections, sutures, and staples; heart and lung sounds; and using an Anatomage. The youth enjoyed trying the various tasks.

This workshop was a great experience for them to have in order to know if they should go into any medical field. One youth stated (that had just come to be with her friend) that after the workshop she is very interested in pursuing a job in nursing!



Students learn the how to perform CPR.

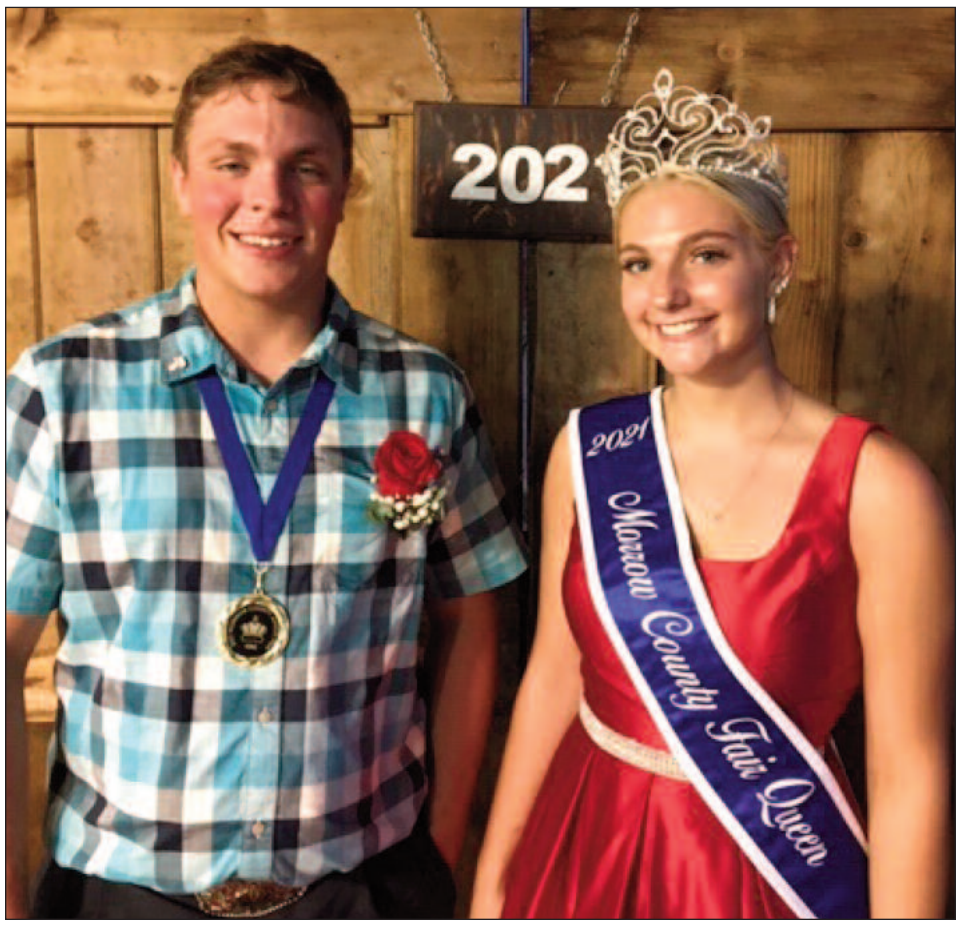
Teen opportunities with STEM

By Amanda Staley, 4-H Educator

Do you have a passion for STEM? Amanda's looking for 3-4 teens to help decide what STEM activities youth of our county want to learn more about. You'd help plan and execute activities, workshops, and field trips that would be countywide and maybe even state and national programs. A few examples include planning the science activities for 4-H camp, a field trip like the one to Stone Lab, and create summer workshops for youth. You do not have to be an expert in STEM, just the desire to help the STEM program.

Questions? Contact Amanda Staley, staley.35@osu.edu.

4-H NEWS



Fair Royalty

Congrats to our 4-H Members, Myles Jordan – Jr. Fair King and Brooke Clapham – Jr. Fair Queen

2021 Morrow Co. Swine Carcass Show Results

RANK	ID	HCW	BACK FAT	LMA	LEAN %	
1	3095	182	0.3	9.8	63.79	Ulrey Farms/Sr Fair
2	338	168	0.4	9.3	63.03	Bowersmith/LIVE CHAMP
3	3091	161	0.7	9.3	59.67	Ulrey Farms/Sr Fair
4	345	169	0.6	8.6	59.09	Haylee Walker/Jr Fair
5	664	187	0.8	8.8	55.86	Dawson Davis/Jr Fair
6	555	169	0.7	7.4	55.67	Ulrey Farms/Sr Fair
7	371	173	0.8	8.2	55.58	Bailey Ulrey/Jr Fair
8	404	192	0.9	8.7	54.32	Eichorn/ LIVE RES CH
9	87	175	1.0	6.8	50.57	Kaitlyn Straley/Jr Fair
10	3093	146	0.2	7.9	65.64	Ulrey Farms/Sr Fair

HCW = Hot Carcass Weight, lbs.; Back Fat = External Fat Measurement (inches); LMA = Loineye Measurement Area; (square inches); Lean, %: percent saleable product

2021 Morrow Co. Lamb Carcass Results

RANK	ID	HCW	BACK FAT	REA	BODY WALL	YG	BTRC	
1	1142	88	0.2	3.8	0.9	2.4	44.46	GCh/Johnson
2	0310	91	0.2	3.8	1.0	2.4	42.25	RGCh/Parrott

HCW = Hot Carcass Weight, lbs; Back fat = external fat between 10th/11th ribs; REA = Ribeye Area, in2; Body Wall = Thickness measurement (in); YG = Yield Grade; BTRC% = Boneless Trimmed Retail Cuts (saleable product)

Dunk Tank Thank You!!

Thanks to the following clubs who braved the fair dunk tank!!

All monies go to the Weiler 4-H Camp Scholarship Fund!

America's Country Farmers
Clover Posse
Country Guys and Gals
Dream Chasers
Next Generation
Reckless & Rowdy

Sr. Fair Swine Carcass Contest Winner

Sr. Fair Swine Carcass Contest Winner – Next Generation Ulrey Farm – Nate, Garrett, Larry Gandy presenting award in honor of Lawton McClintock, Paul Ulrey, Sandy Ulrey

Top Food Project

Congratulations to Kayla Mcleod for being named as the Top Food Project member for Morrow County 4-H!

Top Clothing Project Selected!

Congratulations to Julia Kennedy for being named as the Top Clothing Project member for Morrow County 4-H!

Julia received this award for outstanding knowledge and Outerwear 4-H project.

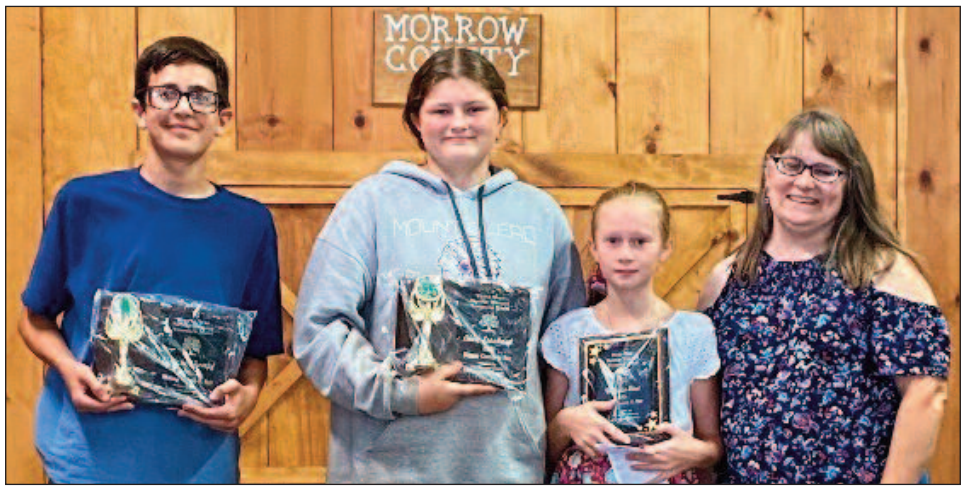
Julia Kennedy models her cape at The Ohio State 4-H Judging.

2021 Morrow Co. Beef Carcass Show Results

RANK	ID	HCW	BACK FAT	REA	%KPH	YG	BTRC%	MATURITY	MARBLING	QG	PRICE	
1	Emma Davis	760	0.5	12.3	1.5	3	63.97	A	md10	Ch+	246.90	
2	Caiden Daugherty	904	0.4	15.9	2.5	2.3	56.21	A	mt00	Ch	246.40	LIVE RES CHAMP
3	Mason Powell	878	0.5	15.4	2.5	2.7	55.36	A	sm30	Ch-	243.65	LIVE GRAND CHAMP
4	Larissa Coleman	849	0.9	12.2	2.0	4.5	41.02	A	mt80	Ch	236.15	
5	Dana Clinedinst	789	0.3	16.7	2	1.3	58.05	A	sl90	Se+	233.00	

HCW = Hot Carcass Weight, lbs.; Back Fat = External fat measurement (inches); REA = Ribeye Area (square inches); KPH = Kidney Pelvic and Heart Fat (internal fat); YG = Yield Grade; BTRC = Boneless Trimmed Retail Cuts (saleable product); Maturity: A = Young (youthful); QG = Quality Grade (Maturity + Marbling) Pr = prime; CH+ = top choice; CH- = low choice; Se+/- = Select; Price = Overall value / 100 lbs.

4-H NEWS



Genealogy Project members recognized!

L to R: Fletcher Gompf (4th year), Abby Leonhard (3rd year), Makayla Rhea (1st year), Ann Artrip (Morrow County Genealogical Society donor/Representative)

Money Project Members Recognized!

L to R: Jacob Anthony, Nida Shuff (Ag Credit Donor), William Fidler. Thank You Ag Credit!

Celebrating Morrow County Terrific Teens

Lydia Leonhard

Lydia has been an active member of the Johnsville Jolly Farmers & Farmerettes 4-H Club for the past 8 years and FFA for 2 years. Lydia has held offices of News Reporter, Secretary and currently our Vice President. She has won the county award for News Reporter for 4 years. Lydia is now serving on each club committee. Her project interests have included Dairy Cow, heifers and feeders, Beef Breeding and feeder and also clothing projects. She has participated at the Ohio State Fair with her projects and also with Public Speaking. Lydia is an active member of the Apostolic Christian Church Youth Group. She is a great role model for the younger members.

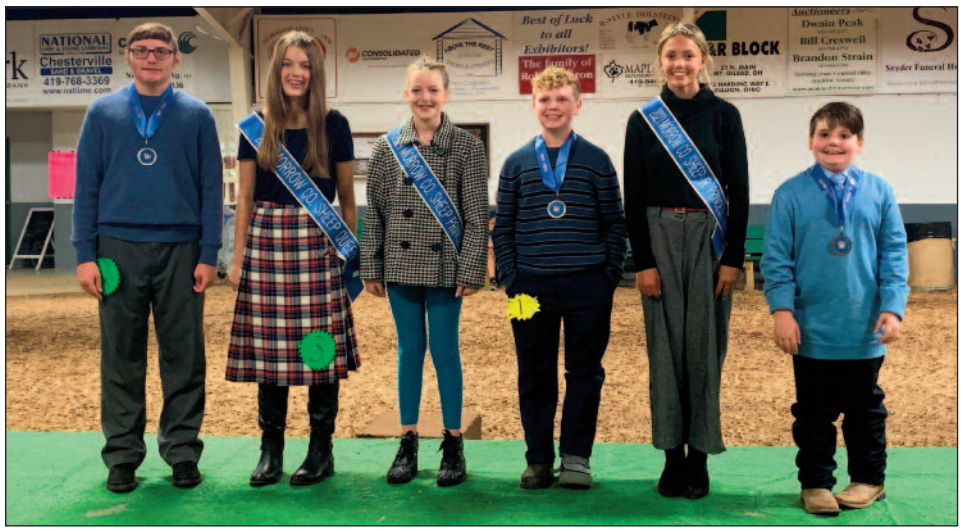
Elizabeth Leonhard

Elizabeth has been an active member of the Johnsville Jolly Farmers & Farmerettes 4-H Club for the past 8 years and FFA for 2 years. Elizabeth has held offices for Health & Safety, as well as our club Treasurer, in which she has won the county award for the past 3 years. She always seeks out a way to be helpful to those around her. Her project interests have included Dairy feeder & heifer projects, Beef Breeding, Market Steer and Vet Science. She has achieved much success in public speaking and has advanced to the State level. Elizabeth is also an active member of the Apostolic Christian Church Youth Group. Elizabeth speaks and exhibits with great confidence.

Congratulations to all our 4-H Clothing Project members!!

L to R: Gabby Brinkman, Sammi Brown, Ryan Brinkman, Josie Smith, Ester Kennedy, Emma Cooper, Lia Alexander, Mallory Trainer, Julia Kennedy, Candace Grimm (with mom Lindsey), Maizy Brinkman, Rebecca Johnson, Annabelle Cooper, Emily Zeger (Jr. Fair Board member), Cadie Hamilton (Jr. Fair Board member), and Amelia Bender

4-H NEWS



Sheep Royalty Awarded!!

L to R: King- Kasey Fiant, Queen- Maizy Brinkman, Princess- Gabby Brinkman, Prince- James Fiant, Jr Princess- Elizabeth Ruhl, Jr Prince- William Mattix

Poultry Awards

L to R: Heidi Johnson (Herdsman), Belladonna Threadgill (Beg.), Rebecca Johnson (Herdsman and Jr. Winner), Tyler Duckworth (Intermediate and Overall winner), Sage Whetnall (Sr.)

2021-2022 Specie Ambassadors

Congratulations to the following youth specie ambassadors selected and awarded at fair!

Goat Ambassadors:
Jr. – Abigail Hinkle; Sr. – Sophie Hinkle

Rabbit Ambassador:
Jr. – Josie Smith

Poultry Ambassador
Jr. – Laken Dye; Sr. – Sage Whetnall

Thank You for Your July 3rd Help!

Many thanks to the work done to have a 4-H food booth at the July 3rd Tractor Pull at the fairgrounds. We couldn't have done it without you! We apologize if we missed your name.

Betty and Steve May, Russ Mayer, Mandy Meadows, Cooper Nelson, Heidi, Rebecca, Samantha, Jackie and Paul Johnson, Madison and Darren May, Becky Miller, Amanda and Colson Allen, Michele and Makenzie Keifer, Lala Bishop, Tim Brake and Dale Huvler.

Celebrating Champion Project Winners and Herdsman Awards

Champion project awards are selected based on a youth's skillathon score and a Showmanship placing score. Each age group has an winner and then the top overall scores are recognized in each specie. Herdsman awards are selected by the Jr. Fair Department fair board members.

On this page and on the next, you will see these outstanding youth!

Goat Awards

L to R: Bethany Sayers (Herdsman) Sebastian White(Herdsman), Rylan Fiant (Beg.), Shalynn Irwin (Jr. and Overall), Laken Dye (Intermediate), Megan Beck (Sr)

Animal Project Book Awards!!

Beef/Feeders: Dana Clinedinst, Hunter Dye, Kendal Fulk, Paisley Fulk, Brooke Jagger, Natalie Jagger, Grant LaRoche, Jillian LaRoche, Lydia Leonhard, Jeffrey Sharp;

Goats: Emily Baker, Megan Beck;

Sheep: Sam Barnes, Cadie Hamilton, Emily Mattix;

Poultry: Garrett Baldwin, Gabrielle Brinkman, Kendall Thomas;

Rabbits: Amelya Bragg, Paige Cottrel, Alexa Gilliam, Makenna Gilliam, Brandon Hughes, Heidi Johnson, Rebecca Johnson, Bryce Moodispaugh, Alexis Peters, Cameron Sherman, Cora Sherman, Jose Smith, Kaylynn Smith, Katie Snider, Hayden Styer;

Horse: Emma Cooper;

Swine: Cassidy Healea, Griffin Healea, Autumn Holt, Jackson Keever, Emily Mattix, Matthew Ruhl

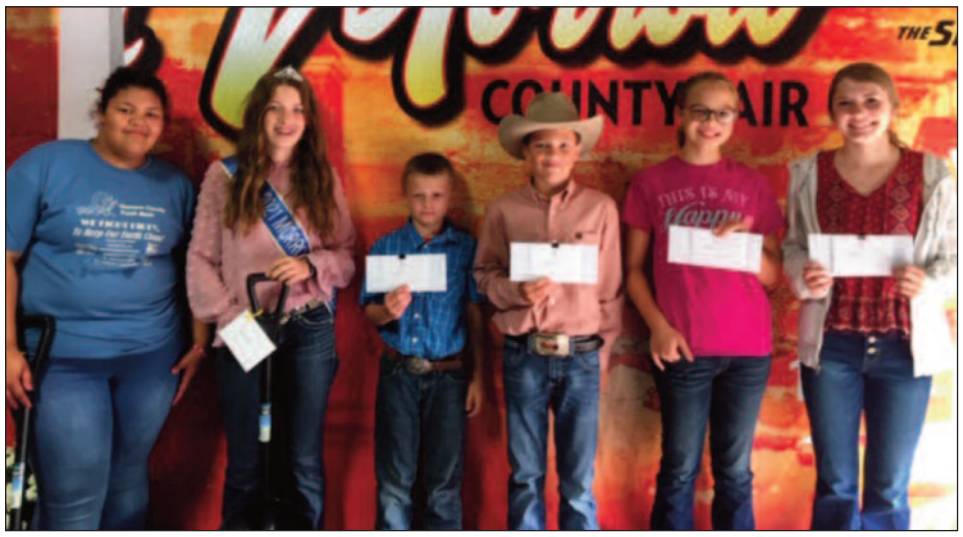
Rabbit Award

Hayden Styer – Sr. Rabbit Champion Project Winner

Rabbit Awards

L to R: Laryssa Coleman (Herdsman), Kaylnn Smith (Herdsman), Brody Eldred (Beg.), Heidi Johnson (Jr.), Emma Smith (Intermediate and Overall)

4-H NEWS



Sheep Awards

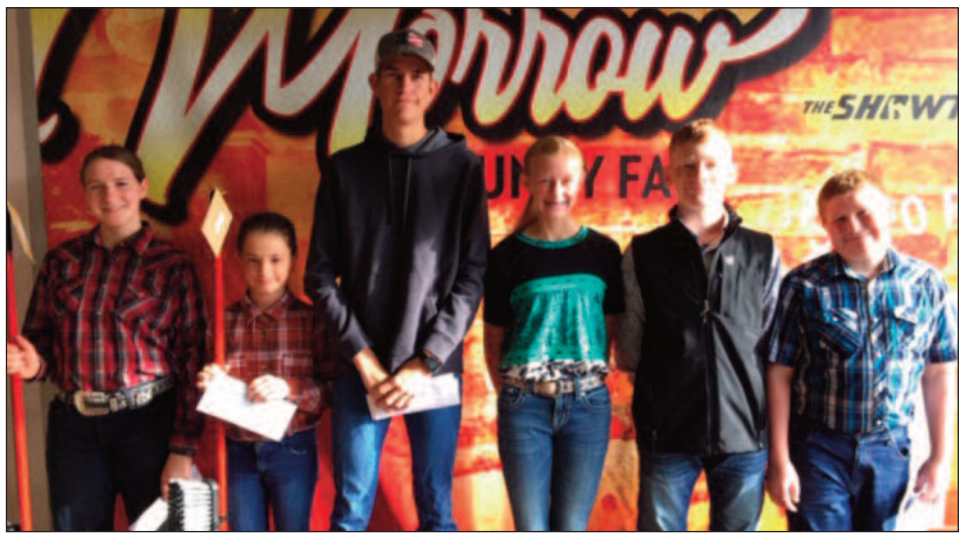
L to R: Leandra Gray (Herdsman), Maizy Brinkman (Herdsman), Parker Grimm (Beg.), Caiden Daugherty (Jr.), Victoria Kovacs (Intermediate), Riley Johnson (Sr. and Overall)

Dairy Awards

L to R: Hunter Dye (Sr. and Overall), Abby Leonhard (Intermediate and Herdsman), Levi Leonhard (Jr.), Janey Creswell (Beg.), Brenna Leonhard (Herdsman)

Swine Awards

L to R: Ella Albert (Herdsman), Max Eichorn (Herdsman), Luke Clark (Beg.), Kasey Clark (Jr.), Griffin Healea (Intermediate), Cassady Healea (Sr. and Overall)

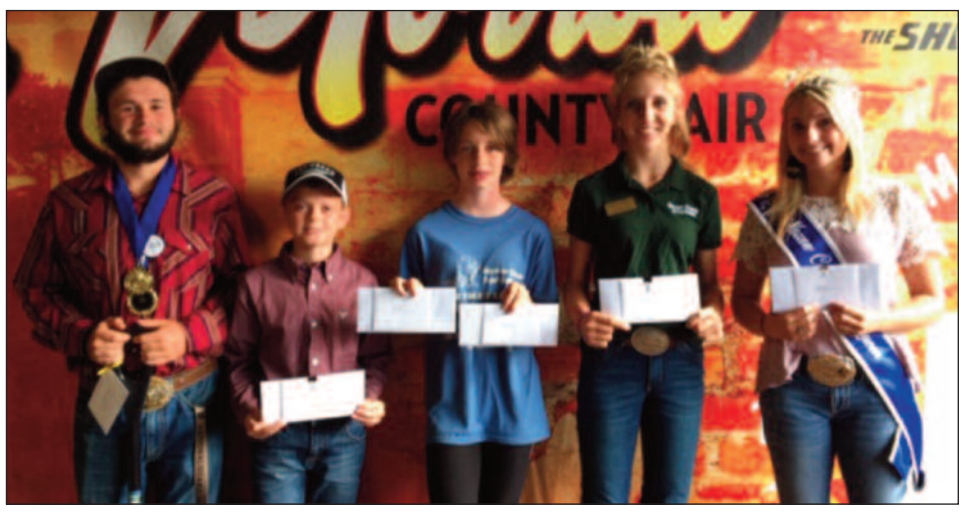


Feeder Calves Awards

L to R: Lydia Leonhard (Herdsman), Janey Creswell (Herdsman), Jed Adams (Sr. and Overall), Natalie Jagger (Intermediate), Grant LaRoche (Jr.), Levi Leonhard (Beg.)

Beef Awards

L to R: Caleb Reynolds (Herdsman), Colton Beck (Sr.), Bryce Cooper (Intermediate, Overall and Herdsman), Porter Beck (Jr.), Aubrey Prest (Beg.)



Horse Awards

L to R: Braden Gamble (Equine King and Herdsman), Tate Pollard (Beg), Faith Harris (Jr. and Overall Winner), Brooklin Poppell (Intermediate), Brooke Clapham (Sr.), Lyla Bishop (Herdsman, Not pictured)

FAMILY & CONSUMER SCIENCES

Teaching your tweens and teens to be media literate

There are more ways for people to get news and information than at any other time in history. This access is good and bad. On one hand, more information is almost always better than less. On the other, how do you sort through it all and determine the veracity of what you're reading or hearing?

The challenge is especially acute for teens and tweens who may still be developing critical-thinking skills as consumers. Ohio State School of Communication lecturers Kristie Sigler and Mary Sterenberg recently published a blog post that gives advice on how you can help teens and tweens navigate an increasingly dangerous information superhighway.

1. Stay involved.

The National Association for Media Literacy Education cautions parents not to back away from regulating their kids' media consumption as they hit tween and teen years. Tweens and teens naturally start to seek out independence and find their own identities during these years, but media shouldn't be the only voice telling our kids who they should want to be. Plenty of images online don't give young people a healthy or realistic model, and parents can be a voice of reality and reason.

NAMLE offers a free Parent's Guide to Media Literacy with information on helping kids build healthy relationships with media.

2. Identify credible sources.

Share this short video from PBS news with your tweens and teens to let another young person tell them how to navigate social media news. She gives tips on what sources should be considered "green lights" and what warning flags indicate fake news or advertising that might appear to be actual news.

One tip Sigler and Sterenberg give college students is that websites that end in .gov, .edu and .org carry more weight and credibility than a .com. NAMLE's Parent's Guide to Media Literacy also includes helpful examples of conversations you can easily imagine having with a tween and teen.

3. Teach the art of double-checking.

In its curriculum for middle and high school students, Common Sense Media uses a technique called lateral reading. This means encouraging our kids to corroborate information they find with another source (or more). We can suggest they look for a news item in multiple places to see if it is widely covered and also appears in trusted news outlets. If they find several articles on the same topic, they can compare the coverage on different sites and consider major differences in what information is provided.

4. Decode fake news and ads disguised as news.

Almost a quarter of adults have shared a false news story according to Canada-based Media Smarts, a center for digital and media literacy. We're all getting more and more news on social media, and we tend to ask fewer questions about credibility when we receive news from people we know.

We need to remind our tweens and teens (and ourselves) not to believe everything we read. Media Smarts offers an Authentication 101 tip sheet on how to recognize false information online.

5. Give a lesson in what makes news newsy.

Sterenberg started her career as a journalist, putting her in a position to really give her kids an earful about the 24/7 news cycle and news values. These aren't things the average parent knows. Media outlets choose news based on what they think their audience wants or needs to know most.

News values haven't changed much over the years, but the internet now makes news a 24/7 business. The pressure on media outlets to provide timely and accurate information all day every day can jeopardize research and fact-checking even among credible news sources.

This printer-friendly news values worksheet from the PBS Student Reporting Lab gives more detail on news values.

6. Reinforce family values.

As you discuss current events and other issues with your tweens and teens, bring your own family's values into the conversation. Sigler and Sterenberg wrote an entire post about how to define your family's values and why it's such a game-changer for parents of tweens and teens. Help your kids see how you filter what you see and read through the values you've chosen for your family, and how that impacts your response to information in the media.

7. Use politics as a lesson in media literacy.

Common Sense Media gives easy ways to talk to kids about politics and breaks them down elementary through high school in ways that are developmentally appropriate.

https://insights.osu.edu/life/media-literacy-teens

Why the rich go broke — and how you can avoid a similar fate

In the summer of 2019, NFL running back Adrian Peterson made headlines when he found himself in court because he couldn't pay his debts.

This is a football star who it is estimated will make close to $100 million in his career. So it was surprising to some when Peterson was reported to be unable to pay millions in debts. But it's not a unique story. Over the years, celebrities such as Nicolas Cage, Kim Basinger, Michael Jackson and MC Hammer have made headlines by falling on financial hardships.

"What can be even more shocking is hearing about lottery winners going bankrupt," said Matt Sheridan, senior lecturer in the Department of Finance at Fisher College of Business. "How does someone who won the Powerball go bankrupt? They had all the money in the world, right?"

Q So how does that happen? How does someone go from being a multimillionaire to broke?

A When you feel you have a ton of money, you live in the moment and think it's going to last forever. We are a society built off consumption. It feels better to spend today than save for tomorrow. That can lead to bad financial decisions.

Money is put into depreciating assets such as cars. And then every family member comes out with their hands out. Many will say money was stolen or misappropriated. In many of these cases, it's not solely that people make bad financial decisions, but that they do not know the quality of financial advice they are receiving.

A lot of financial advisors are not fiduciaries. Legally, a fiduciary must act in your best interests. A large percentage of financial advisors are salespeople and are held to a suitability standard. Most people don't realize that an advisor held to a suitability standard needs to ensure only that the investment decisions are suitable for the client's situation and does not require that the investment advice is in the client's best interest.

Q Is there anything the rest of us can learn from these stories?

A They highlight how big of an issue financial illiteracy is in the United States. It would be nice to have financial literacy classes required in high schools. I definitely think it should be required at a four-year college, especially with the fact that tuition has been increasing faster than inflation, and graduates are coming out of college with an average of $30,000 in student load debt and that's trickling down to society.

Q So this is a societal issue?

A We could improve a number of economic issues and reduce a lot of stress with better financial literacy. A leading cause of divorce is due to money problems. The number one cause of bankruptcy isn't losing a job, it is actually medical bills. These issues show that the majority of Americans are not financially prepared for negative economic surprises.

There are stats that show the average American can't handle a $500 emergency. That's a broken windshield. In addition, many of our financial institutions directly profit from financial illiteracy. Many of our consumer banks have become high-pressured sales organizations, and we have a system that allows for predatory lending (i.e., payday loans).

Q In the absence of those institutional financial programs, what do you recommend?

A • One, live below your means.

• Two, make sure you budget. Most people equate that with a four-letter word, but it's a strategic plan — you're telling your money what to do. Living within your means is important.

• Three, the phenomenon of wage creep — of whatever you make you'll spend — is real. Let's say you make $50,000 a year and are living paycheck to paycheck and you think, 'If I could just make $60,000 a year, that would solve everything.'

Then you get to $60,000 and you become accustomed to that and you're still in the exact same position where you're month-to-month.

Some of it is common sense, but unless you walk through how the brain thinks about money, it's easy to forget the advice. Wage creep, keeping up with the Joneses — these things are baked into us as human beings.

Q What are some strategies to get ahead financially?

A • Automating savings — save 15 percent of your pretax dollars. That can be put into retirement accounts. You can set it up so money is pulled out pretax and never hits your bank account.

• Have an emergency fund separate from your main checking account. If you're single, have enough money to cover three to six months of expenses; if you're married with dependents, nine to 12 months. That way if an emergency happens, you can protect your retirement savings and avoid high-interest debt.

• Focus on getting the big purchases right. Debt is a serious issue in this country — breaking it down among auto loans, mortgages, student debt, credit cards — and what makes the biggest difference is getting the big purchase right.

Your goal should be to get the lowest interest rate possible. So for a house, you can go to bankrate.com and it will show which banks are giving the lowest interest rate loans and the highest for savings accounts. And that's important.

Let's say the average house in the U.S. is $250,000. For a 4 percent mortgage, total interest is about $180,000. If you paid just 1 percent higher on a 30-year fixed loan, that's going to cost you an additional $53,000 over the course of that loan. That's a big deal.

https://insights.osu.edu/business/avoid-going-broke

FAMILY & CONSUMER SCIENCES

Don't kid around with your kidneys

By Dan Remley, PhD, MSPH, Associate Professor, Field Specialist, Food, Nutrition, and Wellness, O.S.U. Extension

When I was in my early 40s my ankles started to swell up. I was healthy in every other way with the exception of living with Type 1 diabetes. Through a urine and blood test, doctors were concerned that I had some indicators of a kidney disease. After a biopsy, I was diagnosed with idiopathic nephropathy. My kidneys were inflamed and damaged from an autoimmune reaction. Fortunately, doctors were able to treat it successfully through medicines and monitoring.

When we are healthy, we might not think about our kidneys. When we have a chronic disease like diabetes, we still might not think about our kidneys, as I didn't. We should though, as kidney disease is becoming more and more common today and is a potential complication of chronic diseases like diabetes. Kidneys play an important role in our bodies. They remove wastes, extra fluid, and acids to maintain a healthy balance of water, salts, and minerals. In addition, kidneys produce hormones that help control blood pressure, make red blood cells, and keep our bones healthy.

Conditions such as hypertension or elevated blood sugar can be harmful to the kidneys over time as they become damaged and leaky. Kidney disease is often called the silent killer because individuals can be asymptomatic at first. As kidney disease progresses, harmful electrolytes and waste start to build up in the body. In the final stages of kidney disease, dialysis is needed. Kidney disease can be detected by routine blood and urinalysis tests. It's imperative that people get checked if they are at high risk:

- Diabetes
- High blood pressure
- Heart (cardiovascular) disease
- Smoking
- Obesity
- Being Black, Native American or Asian American
- Family history of kidney disease
- Abnormal kidney structure
- Older age
- Frequent use of medications that can damage the kidneys

Fortunately, kidneys disease can be controlled or managed if it is detected early enough. Medications and behavioral changes can delay or prevent complications.

Following a low sodium diet, being physically active, smoking cessation, managing blood sugar, and maintaining or reducing weight are all kidney healthy behaviors.

How long is too long for holiday leftovers?

By Tracy Robinson

I typically make a large turkey (22 pounds) and plenty of trimmings because my family loves Thanksgiving leftovers. How many days after the holiday is the food safe to eat?

Wow, it sounds like your family really loves turkey, as do I!

Many people often wonder how long it is safe to eat leftovers, not just during the holidays, but at any other time as well. The recommended refrigerated storage time for different foods can vary by food type, but in general, the refrigerated storage time is quite short, said Sanja Ilic, Food Safety State Specialist, Ohio State University Extension. OSU Extension is the outreach arm of The Ohio State University College of Food, Agricultural, and Environmental Sciences.

For instance, the U.S. Department of Agriculture recommends storing cooked turkey no longer than three to four days. These short-but-safe limits will also keep refrigerated foods from spoiling.

Many consumers, however, do not practice safe leftover storage. In a recent study by the USDA, one-third of participants said they'd eat leftovers longer than four days after cooking.

This is a problem because after four days of refrigeration, the risk of foodborne illness causing bacteria growing on those leftovers increases, Ilic said.

"And because pathogen bacteria typically doesn't change the taste, smell, or look of food, you can't tell whether leftovers are safe to eat," she said.

And, if you choose to store the leftover turkey in the freezer, you can feast on that turkey, well, forever. While the taste and texture of the frozen meat will decline after about four months, turkey that is correctly prepped for frozen storage is safe to eat indefinitely, says the Food Safety and Inspection Service of the USDA.

The federal agency recommends that you remove the turkey from the bone, slice it into smaller pieces, and store it in small containers if you plan to eat it within four days. If you want to store the turkey longer, you should pack it into freezer bags or other airtight containers and place it in the freezer.

For the other leftover foods, you should cover and wrap them in airtight packaging, or seal them in storage containers for storage in the refrigerator. This helps to keep bacteria out, retain moisture, and prevent leftovers from picking up odors from other food in the refrigerator, the USDA says. Taking care to store leftovers correctly can help you avoid getting a bad case of foodborne illness.

"Remember that cooked foods have to be kept out of the temperature danger zone (40 to 135 degrees Fahrenheit)," Ilic said. "Turkey, like other cooked foods, should be kept warm (135 degrees Fahrenheit).

"Turkey can only be at room temperature for two hours. After that, it should be refrigerated."

According to the Centers for Disease Control and Prevention, Clostridium perfringens is one of the bacteria that can grow in cooked foods that are left at room temperature for too long after cooking. It also produces toxins that cannot be inactivated by reheating the foods.

In fact, C. perfringens is the second most common bacteria that causes foodborne infections. As many as one million individuals are affected by C. perfringens each year, according to the CDC. Perfringens food poisoning symptoms include severe abdominal cramps and pain, diarrhea, and flatulence within six to 24 hours after eating foods that contain high numbers of bacterial cells.

Another interesting fact: C. perfringens outbreaks occur most often in November and December, with many of the outbreaks linked to turkey and roast beef, according to the CDC.

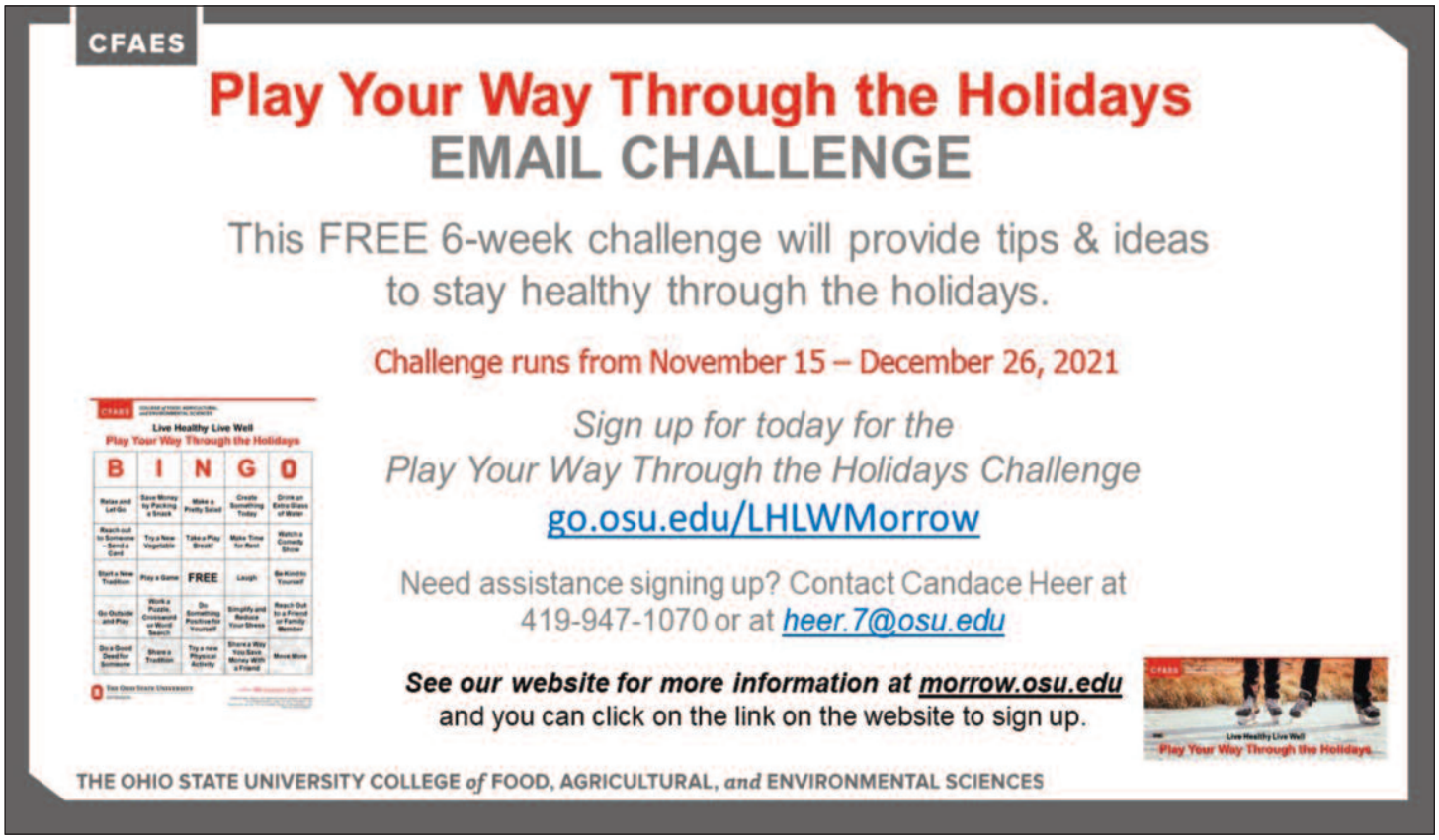
Here are some other tips from the USDA regarding leftovers:

- Keep leftovers in a cooler with ice or frozen gel packs if the food is traveling home with a guest who lives more than two hours away.
- Store stuffing separately from leftover turkey. Remove the stuffing from the turkey and refrigerate the stuffing and the meat separately.
- When reheating cooked foods, be sure to use a food thermometer to make sure they have been heated to an internal temperature of 165 degrees Fahrenheit.

Lastly, while you think of clever ways to serve up those leftovers, (turkey pot pie, anyone?) remember to keep food safety in mind so that you, your family, and any guests who want to feast on Nanna's special-recipe sweet potato casserole or other traditional holiday favorites, can do so safely.

Chow Line is a service of the College of Food, Agricultural, and Environmental Sciences and its outreach and research arms, OSU Extension and the Ohio Agricultural Research and Development Center. Send questions to Chow Line, c/o Tracy Turner, 364 W. Lane Ave., Suite B120, Columbus, OH 43201, or turner.490@osu.edu.

Reviewed by Sanja Ilic, Food Safety State Specialist, Ohio State University Extension



OSU EXTENSION CALENDAR OF EVENTS

OCTOBER 2021

27 Volunteer Appreciation "Drive Thru" Dinner, Morrow County Fairgrounds, 4:30-6:30 p.m.

29 4-H Teen Opportunities Application Due

NOVEMBER 2021

1 Jr. Fair Board, Fairgrounds, 7 p.m.

2 How To Create A Spring Bulb Container Garden, Ag Credit Building Conference Room, 6 p.m.

4 Dairy Board Meeting, Ag Credit Building Conference Room, 12 noon

6 Cattlemen's Meeting, Ag Credit Building Conference Room, 6 p.m.

11 Veterans Day – Office Closed

11 Pork Producers, Ag Credit Building Conference Room, 7 p.m.

17 Dining with Diabetes: Take Charge for the Holidays webinar 12 PM

18 Holiday Wreath Make & Take Workshop, 6 p.m., Perry Cook Memorial Library

18 Horse & Pony Committee, Ag Credit Building Conference Room, 7:30 p.m.

25-26 Thanksgiving Holiday – Office Closed

30 CARTEENS, Ag Credit Building Conference Room, 6:30-8:30 p.m.

DECEMBER 2021

3 Morrow County Chamber of Commerce Christmas Parade, 7 p.m., Mt. Gilead

4 Market Beef Pre-Fair (2022) Weigh-In, 8-11 a.m., Fairgrounds

6 Jr. Fair Board, Fairgrounds, 7 p.m.

6 Holiday Wreath Make & Take Workshop, 6 p.m., Ag Credit Building Conference Room

7 Holiday Wreath Make & Take Workshop, 6 p.m., Ag Credit Building Conference Room