Hello Northeast Ohio Counties!

Snow and temperatures keep falling, with more winter weather in the forecast! How cold did it get at your place last Saturday? I had -13 degrees in Pierpont, can anyone beat that?

Make sure to check out the ‘Upcoming events’ section at the end of the newsletter, and the flyers at the end, for all the OSU and agricultural programs coming up in the next few months.

Stay warm and have a good week!

Lee Beers  Andrew Holden  Angie Arnold
Trumbull County  Ashtabula County  Portage County
Extension Educator  Extension Educator  Extension Educator
OSU Extension Lake County is Hiring an ANR Educator

Are you interested in a career with OSU Extension working with agricultural producers in Lake County, OH? We are currently seeking applications for the Lake County Agriculture and Natural Resources Extension Educator. This position will provide overall leadership to developing and conducting a proactive applied research and education programming in commercial horticulture/agriculture and natural resources to meet current and future needs of residents in Lake County. This position will work closely with the commercial horticulture industry employing integrated pest management (IPM) strategies to manage plant pests and disease, and promote environmental safety.

You can read the full details and apply at the link below. If you have any questions about this position please contact Lee Beers at 330-638-6783 or beers.66@osu.edu.


Online Options for Pesticide Recertification Available

With the rapid rise in COVID cases throughout Ohio, the NE Ohio Extension team will be offering two ZOOM based online pesticide and fertilizer recertification sessions. These will be in addition to the in-person events. The ZOOM options are available to everyone that would prefer to attend virtually instead of in-person. The first online option will be February 8th from 8:30AM to 12:30PM, and a second online opportunity will be March 30 from 5-9PM. If you have already scheduled an in-person session and would like to change to an online option please call the OSU Extension Trumbull Office ASAP at 330-638-6783.

If you prefer the in-person event, do not worry as the previously planned sessions will be held without disruption. We do recommend wearing masks and maintaining a safe physical distance for the in-person sessions. If you have any questions, please call Lee Beers at 330-638-6783.
The Ohio State Extension Offices of Northeast Ohio is excited to offer The Northeast Ohio Agronomy Breakfast - Weekly Webinar Series. Start the morning off right with a quick one-hour presentation each Wednesday starting on February 23, 2022. Each webinar will cover a different topic and offer time to ask questions to the speakers. There is no cost to attend, and everyone is welcome to join. You can register easily online at Register at: https://u.osu.edu/neoab/ For any question or for help with registration or zoom, contact Andrew Holden at the Ashtabula County Extension Office at 440-576-9008.

This series will feature a variety of experts on a variety of important agronomic topics, including grain bin fires and safety, farm drainage, corn leaf diseases, and 2022 weather outlooks!

Schedule:
- February 23rd, 9:00 AM – Peter Dahl speaking on Grain Bin And Dryer Fires
- March 2nd, 8:00 AM – Jason Hartschuh speaking on Corn Leaf Disease and Tire Pressure
- March 16th, 8:00 AM – TBA
- March 23rd, 8:30 AM – Dr. Vinayak S. Shedekar on Farm Drainage
- March 30th, 8:00 AM – Dr. Aaron Wilson on 2022 Weather Outlook

Register at: https://u.osu.edu/neoab/
**AEDE Economic Outlook and Policy Webinar Series**

Source: [https://farmoffice.osu.edu/blog/tue-01182022-924am/do-you-need-plan-future-your-farm](https://farmoffice.osu.edu/blog/tue-01182022-924am/do-you-need-plan-future-your-farm)

Will prices keep rising or will we finally catch a break in 2022? Uncertainty and rising prices have become fixtures in our financial and economic decision making of late. Join our expert economists for a new webinar series as we explore what's going on in key commodity and labor markets, as well as the supply chain. This series features a different AEDE economist breaking down an interesting topic every month throughout spring.

Our first webinar “The price of putting food on the table: Consumer food price and inflation,” with Dr. Zoë Plakias, will be next Wednesday, 2/2 from Noon – 1 p.m. [Click here to register](https://farmoffice.osu.edu/blog/tue-01182022-924am/do-you-need-plan-future-your-farm). To view the full series schedule and register for the below webinars, [click here](https://farmoffice.osu.edu/blog/tue-01182022-924am/do-you-need-plan-future-your-farm).
**Fertility Calculator for Ohio Recommendations**

By: Greg LaBarge, CPAg/CCA  
Source: [https://agcrops.osu.edu/newsletter/corn-newsletter/2022-02/fertility-calculator-ohio-recommendation](https://agcrops.osu.edu/newsletter/corn-newsletter/2022-02/fertility-calculator-ohio-recommendation)

A Microsoft Excel spreadsheet has been developed to support nutrient management education programs provided by Ohio State University Extension and for users who want to generate their own recommendation or compare recommendations provided to them to the *Tri-State Fertilizer Recommendations for Corn, Soybeans, Wheat, and Alfalfa, 2020*. The spreadsheet is designed to be compatible with Excel version, Excel 1997-2003 or later.

The tool generates recommendations for the following crops:
1. Corn  
2. Corn-Silage  
3. Soybeans  
4. Wheat (Grain Only)  
5. Wheat (Grain & Straw)  
6. Alfalfa  
7. Grass Hay  
8. Grass/Legume Hay

Overview of spreadsheet features:
- There are 21 data lines.  
- Data can be copied from another spreadsheet or within the spreadsheet  
- User controls whether recommendations are build/maintenance or maintenance only for phosphorus (P) & potassium (K) recommendations.  
- User can select when a field the critical level used for corn/soybean rotations or wheat, alfalfa, or grass legume hay for P recommendations.
• Can select a shorter or longer buildup period than standard 4 year for P & K.
• P & K recommendations are displayed with buildup and maintenance requirements separately.
• Total fertility need can be determined for a 1-, 2- or 3-year application on P & K Recommendation page.
• Lime recommendations are developed using target final soil pH and tillage depth.
• User can compare cost of two lime sources on lime recommendation page.
• User can determine total cost of P & K fertilizer needed to meet the nutrient recommendation.
• User can determine total cost of Lime needed in the recommendation developed.

The spreadsheet is available at: https://go.osu.edu/ohiofertilitytool
A printed User Guide is available at: https://go.osu.edu/ohiofertilitytoolguide
A video demonstration at: https://go.osu.edu/ohiofertilitytoolvideo

A New Enlist Labels – When Enlist is Outlawed, Only Outlaws...
By: Mark Loux
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2022-02/new-enlist-labels—when-enlist-outlawed-only-outlaws......

Sometimes you’d like the s**t to stop hitting the fan just long enough to get cleaned up, but you can’t get a break. Like when you’re in the middle of an endless pandemic, a worldwide shipping fiasco, herbicide scarcities and price increases, and parts shortages. And just when you had it worked out to use Enlist herbicides on Enlist soybeans for 2022 so you wouldn’t have to deal with dicamba, their use is no longer legal in your county. We’re trying to find something reassuring to say here, but there’s not much. The USEPA issued a new seven-year registration for Enlist One and Enlist Duo, valid through January 2029. Changes include a revised application cutoff for soybeans, “through R1” that replaces “up to R2” on previous labels, and the addition of a slew of spray nozzles to the approved nozzle list. The most significant change for Ohio is that due to changes in Endangered Species information, Enlist One and Enlist Duo cannot be used in 12 Ohio counties: Athens, Butler, Fairfield, Guernsey, Hamilton, Hocking, Morgan, Muskingum, Noble, Perry, Vinton, and Washington. We contacted Corteva
to see if this was likely to change anytime soon, and got no assurances of this, although the PR information they have distributed indicates it is possible.

This really couldn’t happen at a worse time for growers in these counties. We lack solid information on herbicide availability and price, and it’s a fluid situation, but it appears that glyphosate and glufosinate can be in short supply, and prices high. Glyphosate resistance in key weed species makes us dependent on POST soybean herbicide systems based on use of glufosinate (Liberty etc), dicamba (XtendiMax/Engenia), or 2,4-D (Enlist One/Duo). The Enlist system allows use of glyphosate, glufosinate, and 2,4-D, and combinations of these. While Enlist soybeans are tolerant of other 2,4-D products, Enlist One and Duo are the approved 2,4-D products for all POST applications to Enlist soybeans, and any preplant or preemergence applications that occur less than 7 days before planting or anytime after planting. As far as we know, this prohibition of use does not apply to legal uses of other 2,4-D products. Some things to consider here:

- Some growers/applicators were planning on omitting glyphosate from burndown and/or POST applications. In the Enlist system, this increases the overall importance of the 2,4-D in these applications. Where the Enlist products cannot be used, revaluation of the mixture is warranted. It may be necessary to use glyphosate, or an alternative 2,4-D product in the burndown (with a 7-day wait to plant), or other herbicides, such as Sharpen or Gramoxone.

- The most obvious replacement for Enlist products in POST applications is glufosinate since glyphosate won’t control most populations of ragweed, waterhemp, or marestail. Growers going this route should check on availability and price immediately, since supply seems to be finite. For those in the 12 counties who are unwilling or unable to use glufosinate, the Enlist soybean essentially becomes a RoundupReady soybean with respect to herbicide use.

- Most users of glufosinate supplement the grass control by including either glyphosate, or a POST grass herbicide such as clethodim. Glufosinate is weak on barnyardgrass and yellow foxtail, volunteer corn, and large grasses in general.

- While spray volume and nozzle type are not that critical for effectiveness of 2,4-D and glyphosate, glufosinate requires these to be optimized to maximize activity. Most growers tell us that for glufosinate, 20 gpa works better than lower spray volumes. The nozzles that work well to minimize off-target movement of Enlist products may not be optimum for glufosinate.

- Where 2,4-D cannot be used in the POST, the effectiveness of the residual herbicides used becomes more important. Glufosinate applied alone or with just a grass herbicide can be less effective on certain broadleaf species, and large weeds
in general, compared with mixtures of 2,4-D with glufosinate or glyphosate. We recommend using residual herbicides at planting, and possibly increasing herbicide rates and the overall complexity of the mixture. Information we have received from Corteva includes several documents with explanation of label changes and restrictions, and supplemental labels for Enlist One and Enlist Duo. Aside from this, we don’t know any more than anyone else.

**OSU’s decision tool can help with Farm Bill elections**

It’s time to make elections for the Farm Bill’s ARC/PLC programs for the 2022 crop year, and **OSU’s Farm Bill Decision Tool** can help. We have a newly updated software program to assist producers with evaluating ARC/PLC scenarios and options. The tool is available on our [Decision Aids page here](https://farmoffice.osu.edu) or through your county Extension Educator. The deadline to enroll and make amendments is **March 15, 2022**, so now is the time to do your analysis!

**Timely Frost Seeding Improves Pasture, Hay Stands!**
By: Chris Penrose
Source: [https://u.osu.edu/beef/2022/01/19/timely-frost-seeding-improves-pasture-hay-stands/](https://u.osu.edu/beef/2022/01/19/timely-frost-seeding-improves-pasture-hay-stands/)

In the past as we’ve talked about the virtues of frost seeding, we’ve suggested it’s something that is best to occur in February or March during the period when the ground is freezing and thawing almost daily. In recent years freezing and thawing temperatures haven’t always happened after mid-February. Since it’s the freezing and thawing over time that gives frost seeding a great chance to work, the time for frost seeding may be upon us soon.

![Figure 1](image)

Figure 1 If and when the seed can reach the soil in late winter while there is still freezing and thawing activity, clover can fill in bare spots and add to the density of the pasture stand.
Frost seeding is a very low cost, higher risk way to establish new forages in existing fields by spreading seed over the field and let the freezing and thawing action of the soil allow the seed to make “seed to soil” contact allowing it to successfully germinate. When you see soils “honeycombed” in the morning from a hard frost, or heaved up from a frost, seed that was spread on that soil has a great chance to make a seed to soil contact when the soil thaws. I think the two biggest reasons why frost seeding fails is people wait too late to frost seed and the seed never makes good contact with the soil. I have heard some say that they like to “ overseed” or just spread seed over an established stand. Let’s face it, if the seed does not land on the soil but on existing living or dead vegetation, it does not have a chance to successfully germinate: you need exposed soil. In light of the recent snow that’s arrived and/or expected throughout Ohio, it’s important to also note that frost seeding can be done over a thin layer of snow, however it’s important to realize that rapid snow melt can cause the seed to be washed away from where it’s needed.

There’s still ample time to assess and seed potential fields. I am especially fond of frost seeding endophyte infected fescue fields where producers have issues with cattle grazing them during the summer. If you can get cattle to graze these fields in the winter, the quality and palatability is actually good, and in many cases, better than hay you may be feeding. The endophyte levels are very low now and the quality is maintained better than other forages. I actually have one predominately fescue field still stockpiled to turn cows ready to calve in to in early March weeks to have good feed and a thick sod. If you have a field you want to frost seed, if possible, abuse the field without causing environmental issues, break up the sod and expose the soil. Once that is done, go ahead and frost seed. We will rapidly run out of time for a likely successful seeding, so start as soon as possible. Typically you can start at the beginning of February through mid-March. My opinion is that once we get into March, the chance of success starts to drop depending on the weather.

The age old question is what to plant. The seed that has the best chance to germinate and become established is red clover. For years I recommended medium red clover but I am now convinced that that no matter what we plant, use improved varieties. Advancement in genetics is amazing. Numerous studies confirm that those varieties will last several years longer in most conditions. Forage trials at OSU show there a several red clover varieties that have high yields and stand percentages 60% or greater after four years. These are more expensive varieties than some of the common, shorter-lived varieties, but I think it is worth it.

Red clover is a heavy round seed that has a better chance of making soil contact then a light flatter seed. Dr. Garry Lacefield, retired Extension Forage Specialist from University of Kentucky says that clovers, seeded in the right conditions will germinate most years. Grasses are more “hit or miss” germinating about half of the time. With alfalfa, the odds are even less. Frost seeding alfalfa into an alfalfa stand rarely works as
existing alfalfa is toxic to new plants. If an alfalfa field is starting to thin out, an option to extend the life of the stand would be to frost seed red clover.

Another reason to plant clover, especially red clover is the high seedling vigor. It is tolerant of a wide range of soil pH and fertility conditions and is more drought tolerant than white clover. The advantage of frost seeding a legume like red clover is that legumes “fix” nitrogen typically in excess of their own needs, providing added fertility to other plants, improving an improved stand. Once legumes become established in a stand of grass and compose 25-30% of the stand, there is no need to provide additional nitrogen, reducing fertility costs.

If you choose to frost seed grass, which will do best? Studies by Dan Undersander, Forage Specialist from University of Wisconsin indicate that perennial ryegrass will do best (note that it grows best in Ohio north of I-70), followed by orchardgrass, then timothy. Other studies note that annual ryegrass will work good compared to other grasses.

Some other tips to help succeed include mixing with granular fertilizer when you spread the seed. The coarse fertilizer, when mixed with clover seed will “scour” the seed coat and help in germination. Keep in mind that when you use a broadcast spreader, the fertilizer will travel twice as far as seed, so plan accordingly unless you want a striped field of clover. Over the years, I have heard people applying anywhere from 2-10 pounds of seed per acre with the lower amount applied more frequently.

Finally, grasses tend to grow earlier in the spring than legumes so where available, you could consider a light, early grazing of the grass as the clovers try to get established. You may lose some clover from the cattle trampling some new seedings, but if done right, you will set back the grass and allow the remaining clovers to establish while the grasses recover from the grazing. If you have fields with exposed soils and get the seed on early enough, I like your odds of a successful frost seeding.

**Upcoming Extension Programs**

The following programs have been scheduled for NE Ohio farmers. Check back each week as more programs are added to the calendar

**Private Pesticide/Fertilizer Applicator Training**  
February 2, 2022 – Geauga County  
March 1, 2022 – Portage County  
March 28, 2022 – Ashtabula County
Fertilizer Certification Training
February 16, 2022 – Trumbull County Extension Office

NE Ohio Agronomy Breakfast Webinar Series Register at https://u.osu.edu/neoab/

February 23rd, 9:00 AM – Peter Dahl speaking on Grain Bin And Dryer Fires
March 2nd, 8:00 AM – Jason Hartschuh speaking on Corn Leaf Disease and Tire Pressure
March 16th, 8:00 AM – TBA
March 23rd, 8:30 AM – Dr. Vinayak S. Shedekar on Farm Drainage
March 30th, 8:00 AM – Dr. Aaron Wilson on 2022 Weather Outlook

Ohio Small Farm Conference
March 12, 2022 – OSU Mansfield Campus

Backyard Chickens
March 16, 2022 – Trumbull County Extension Office

Women in Ag Conference
March 25, 2022
The Ohio State Extension Offices of Northeast Ohio is excited to offer The Northeast Ohio Agronomy Breakfast - Weekly Webinar Series. Start the morning off right with a quick one-hour presentation each Wednesday starting on February 23, 2022. Each webinar will cover a different topic and offer time to ask questions to the speakers. There is no cost to attend, and everyone is welcome to join. For any question or for help with registration or zoom, contact Andrew Holden at the Ashtabula County Extension Office at 440-576-9008.

Schedule:
- February 23rd, 9:00 AM – Peter Dahl speaking on Grain Bin And Dryer Fires
- March 2nd, 8:00 AM – Jason Hartschuh speaking on Corn Leaf Disease and Tire Pressure
- March 16th, 8:00 AM – TBA
- March 23rd, 8:30 AM – Dr. Vinayak S. Shedekar on Farm Drainage
- March 30th, 8:00 AM – Dr. Aaron Wilson on 2022 Weather Outlook

Location: Online via Zoom  
Cost: Free
More info: Contact Andrew Holden at 440-576-9008 or Holden.155@osu.edu

Register at: u.osu.edu/NEOAB
Fertilizer Applicator Certification Training

FEBRUARY 16, 2022  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 ________. 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 OSU 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

trumbull.osu.edu
2022 Fertilizer Applicator Training  
Trumbull County

Name ____________________________________________

Address _______________________________________________________________________________

City __________________ State _____  Zip____________________

Phone __________________ Email __________________________

Number of People Attending: __________ X $35/person __________

_____________________________________________________________________________________

Please make checks payable to: OSU Extension

OSU Extension Trumbull County, 520 West Main Street, Cortland, 
OH 44410

For questions, contact Lee Beers at 330-638-6783 or by email at 
beers.66@osu.edu
WINTER WORKSHOP SERIES

- **Greenhouse Workshop**
  - **Date**: Friday, January 21 | 10 a.m. – 1:30 p.m.
  - **Location**: Mahoning County Extension Office
  - **Cost**: $35 per person (includes CORE and Category 5 Pesticide Credits)
  - For more information: [https://go.osu.edu/mahogreenhouse](https://go.osu.edu/mahogreenhouse)

- **Farm Management Workshop: Preparing your Farm for 2022**
  - **Date**: Thursday, January 27 | 6:30 p.m.
  - **Location**: Mahoning County Extension Office
  - **Cost**: $10 per person
  - **Speaker**: Dianne Shoemaker, Extension Field Specialist
  - For more information: [https://go.osu.edu/farmmgmt22](https://go.osu.edu/farmmgmt22)

- **Weather Workshop: How do Weather Trends Affect my Farm?**
  - **Date**: Thursday, February 3 | 6:30 p.m.
  - **Location**: Mahoning County Extension Office
  - **Cost**: $10 per person
  - **Speaker**: Aaron Wilson, PhD, Extension Climate Specialist
  - For more information: [https://go.osu.edu/weather22](https://go.osu.edu/weather22)

- **Pond Management Workshop**
  - **Date**: Thursday, February 10 | 6:30 p.m.
  - **Location**: Columbiana County Extension Office
  - **Cost**: $10 per person
  - **Speakers**: Pete Conkle and Blaine Winger, NRCS/SWCD
  - For more information: [https://go.osu.edu/pondmgmt22](https://go.osu.edu/pondmgmt22)
WINTER WORKSHOP SERIES CONT.

- **Horse Hay Management Workshop: “Hay is for Horses”**
  - **Date:** Thursday, February 17 | 6:30 p.m.
  - **Location:** Mahoning County Extension Office
  - **Cost:** $10 per person
  - **Speaker:** Clif Little, OSU Extension Educator
  - For more information: [https://go.osu.edu/horsehay22](https://go.osu.edu/horsehay22)

- **Ag Policy and Legislative Update**
  - **Date:** Thursday, February 24 | 6:30 p.m.
  - **Location:** Mahoning County Extension Office
  - **Cost:** $10 per person
  - **Speakers:** Jill Ritchie, Farm Service Agency; Jenna Reese, Ohio Farm Bureau Director of State Policy
  - For more information: [https://go.osu.edu/agupdate22](https://go.osu.edu/agupdate22)

We look forward to seeing you this winter!

For any questions, please call 330-533-5538
CHOOSING BEEF SIRES FOR AND RAISING TERMINAL DAIRY CALVES

Educational programming will focus on the use of beef x dairy calves raised to supply the beef market. Information will include breed selection, calf health, nutrition, and economics from birth to harvest. This event is being offered for only $10 and preregistration is requested.

Schedule of Events

- 9:30 AM Registration
- 10:00 AM Introduction to the Beef x Dairy Topic (Tara Felix)
- 10:15 AM Selecting Beef Genetics in Dairy Herds (Andrew Sandeen)
- 11:00 AM Calf Health and Nutrition (Cassie Yost)
- Noon Lunch
- 1:00 PM Growth Performance and Meat Quality Expectations for Beef x Dairy (Tara Felix)
- 2:00 PM Economics of Beef x Dairy (Cheryl Fairbairn)
- 2:30 PM Q&A

February 10
Franklin County Ext. Office
Ag Heritage Building
185 Franklin Farm Lane
Chambersburg, PA 17202
Local Contact: Cassie Yost
clm275@psu.edu
717-263-9226

February 24
Mercer County Ext. Office
463 North Perry Highway
Mercer, PA 16137
Local Contact: Camren Maierle
clm6630@psu.edu
724-662-3141

March 2
Lancaster Farm & Home Center
1383 Arcadia Road
Lancaster, PA 17601-3184
Local Contact: Cheryl Fairbairn
caf2@psu.edu
610-696-3500

REGISTER ONLINE:
extension.psu.edu/choosing-beef-sires-for-and-raising-terminal-dairy-calves

OR CALL:
877-345-0691

SPONSORED BY:
PennState Extension
Small Farm Conference
Registration Options

By Mail: Use form below (check only)
Online: go to https://go.osu.edu/osufarmconference2022

Mail-In Registration Form
DEADLINE FOR REGISTRATION is March 4, 2022

Please use one form per person
Choose the Sessions you will be attending

Choose the Date:
_____Full Conference $75.00

Sessions
Indicate session # per time slot (see track schedules for #’s)
9:15 a.m. Session# ______
10:45 a.m. Session# ______
1:15 p.m. Session# ______
2:30 p.m. Session# ______

Choose the Sessions you will be attending

Name ________________________________
Address ________________________________
City ______ State __________ Zip Code ______
County __________
Phone ________________________________
Email ________________________________

Lunch will be provided and served.

Do you have any food dietary restrictions?
_____yes  _____no
Please describe your restriction:

♦ Do NOT Send Cash
♦ There will be no refunds
♦ No registration confirmation with mail-in registrations
♦ Make Checks Payable to OSU

Please send completed form to:
OSU Extension Morrow County
5362 US Highway 42, Suite 101
Mt. Gilead, OH 43338

https://go.osu.edu/osufarmconference2022

Due to changing COVID restrictions conference may have to held virtually. Participants will be notified IF changes are made.
Conference Schedule

Saturday, March 12th
8:00 a.m.—8:30 a.m. Check-in/Registration
8:30 a.m.—9:00 a.m. Opening Comments
9:15 a.m.—10:30 a.m. Multiple Sessions
10:45 a.m.—11:45 a.m. Multiple Sessions
12 noon LUNCH
1:15 p.m.—2:15 p.m. Multiple Sessions
2:30 p.m.—3:30 p.m. Multiple Sessions
3:30 p.m. Evaluations and Close of the Day

For further information on registration, sessions, and more go to https://go.osu.edu/osufarmconference2022

Track 1: Horticulture
1. 9:15 a.m. Micro. Farm at OSU Mansfield
   Amanda Stanfield- Owner of Grow Fourth Urban Farm
2. 10:45 a.m. Controlled Environment Agriculture/Hydroponics
   Cherie Kubota- Ohio State University
3. 1:15 p.m. Growing and Selling Cut Flowers
   Lyndsay Biehl- Producer/Owner Wild Root Flower Co.
4. 2:30 p.m. Chain Saw Safety
   Dave Apsley and Lee Beers

Track 2: Produce Production
5. 9:15 a.m. Starting and Managing an Orchard
   Anne Joudrey- Apple Hill Orchard Owner
6. 10:45 a.m. “Super Berry” Production and Marketing
   Gary Gao- OSU South Centers
7. 1:15 p.m. Invasive Pests in Fruit Production
   Ashley Leach- Ohio State University
8. 2:30 p.m. Growing in High Tunnels
   Matthew Kleinhenz- Ohio State University

Track 3: Natural Resources
9. 9:15 a.m. Timber Harvesting and Marketing
   Kathy Smith- OSU Extension
10. 10:45 a.m. Managing Your Woodland for Wildlife
    Marne Titchenell- OSU Extension
11. 1:15 p.m. Landscaping for Wildlife
    Marne Titchenell- OSU Extension
12. 2:30 p.m. Maple Syrup Production
    Les Ober- OSU Extension

Track 4: Livestock
13. 9:15 a.m. Water and Fencing for Livestock
     Ted Wiseman & Chris Penrose- OSU Extension
14. 10:45 a.m. Basic of Forage and Pasture Management
     Christine Gelley- OSU Extension
15. 1:15 p.m. Maximizing Reproduction of a Small Beef Herd
     Garth Ruff- OSU Extension, Dean Kreager- OSU Extension
16. 2:30 p.m. Health Considerations for Sheep and Goats
     Tony Nye- OSU Extension, Brady Campbell- OSU Extension

Track 5: Specialty Crops
17. 9:15 a.m. Growing Hops
    Mike and Jenny Napier
18. 10:45 a.m. Shiitake Mushroom Production
    Jeff Wilkinson- Local Producer
19. 1:15 p.m. Getting Started in Hemp Production
    Lee Beers- OSU Extension
20. 2:30 p.m. Secrets from the Pawpaw Patch
    Ann Channon- OSU Extension

Track 6: Farm Management
21. 9:15 a.m. Choosing an Enterprise
    Mike Hogan- OSU Extension
22. 10:45 a.m. The Government is Actually Here To Help
    Mike Hogan, David Marrison, Tony Nye- OSU Extension
23. 1:15 p.m. Is Farming for You? Introduction to Farm Business Management
    David Marrison- OSU Extension
24. 2:30 p.m. Purchasing a Used Tractor
    Jason Hartschuh- OSU Extension

Track 7: Marketing
25. 9:15 a.m. Creative Marketing
    Shelly Detwiler- Mitchell's Berries
26. 10:45 a.m. Choosing the Best Market Channel for Your Farm Success
    Christie Welch- OSU South Centers
27. 1:15 p.m. Marketing Your Produce to Wholesale Buyers
    Benji Ballmer- Yellowbird Food Shed
28. 2:30 p.m. Developing a Marketing Plan
    Mary Griffith-

Track 8: Miscellaneous
29. 9:15 a.m. Selling Meat at Markets and Off Your Farm
    Liz Looker- Producer, Angela Dinneen ODA
30. 10:45 a.m. Growing Ginseng
    Karam Sheban - Rural Action
31. 1:15 p.m. Navigating the World of Cottage Food Regulations
    Emily Marrison- OSU Extension
32. 2:30 p.m. Bury Seeds Not Stress
    Bridget Britton, OSU Extension
The Ashtabula County Beekeepers Association, Ohio State Master Gardener Volunteers of Ashtabula County, Ashtabula Soil and Water Conservation District, and the Ashtabula County Metroparks bring you another fantastic set of webinars for the 2022 winter series of our award winning Northeast Ohio Pollinators Symposium.

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