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OHIO STATE UNIVERSITY EXTENSION

NORTHEAST OHIO AGRI-CULTURE NEWSLETTER

Your Weekly Agriculture Update for
Ashtabula, Portage and Trumbull Counties

January 31, 2023

Pesticide applicator training in Trumbull County.

In This Issue:

Hello Northeast Ohio Counties!

We’re excited to announce that registration is open for our 2023 Northeast Ohio Agronomy School! You can register at go.osu.edu/neoas23. We have a great lineup of speakers get you prepared for the growing season. Certified Crop Advisor, and pesticide credits will be offered. You can find more information in our newsletter this week.

You can also find more information about our upcoming programs including fruit tree pruning, fertilizer applicator training, chainsaw safety, and a lot more. Give us a call at 330-638-6783 if you have any questions about getting signed up.

Lee Beers
Trumbull County Extension Educator

Andrew Holden
Ashtabula County Extension Educator

Angie Arnold
Portage County Extension Educator

Northeast Ohio Agronomy School Returns March 28th, 2023

Source: www.go.osu.edu/neoas23

OSU Extension will be hosting the Northeast Ohio Agronomy School again in 2023 on March 28th!

Join us from 9:00 a.m.– 2:30 p.m. at the Colebrook Community Center in Colebrook, OH for a full day of agronomic programing. Cost for the program is $15/person and includes snacks, lunch, and handouts. We will also have Agronomy Guides, Field Guides, and Weed Control Guides available for purchase. Pesticide and CCA credits will be available for those in attendance. To register for this event, please visit the website: www.go.osu.edu/neoas23 Online registration is preferred, but checks can be mailed to 39 Wall Street Jefferson, OH 44047 with name and phone numbers of attendees. For more information about the event please call 440-576-9008. The registration deadline for this event is March 23.

A wide variety of topics will be discussed throughout the day including Soybeans Disease Update, Weather/Climate Update, Farm & Roadway Safety, Precision Ag, and Energy Outlook. Speakers for this year's event include Dr. Dee Jepsen, Dr. Horacio Lopez-Nicora, Brent Sohngen, Dr. Aaron Wilson, and Alan Leininger.

This workshop is brought to you by the OSU Extension offices in Ashtabula, Trumbull & Geauga Counties with support from W.I. Miller & Sons, Centerra Co-op, Schwartz Farms, and Ohio Corn & Wheat! Thank you to all our sponsors for making this event possible!

Sampling Corn Grain for Vomitoxin

By Pierce Paul
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2023-03/sampling-corn-grain-vomitoxin

Moldy grain and vomitoxin levels vary considerably within the grain lot. This is largely because the number of ears infected with *Gibberella zeae*, the fungus that causes Gibberella ear rot and produces vomitoxin in the grain, and number of infected kernels on a given ear within a field are highly variable. In addition, ears, and kernels with a similar appearance in terms of surface moldiness may have vastly different levels of internal fungal colonization, and consequently, different levels of vomitoxin contamination. In addition, pockets of warm, humid area in the grain lot coupled with moldy grain may lead to vomitoxin "hot spots" that can affect vomitoxin test results if sampling is inadequate. This may lead to price discounts or rejection of grain lots that

are less contaminated than test results suggest, or conversely, acceptance of lots that are more contaminated than indicated by the results. For instance, if a single sample is drawn and the location from which it is drawn happens to be a hot-spot, then the overall level of contamination of the lot will be overestimated. Conversely, if the sample misses the hot spots completely, vomitoxin contamination may be underestimated. A single sample is never sufficient when testing grain for vomitoxin or other mycotoxins.

Accurate testing depends on thorough and appropriate sampling and sample processing. Guidelines for grain sampling, based on research with scabby wheat and barley, are available from the United States Dept. of Agriculture Grain Inspection, Packers and Stockyards Administration (GIPSA). To collect a representative grain sample, 5-10 samples should be randomly collected from multiple locations in the bin or truckload. Samples taken only from the bottom, central or outer portions of the load or from the beginning and end of the grain stream will not provide an accurate estimate of toxin contamination of the lot. This is largely because lightweight, heavily contaminated kernels often end at the top of the pile/load and contaminated fines and dust settle at the bottom during transport and other forms of grain movement. For end-gate sampling, samples should be drawn from the entire width and depth of the grain stream. For sampling with hand or mechanical probes, multiple samples should be drawn from throughout the bin or truck, along an "X"-shaped pattern, for example. Once samples are obtained, bulked, and cleaned, the grain must be thoroughly mixed and ground uniformly, in a clean grinder, to resemble flour. Finer particle size increases surface area of the grain and enables efficient extraction of vomitoxin.

Source: modified from the following factsheet: https://ohioline.osu.edu/factsheet/plpath-cer-04.

Spinning food processing waste into 'gold'

By: Emily Caldwell
Source: https://cfaes.osu.edu/news/articles/spinning-food-processing-waste-%E2%80%98gold%E2%80%99

There is money to be made – and potential to reduce greenhouse gas emissions – by finding a second life for the potato peels, fried dough particles, cheese whey and other industrial food-processing waste products that routinely end up in landfills, according to new research.

Scientists have taken the first step at estimating the best large-scale uses for food processing waste, first analyzing its contents and, based on those findings, proposing production opportunities ranging from sustainable fuels, biogas and electricity to useful chemicals and organic fertilizer.

This work is known as valorization, or determining the potential value of something "that is otherwise valueless or even a drain on resources for a company – when you have to spend money to get rid of it," said Katrina Cornish, senior author of the study and professor of horticulture and crop science and food, agricultural and biological engineering at The Ohio State University College of Food, Agricultural, and Environmental Sciences (CFAES).

"The bioeconomy is becoming much more prevalent as a topic of conversation. In this case, don't get rid of food waste – make some money from it," said Cornish, also an Ohio Research Scholar of Bio-Emergent Materials. "Here, we're putting the base model in place for food manufacturers who are wondering, 'What can I do with this stuff?' Our flow chart guides them in a specific direction and prevents them from wasting time trying something we know won't work."

The study was published online recently in the journal *Science of the Total Environment*.

About 2% of the 80 billion pounds of food discarded annually in the United States is attributable to food manufacturing and processing – with food waste solids sent to landfills or composted, and liquids poured into sewers.

For the study, researchers collected a total of 46 waste samples, including 14 from large Ohio food processing companies, and divided them into four broad categories: vegetable, fat-rich, industrial sludge and starchy. They then characterized the sample contents' physical and chemical properties and tested some starchy wastes they determined were good candidates for fermentation into the platform chemical acetone. In the big picture, a waste type's energy density – based on calorific value – and carbon-to-nitrogen ratio were major determinants for its repurposing potential. For

example, fatty waste and mineral-based waste can be digested anaerobically to generate biogas, and soybean waste has enough energy density to be used for biodiesel production.

Low-calorific vegetable wastes aren't great for energy production, but they are plentiful organic sources of flavonoids, antioxidants and pigments that could be extracted and used in health-promoting compounds.

Based on the analysis of fibrous and mineral-rich wastes, Cornish has practiced what she's preaching: Her lab developed a method for turning eggshells and tomato peels sourced from Ohio food producers into fillers in rubber products, partially replacing petroleum-based carbon black in tires, for example.

"We aligned this work with the Environmental Protection Agency goal to reduce 50% of food loss and waste by 2030," said first author Beenish Saba, a postdoctoral researcher in food, agricultural and biological engineering at Ohio State. "So, how can you reduce this waste? Valorization is one method.

"In Ohio, corn is being grown to convert into biofuel, acetone and butanol, and here we've identified other sources already available as wastes that you can also convert into those products."

The proposed conversion technologies require energy to operate and also yield some secondary waste, but the valorization modeling lays groundwork for further "cradle to grave" analyses that would help quantify the environmental benefits of large-scale food – and other industry – waste reduction, Saba said.

While this study is a starting point, it ideally will offer incentive for food producers to consider the possibilities of making something out of waste products that are currently treated as trash, the researchers say.

"What we hope will happen is that food producers will actually look at their costs and their footprint, and see which of these approaches for their particular wastes will work best – which will be the least financially negative, and preferably profitable, and also minimize any carbon footprint," Cornish said. "In terms of global warming, any waste that can be valorized has a direct impact on global warming because it has a direct impact on emissions and on the ecosystem.

"This is all about improving energy security and lowering the financial and environmental impacts of food waste management," she said. "If your waste has

enough value for you to do something with it that prevents it from going into the landfill, that's a really good thing."

This work was supported by the U.S. Department of Agriculture National Institute of Food and Agriculture. Additional Ohio State co-authors include Ashok Bharathidasan and Thaddeus Ezeji.

Frost Seeding Clover: A Recipe for Success

By Chris D. Teutsch, S. Ray Smith, and Jimmy Henning, University of Kentucky
Source: https://u.osu.edu/beef/2023/01/18/frost-seeding-clover-a-recipe-for-success/

Legumes are an essential part of a strong and healthy grassland ecosystems (Figure 1). They form a symbiotic relationship with Rhizobium bacteria in which the bacteria fix nitrogen from the air into a plant available form and share it with the legume. Clover also increases forage quality and quantity and helps to manage tall fescue toxicosis. In the past, the positive impact of clover on tall fescue toxicosis has always been thought to simply be a dilution effect, but new research from the USDA's Forage Animal Production Unit in Lexingtonshows that compounds found in red clover can reverse vasoconstriction that is caused by the ergot alkaloids in toxic tall fescue. The primary compound found in red clover is a vasodilator called Biochanin A.

Figure 1. Clover and other legumes are an important part of sustainable grassland ecosystems. They form a symbiotic relationship with Rhizobium bacteria in which nitrogen from the air into a plant available form, improve nutritive value, and help to alleviate tall fescue toxicosis. (Photo by Chris Teutsch)

Clover stands in pastures thin overtime due to various factors and require reseeding every three to four years. There are several techniques for reintroducing clover into pastures including no-till seeding, minimum tillage, and frost seeding. Of these techniques, frost seeding requires the least amount of equipment and is the simplest to implement. Frost seeding is accomplished by broadcasting clover seed onto existing pastures or hayfields in late winter and allowing the freezing and thawing cycles to incorporate the seed into the soil (Figure 2 and 3). This method works best with red and white clover

and annual lespedeza. It is NOT recommended for seeding grasses or alfalfa. This article covers the important factors for successful frost seeding.

Frost Seeding Tips

• *Control broadleaf weeds*. Ideally, broadleaf weeds should be controlled prior to seeding legumes since most herbicides will damage clover seedlings. This is best accomplished by controlling weeds the season prior to renovation. More information on controlling weeds in pastures and hayfields can be obtained contacting your local extension office or consulting AGR-207 Broadleaf Weeds of Kentucky Pastures.

pastures in late winter or early spring. Using GPS guidance helps operators maintain equal spacing between passes and consistent speed (inset picture). (Photos by Chris Teutsch)

• *Soil test and adjust fertility*. For clover and other improved legumes to persist and thrive in pastures, an environment conducive for their growth must be created. This starts with proper soil fertility. Prior to frost seeding clover, soil test pastures and hayfields then lime and fertilize pastures according to the soil test recommendations.

• *Suppress sod and decrease residue*. The existing sod must be suppressed and plant residue reduced prior to seeding. The reduction in plant residue allows seed to reach the soil surface where it can be incorporated by freezing and thawing events. Sod suppression and residue reduction is best accomplished by hard grazing in late fall and early winter.

• *Ensure good soil-seed contact*. Good soil-seed contact is required for seed germination and emergence. In frost seedings, this occurs when freeze and thaw cycles form cracks in the soil surface, often referred to as a honeycomb (Figure 3).

• *Seed on proper date*. Frost seeding is best accomplished in late winter or very early spring (February and early March). Frost seeding is accomplished by simply broadcasting the seed on the soil surface and allowing the freeze and thaw cycles to incorporate the seed into the soil. Success with frost seeding can be enhanced by dragging the pasture as the seed is being broadcast or immediately after. Rolling the field with a corrugated roller after seeding will also improve success.

• *Use high-quality seed and adapted varieties*. Choose clover varieties that have been tested in Kentucky. The most current variety testing results can be found on the UK Forage Extension website or by visiting your local county extension office. Using the Long-Term Summary of Kentucky Forage Variety Trials, choose varieties that have

performed above average (>100%) for multiple site-years. This indicates that they are well adapted to conditions found in Kentucky. Use either a certified or proprietary seed to ensure high germination, good seed genetics, and low noxious weed content. Do NOT use common or VNS (Variety Not Stated) seed since there is no way to tell how it will perform in Kentucky.

• *Legume mixture for Kentucky*. In Kentucky, a good mixture for renovating pastures with is 6-8 lb/A of red clover, 1-2 lb/A of ladino or intermediate white clover. On rented farms or where soil fertility is marginal, adding 10-15 lb/A of annual lespedeza can be beneficial. Annual lespedeza is a warm-season annual legume that was used extensively in the past before producers had ready access to lime and fertilizer. In general, cool-season legumes (red and white clover) will be more productive under good growing conditions.

• *Use correct seeding rate*. Make sure to maintain and calibrate broadcast seeding equipment prior to planting (see video on KYForages YouTube Channel on seeder calibration). Seeding at too high of a rate needlessly results in higher seed costs. On the other hand, seeding at too low a rate results in weak stands and lower productivity.

• *Inoculate legume seed*. Most improved clover seed comes with a lime-based seed coating that contains inoculant. Make sure that the seed is fresh and has not been stored under adverse conditions. If the seed is not pre-inoculated, inoculate it with the proper strain of nitrogen-fixing bacteria prior to seeding. This is relatively inexpensive insurance that optimum nitrogen fixation will take place.

• *Check seed distribution pattern*. When using a spinner type spreader/seeder make sure and check your spreading pattern. In many cases small-seeded forages are not thrown as far as you think. This can result is strips of clover in your pastures rather than a uniform stand. Also check your seed distribution pattern. Single disk spinners often throw more seed to one side if not correctly adjusted.

• *Use GPS guidance to maintain a consistent distance between passes and speed*. It is often difficult to see where seed has already been broadcast and many ATV/UTVs are do not have a functioning speedometer. Using a portable GPS unit can reduce misses and overlaps and help the operator maintain a consistent speed (Figure 2).

• *Control post-seeding competition*. Not controlling post-seeding competition is one of the most common causes of stand failures. One of the best management practices is to leave cattle on pastures that have been overseeded with clover until the clover seedlings have germinated and are tall enough that the cattle start to graze them. Then remove animals from the pasture and allow the clover to reach a height of 6-8 inches. At that time the paddock can be placed back into the rotation. If the existing vegetation is not controlled, the new clover seedlings will be shaded out.

For more information on frost seeding contact your local extension agent or visit the UK Forage Extension Website.

Figure 3. Freeze and thaw cycles during late winter result in the formation of cracks in the soil surface often referred to as a "honeycomb". This heaving incorporates clover seeds into the soil and is commonly referred to as "frost seeding". (Photo by Jimmy Henning)

Frost Seeding at a Glance

- Legumes are an essential part of sustainable grassland ecosystems.
- Overseeding may be required to maintain and thicken stands.
- Frost seeding is the simplest method for reintroducing clover back into pastures.
- Control broadleaf weeds prior to frost seeding.
- Soil test and apply any needed lime or fertilizer before frost seeding.
- Suppress the existing sod and reduce residue with hard grazing in the fall and winter.
- Choose well adapted varieties of red and white clover using the UK forage variety testing data.
- Calibrate seeder and check spread pattern.
- Broadcast 6-8 lb/A of red clover and 1-2 lb/A of white clover that has been inoculated in February or early March.
- Control post seeding competition by grazing pastures until clover seedlings become tall enough to be grazed off.
- Put pasture back into rotation once seedlings reach a height of 6-8 inches.

The Trumbull Portage Summit County Farm Service Agency is Hiring

The Trumbull Portage Summit County Farm Service Agency (FSA) is accepting applications for a full time Program Technician position. The FSA is an exciting and rewarding place to start, build, and/or continue your career. Be part of our team and help support the well-being of Ohio agriculture and the American public.
FSA is seeking candidates with farming experience and/or knowledge to perform work in support of Ohio agriculture and farmers. This position offers benefits, including health

insurance that can be carried into retirement, 401(k) plan, paid holidays, vacation and sick leave, and flexible work schedules. Basic requirements include general office clerical work, record keeping, computer skills, organizational skills, and good public relations skills.
This position is responsible for:

- Carrying out office activities and functions pertaining to one or more of the program areas administered in the county.
- Interpreting and explaining procedures, program regulations and forms to producers and other agency personnel.
- Utilizing various web-based software applications to maintain producer data and processing automated forms.
- Using a high degree of initiative and judgment in planning and carrying out assigned tasks and resolving problems encountered.

Individuals who are interested in applying for these job opportunities will apply online through USAJOBS website at www.usajobs.gov. Applicants will enter the appropriate job announcement number below into the keyword search or click on the link below to complete and submit your application. The current Ohio County FSA vacancy is open and ready to accept applications.
Cortland, Ohio, CO-1101-4/5/6/7 - Announcement Number FSACO-11818023-23-OH-CF
Application deadline: 11:59 p.m. Eastern Time (ET): Monday, February 6, 2023
Applicants interested in learning more about these positions should establish a user profile through www.usajobs.gov. Profiles offer the opportunity for interested individuals to search for positions by location and/or job titles, upload searchable resumes, and receive automated vacancy announcement updates.
Contact Alexa Allison at 330-637-2046 if you have specific questions regarding the position.

Extension Talk – The Chicken or the Egg; Raising Prices, Raise Questions

By: Andrew Holden, ANR Educator – Ashtabula County

Hello Ashtabula County! Have you noticed that the usual small talk topic of the weather or sports has shifted recently? It seems like everyone I speak to recently wants to talk eggs. More specifically the price of eggs.

If you have found yourself in asking why a dozen eggs cost more than a gallon of gas or have recently considered buying laying hens for some quick income, make sure to read this article! Today I will briefly discuss what is going on with the egg market, what to consider before buying your own hens, and what is involved in selling your eggs.

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Egg Prices

According to U.S. Bureau of Labor Statistics, Large, Grade A eggs cost on average $4.25 a dozen in December, a 138% increase from $1.79 in December of 2021. When it comes to the recent explosion of egg prices, there are many factors at play. Let's consider two aspects of egg economics (or egg-onomics) at play, supply and demand.

On the supply side, national egg inventory is down significantly. According to the USDA's Egg Market Overview, last week we were at 23% lower shell egg inventory than this week last year. Avian flu was a major contributor to this decline in supply. We saw an estimated 58 million birds killed due to the avian flu in 2022 according to the CDC. General inflation of input cost and continued supply chain issues also contribute to supply decreases around the U.S.

On the demand side, we generally see a spike in egg demand around the holidays. The good news being that demand goes down in the time between now and Easter. The USDA even mentions in their egg report, "*Consumer demand for shell eggs continues decline as newly minted diets fade just as holiday bills are appearing in mailboxes across the country at a time when shell egg prices remain at unappetizing levels in retail outlets relative to other proteins".*

In addition to the supply and demand challenges, another impact to egg prices comes from the companies selling the eggs. Over half of the nation's eggs are produced by the top 10 largest egg companies. Cal-Maine Foods is the nation's largest egg producer and controls around 20% of the retail egg market with over 46,000,000 hens. The corporation just reported their gross profits were up more than 600% over the same quarter in the prior fiscal year. Reports like these have spurred questions of price gouging by taking advantage of the already difficult economic conditions facing the egg market.

Looking forward, as demand lowers and our laying bird supply increases, the expectations are that prices will start to come back down. The USDA report shows that prices have already started to drop across the country.

Buying Chickens

You may be thinking that now is the time to buy chickens. It does seem nice to never have to worry about high egg prices again. Maybe even turning a profit selling to neighbors and co-workers now that eggs are worth their weight in gold. While farm fresh eggs are regarded as better tasting and chickens are fun to watch in the back yard, I urge you to consider the cost involved before looking to layers to make an income. Even disregarding the cost of the coop, fencing, waterers, and feeders, and all the other start-

up cost you will incur, the cost of feed and time involved may end up being higher per dozen of eggs than what you see at the store.

With prices projected to drop down in the coming months, by time your birds are laying, egg prices may not be as sky high. Owning chickens has many advantages as I previously mentioned, but the financial return on investment, if there is one, can be a long time coming. That being said, if you are still interested in having chickens, we have many resources in our office and would be happy to assist you in your endeavor. Breed, coop design, run design, and how many to buy are all important things to consider and we can assist in making those decisions.

Selling Eggs

Finally, if you do have chickens, or are looking to get some, and would like to sell your eggs, I will share some information on the requirements to do so in Ohio. Licensing and regulations differ depending on method of sale.

If selling eggs only, directly to consumers on the premises, you are not required to register with the Ohio Department of Agriculture. As long as you have under 500 birds you also do not need to get a license from the local health department. You are also not required to include a label or refrigerate the eggs.

Things change if you plan to sell at a farmers' market. To sell at a market, ODA registration is voluntary, license from health department is required, as well as labeling and refrigeration.

If selling eggs exclusively wholesale (restaurant, grocery store, institution, hotel, etc.), ODA registration and health department license are not required, but labeling and refrigeration is.

Eggs that require labeling must include; Name and address of the packer, An accurate statement of the quantity, Label "ungraded" or "unclassified" and "mixed size", Pack date, and the statement: "SAFE HANDLING INSTRUCTIONS: To prevent illness from bacteria: keep eggs refrigerated, cook eggs until yolks are firm, and cook foods containing eggs thoroughly".

This information was sourced from the OSU Factsheet, Selling Eggs in Ohio: Marketing and Regulations (https://ohioline.osu.edu/factsheet/anr-59) . More information can be found by reading the entire factsheet or calling our office.

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CFAES provides research and related educational programs to clientele on a nondiscriminatory basis. For more information, visit cfaesdiversity.osu.edu

Lee's Monthly News Column

Hello Trumbull County! Solar development has been a hot topic throughout Ohio this past year. There are many large solar developments in the state that are hundreds or thousands of acres in size. Locally, interest in solar development has been at a much smaller scale at under 100 acres. These smaller solar projects are also commonly known as "community solar". Most of the solar development projects are planned for private property, and a payment is made to the landowner from the solar company on a yearly basis. The lease agreement between the landowner and the solar company details the payment terms, length of the lease, and special considerations unique to the property. Some of these lease payments can be quite large, or at least advertised with a larger dollar figure, which makes the option worth considering.

When it comes to solar development, size does matter. Larger solar projects, also known as utility-scale, must be approved by the Ohio Power Siting Board (OPSB) which sets out regulations for development and decommissioning the project. The OPSB regulations provide a framework that landowners can use as a starting point in the development of the lease with the solar company. Smaller developments do not have the same level of oversight of the OPSB which can be good or bad. In theory, without the same level of OPSB oversight as larger developments smaller solar projects can be developed at a quicker rate. On the flip side, there can be a larger risk to the landowner.

If you have been approached by a solar development company to lease your property, you should not sign any agreement without first consulting with a lawyer. Your lease agreement will be your best course of action should something go wrong with the project. When discussing with your lawyer you should consider how will funds be set aside for the decommissioning process, payment terms, property access, any property tax payments that will need to be corrected, and a lot more. You should also read OSU's Farmland Owner's Guide to Solar Leasing. You can find a PDF copy at this link (https://farmoffice.osu.edu/sites/aglaw/files/site-library/Farmland_Owner%27s_Guide_to_Solar_Leasing.pdf) or you can contact our office for a hard copy.

Legal and financial considerations are relatively easy to resolve, but neighbor and community relationships can be more challenging. A quick internet search will show

several examples of neighbor relationships being soured due to solar development. Even the solar panels at Kent State Trumbull caused some uproar on social media when they were installed. If good fences make good neighbors, I'm not sure if solar panels will have the same effect. Ohio H.B.501 recently gave zoning authority for solar projects over to local government, so the neighbor concerns may have serious impact on development. Several large projects were recently denied due to community concerns.

When the solar panels are installed, there may be significant changes to your land that may not be easily reversed. If roadways, concrete piers, or other excavation is required, you will see the scars on the land for generations. Despite best efforts to restore the land, it will never be as it is today. That is important to know if you plan for the land to stay in the family, especially if the plan is to return it to productive crop land. Just about any farmer can tell you where an old house foundation, railroad bed, tree line, or fence row used to be due to differences in crop yields.

If you are thinking about leasing your property for solar, make sure you understand the risks and benefits. The financial benefits can be significant, but so can the risks. OSU Extension has several resources available for solar leasing, and I would be happy to walk you through those resources if needed.

OSU Extension Trumbull County has several events planned for this winter. If you need your Ohio Fertilizer Applicator Certification, we will be hosting a 3-hour certification session on February 22 from 6-9PM at our office in Cortland. Cost for the class is $35/person.

We will be partnering with Hartford Orchard again for our March Into Pruning program on March 4th from 9-11AM. During this class you will learn how to prune fruit trees, and you get to practice on the trees at Hartford Orchard. Cost for this class is $15/person.

If you have any question about solar leasing or our upcoming programs call our office at 330-638-6783, visit Trumbull.osu.edu, or follow OSU Extension Trumbull County on Facebook. Stay safe!

Lee Beers can be reached at beers.66@osu.edu or 330-638-6738

Upcoming Extension Events

Pesticide and Fertilizer Applicator Trainings

February 1 – 1PM to 5PM – Geauga County Extension Office
March 1 – 1PM to 5PM – Portage Soil and Water
March 21 – 1PM to 5PM – Ashtabula County Extension Office
March 30 – 5PM to 9PM – Online ZOOM

New Applicator Pesticide Training
Monday, February 13, 2023 – 1:00 PM to 4:00 PM - Geauga County Extension Office

Trumbull Farmer's Learning Series – Weather, Climate, and Agriculture
February 14 – 9AM to 10AM – Online ZOOM

Ohio Fertilizer Applicator Certification
February 22 – 6PM to 9PM – Trumbull County Extension Office

March Into Pruning
March 4 – 9AM to 11AM – Hartford Orchards LLC, Trumbull County

Small Farm Conference
March 11 – 9AM to 3PM – OSU Mansfield Campus

2023 Northeast Ohio Agronomy School
March 28 – 9AM to 3PM – Colebrook Community Center, Ashtabula County

Cow-Calf School
April 14 – 3PM to 7PM – Novak Townline Farm, Trumbull County

Chainsaw Safety and Maintenance
April 22 – 9AM to 12PM – Trumbull County Extension Office

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FARMER'S LEARNING SERIES
CLIMATE SMART AGRICULTURE

Photo Credit: Investigate Midwest

Weather, Climate, and Agriculture

Weather is such a vital force in our lives and something that we experience daily. Evidence clearly demonstrates that our weather patterns, or climate, are changing. But the changes we experience depend greatly on where we live. In this presentation, we will discuss the observed changes in temperature and precipitation over recent decades, from a global overview to local changes right here in Ohio. We will highlight the key challenges facing farmers and natural resources managers across the state, from impacts on planting and harvesting decisions to increased stressors including pest, disease, and nutrient management. We will discuss ways folks are individually and collectively adapting to and mitigating future expected changes. Of course, we will take a look at the rest of what winter has in store and provide an outlook for the spring and summer seasons.

Join us as Aaron Wilson, PhD of OSU Extension discusses weather, climate, and agriculture. Register for this event at the following link: **https://osu.zoom.us/meeting/register/tJUqf-2trjgoH9YK246JlRsCGL44GZQv8KyF**

When: February 14th, 2023
9:00 am – 10:00 am

THE OHIO STATE UNIVERSITY EXTENSION

NRCS Natural Resources Conservation Service

Trumbull Soil and Water Conservation District

CFAES

OHIO STATE UNIVERSITY EXTENSION

Fertilizer Applicator Certification Training

FEBRUARY 22, 2023 6 – 9 P.M.

Do you apply fertilizer to 50 acres or more for crops that are primarily for sale? If so, you are required by Ohio law to attend a training session or take a test to become certified. OSU Extension Trumbull County is offering a training session (no test) that will meet all certification requirements. **Pre-Registration is required a week in advance.** Cost for this training session is $35/person and includes training materials, and handouts. To register online with a credit or debit card please visit https://go.osu.edu/2023trumbullfact. You can also register by completing the back portion of this flyer and mail with check to the address below. Please make checks payable to Ohio State University Extension.

Location: OSU Extension Trumbull County, 520 West Main St, Cortland, OH 44410

Cost: $35/person

Contact information: 330-638-6783 or beers.66@osu.edu

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OHIO STATE UNIVERSITY EXTENSION

Geauga County

New Pesticide Applicator Training

February 13th, 2023

A Private Pesticide Applicator's License is required for those who want to apply restricted-use pesticides on his/her own land (or rented land) and produce an agricultural commodity. ODA requires each private applicator to take & pass the CORE (safety) test and any category(ies) that correspond to the crops he/she produces. **This training will focus primarily on the CORE test.** There are 7 categories in which one may be certified via testing through ODA: 1-Grain and Cereal Crops, 2-Forage Crops and Livestock, 3-Fruit and Vegetable Crops, 4-Nursery and Forest Crops, 5-Greenhouse Crops, 6-Fumigation, and 7-Specialty Uses.

The 3-Hour New Pesticide Applicator Training will cost $35 per person.

Date: Monday, February 13, 2023
Time: 1:00 PM to 4:00 PM
Location: Geauga Co. Extension Office, 14269 Claridon Troy Rd, Burton, OH 44021
Cost: $35 per person includes CORE training materials, handouts, and light refreshments. Category study materials can be purchased at an additional cost at each Extension Office.
Register: Mail a check made payable to OSU Extension, stop in the office, or call to reserve. RSVP by February 6th to secure your spot.
For more information call: 440-834-4656

THE OHIO STATE UNIVERSITY
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CFAES

The Ohio State University Extension Portage County

Starting Your Garden From Seed

COST: $10 per person
DATE: February 16th, 2023
TIME: 5:00 pm – 7:00 pm
LOCATION: Oakwood Conference Room 101,
705 Oakwood St. Ravenna, OH 44266

Scan QR Code for Registration or Call the Extension Office

Do you want to learn to start your own garden from seed? Please join us on February 16th to learn all the tips and tricks to successfully start your own garden from seed. We will also be handing out free seed packets and will be giving away a seed starting kid.

Scan QR code for payment

For Registration: Scan Top QR Code or call the Extension Office at 330-296-6432
Payment: Scan Top QR code, or submit payment via **cash or check to**
705 Oakwood St. Suite 103 Ravenna, OH 44266 by Tuesday, February 14th

CFAES

The Ohio State University - Portage County Extension Office

Small Fruit for Home Gardeners

Thursday, February 16th: 6:00PM Virtual Workshop

Join us virtually for this wonderful opportunity as the Portage Master Gardeners team up with Portage SWCD to host this workshop. Our presenter for the evening will be Dr. Gary Gao. Dr. Gao is a small fruit specialist at OSU's South Center where his research focuses on grapes, blueberries and brambles. Dr. Gao can also provide information on growing less common fruit crops including chokeberries, elderberries, gooseberries, goji berries, hardy figs, and hardy kiwis. There will be an opportunity for questions at the end of the presentation.

To register for this free workshop visit:

https://Smallfruitsforhomegardeners.eventbrite.com

OR

email Lynn at lvogel@portageswcd.org or call (330)235-6815

This event is provided by the Portage County Master Gardener Volunteers

CFAES

OHIO STATE UNIVERSITY EXTENSION

Natural Resource Professionals

Save The Date!

Wednesday March 15th

9:00 am - 3:30 pm

Ohio State University Mansfield Campus

Online registration:

go.osu.edu/maple2023 **Registration: $20**

Introduction to Maple Syrup Production

This workshop is for natural resource professionals that need to get a better grasp of what it takes to turn a woods into a functioning maple syrup operation.

Learn how to assess a woodlands potential, what equipment will be needed, what options are available to a landowner interested in maple sugaring, and what else is needed to establish an operation as an income opportunity.

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COVER CROP ROUNDTABLE 2023

Benefits and Challenges of Growing Cover Crops

When: Thursday February 9th: 6:00 PM

Where: Portage SWCD Meeting Room, 6970 State Route 88, Ravenna OH 44266

What: Join us for a light meal and a discussion about the benefits and challenges of growing cover crops in Northeast Ohio. Open forum so please bring your questions!

Registration: To help us plan for food, please register by emailing Anthony at: alerch@portageswcd.org or call (330)235-6811

PORTAGE SOIL & WATER CONSERVATION DISTRICT

OHIO FARM BUREAU EST. 1919 PORTAGE COUNTY