

NORTHEAST OHIO AGRI-CULTURE NEWSLETTER

Your Weekly Agriculture Update for
Ashtabula, Portage and Trumbull Counties

January 17, 2023



Calving Season in Ashtabula County

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Hello Northeast Ohio Counties!

We have many interesting articles in today's newsletter, along with many educational programs for you to add to your 2023 calendar! Check out the article on 2023 Farm Bill decisions and please contact me if you have any questions about which decision is best for your operation.

A New Applicator Training for obtaining your private pesticide license will be offered next week at the Ashtabula County on Thursday, January 26 from 1:00 PM to 4:00 PM. This class will prepare you for taking the ODA Pesticide License test. The cost is \$35, and you can sign up by calling 44-576-9008!

Lee Beers
Trumbull County
Extension
Educator

Andrew Holden
Ashtabula County
Extension
Educator

Angie Arnold
Portage County
Extension
Educator

John Deere and Farm Bureau Address Right-to-Repair

By: Robert Moore

Source: <https://farmoffice.osu.edu/blog>

As farm machinery has become more complex and reliant on computer software, the right-to-repair issue has become a prominent issue in the farm community. Farmers are sometimes prevented from repairing their own equipment because they do not have access to needed diagnostic tools or are otherwise barred due to embedded software. Farmers have voiced their criticism of manufacturers as right-to-repair has become a prominent issue in the agricultural community.

In an effort to address the right-to-repair issue, the American Farm Bureau Federation (AFBF) and John Deere recently entered into a [memorandum of understanding](#) (MOU) in which Deere agrees to provide access to documentation, data and diagnostic tools used by the company's authorized dealers. This development was likely a response to pressure that Deere and other manufacturers were under to allow right-to-repair. New York recently passed a right-to-repair law and Senator Tester introduced right-to-repair legislation in the U.S. Senate earlier this year.

Software User License

The issue of right-to-repair is related to a user's license. The term "license" has a specific meaning under the law. Someone who holds a license for a product is allowed to use the product but does not own the product. In 2016, Deere began using a user's license for the software in its machines. Essentially, when a customer would buy a machine from Deere, the buyer had ownership of the steel but did not own the software that makes the machine operate.

Software licensing has its roots in 1980's software. The burgeoning consumer software industry initially sold its software to customers and retained no rights to the software. These software developers began to see purchasers of their software reverse engineer the software and develop slightly different software that resulted in the same functionality. In essence, a person could buy the software, make a change to the software to potentially avoid copyright infringement, but end up with software that did the same thing as the originally purchased software. This process essentially allowed for the stealing of intellectual property from the software developer, but the developers had little legal recourse.

To overcome this loss of intellectual property, software developers began selling a license to use the software. The software license allowed the purchaser to use the software, but the software developer retained ownership. The license agreement expressly prohibited reverse engineering or using the software in other ways that jeopardized the software developer's intellectual property. By keeping

ownership, software developers could take legal action against people who tried to copy and resell the software.

The software license worked reasonably well for many years. The vast majority of software users were oblivious to the license agreement and continued using the software as they always had. The licensing arrangement help protect the software developers' intellectual property. However, in the last twenty years or so, software began to be embedded in electronic devices blurring the lines between the software and the hardware. A new tractor seems to be as much a computer running software as it does a power unit pulling implements.

Right-to-Repair

The integration of software into farm machines came to light in 2016 when John Deere implemented a [software user license agreement](#) to presumably protect its intellectual property. Its licensing agreement clearly stated that reverse engineering or copying of the software is prohibited. However, Deere seems to have taken it one step further. Farmers and independent repair shops were prohibited from having the diagnostic tools and manuals required to make repairs. This denial of diagnostic tools effectively made it impossible for farmers and independent mechanics to make repairs on some John Deere equipment. Many people in the farm community expressed their concern about the license agreement and saw it as scheme to keep the repairs, and the fees from those repairs, all within the John Deere dealer network. Farmers wanted to be able to repair their own equipment, or use other independent third parties, to potentially save money and to have more timely service, especially during busy times like planting and harvest.

Due to pressure from a combination of the new legislation in New York, the right-to-repair legislation introduced in the Senate and dissatisfaction expressed by farmers, John Deere likely felt it was best to make some concessions with farmers while keeping ownership of the software. This speculation is supported by the fact that AFBF agreed to *"refrain from introducing, promoting, or supporting federal or state "Right to Repair" legislation that imposes obligations beyond the commitments in this MOU."* So, it seems AFBF agreed not to pursue right-to-repair legislation in exchange for Deere loosening its prohibitions of right-to-repair.

While it is impossible to foresee all the future implications for an agreement like the one between AFBF and Deere, it does seem that it is a reasonable compromise. Farmers can now have access to diagnostic tools to allow for self-repairs while Deere keeps ownership of its software. Critics argue the agreement does not go far enough and Deere still has too much control over self-repairs. We will see over the next few years if the agreement is, in fact, a reasonable compromise.

Memorandum of Understanding

It is noteworthy that the agreement between AFBF and John Deere is memorialized within a Memorandum of Understanding. For those not familiar with an MOU, there may be some curiosity as to its legal context. MOUs are most often used at the

beginning of a negotiation to ensure that both parties are starting with the same understanding of their current positions, to make clear what each party is seeking from the negotiation and that it is worthwhile for both parties to move forward. Unlike a contract, an MOU is generally not legally enforceable. Because the agreement is an MOU, neither AFBF nor Deere is legally bound to its terms. Neither party has legal recourse if the other party does not honor its commitments as outlined in the MOU. If either party reneges on its commitments, the party at fault will likely receive criticism in the public opinion realm but will likely have no legal liability.

Conclusion

The John Deere software licensing issue is a good example of how new technology can require new strategies and concepts in the law. Prior to the 1980's, copyright law had worked just fine for books and movies but it did not work well for the new medium of software. So, the concept of software licenses was developed to address the threats to the software industry. Twenty years later when the line between software and hardware began to blur, software licenses were again modified to protect the developer of the software. In the case of John Deere, perhaps they went a bit too far in enforcing their licenses. The threat of unfavorable legislation and criticism from customers probably caused John Deere to walk back their stance on prohibition of diagnostic tools to allow self-repairs. Hopefully, the agreement between John Deere and AFBF has found a reasonable middle ground that benefits all parties.

Rice breeding breakthrough to feed billions

Source: University of California - Davis. "Rice breeding breakthrough to feed billions." ScienceDaily. ScienceDaily, 10 January 2023.

www.sciencedaily.com/releases/2023/01/230110160152.htm

First-generation hybrids of crop plants often show higher performance than their parent strains, a phenomenon called hybrid vigor. But this does not persist if the hybrids are bred together for a second generation. So when farmers want to use high-performing hybrid plant varieties, they need to purchase new seed each season.

Rice, the staple crop for half the world's population, is relatively costly to breed as a hybrid for a yield improvement of about 10 percent. This means that the benefits of rice hybrids have yet to reach many of the world's farmers, said Gurdev Khush, adjunct professor emeritus in the Department of Plant Sciences at the University of California, Davis. Working at the International Rice Research Institute from 1967 until retiring to UC Davis in 2002, Khush led efforts to create new rice high-yield rice varieties, work for which he received the World Food Prize in 1996.

One solution to this would be to propagate hybrids as clones that would remain identical from generation to generation without further breeding. Many wild plants can produce seeds that are clones of themselves, a process called apomixis.

"Once you have the hybrid, if you can induce apomixis, then you can plant it every year," Khush said.

However, transferring apomixis to a major crop plant has proved difficult to achieve.

One Step to Cloned Hybrid Seeds

In 2019, a team led by Professor Venkatesan Sundaresan and Assistant Professor Imtiyaz Khanday at the UC Davis Departments of Plant Biology and Plant Sciences achieved apomixis in rice plants, with about 30 percent of seeds being clones.

Sundaresan, Khanday and colleagues in France, Germany and Ghana have now achieved a clonal efficiency of 95 percent, using a commercial hybrid rice strain, and shown that the process could be sustained for at least three generations.

The single-step process involves modifying three genes called MiMe which cause the plant to switch from meiosis, the process that plants use to form egg cells, to mitosis, in which a cell divides into two copies of itself. Another gene modification induces apomixis. The result is a seed that can grow into a plant genetically identical to its parent.

The method would allow seed companies to produce hybrid seeds more rapidly and at larger scale, as well as providing seed that farmers could save and replant from season to season, Khush said.

"Apomixis in crop plants has been the target of worldwide research for over 30 years, because it can make hybrid seed production can become accessible to everyone," Sundaresan said. "The resulting increase in yields can help meet global needs of an increasing population without having to increase use of land, water and fertilizers to unsustainable levels."

The results could be applied to other food crops, Sundaresan said. In particular, rice is a genetic model for other cereal crops including maize and wheat, that together constitute major food staples for the world.

Khush recalled that he organized a 1994 conference on apomixis in rice breeding. When he returned to UC Davis in 2002, he gave a copy of the conference proceedings to Sundaresan.

"It's been a long project," he said.

Coauthors on the paper are: Aurore Vernet, Donaldo Meynard, Delphine Meulet, Olivier Gibert, Ronan Rivallan, Anne Cecilé Meunier, Julien Frouin, James Tallebois, Daphné Autran, Olivier Leblanc and Emmanuel Guiderdoni, CIRAD and University of Montpellier, France; Qichao Lian and Raphael Mercier, Max Planck Institute for Plant Breeding Research, Cologne, Germany; Matilda Bissah, CSIR Plant Genetics Resources Research Institute, Ghana; and Kyle Shankle, UC Davis. Khush is not an author on the new paper.

The work was supported in part by funding from the Innovative Genomics Institute and the France-Berkeley Fund.

Farm Bill Decisions and Risk Mitigation in 2023

By: Chris Bruynis, Extension Educator, Ross County

Source: <https://u.osu.edu/ohioagmanager/2023/01/17/farm-bill-decisions-and-risk-mitigation-in-2023/>

If I could accurately predict the future, I would then know which Farm Bill decision to elect for my farm. Even without knowing future yield and prices, I can determine what risks I face, and which are mitigated by the different farm bill programs. Each farm might have its own inherent risk related to yield and price, making the farm bill program election different for each FSA farm number.

Price Loss Coverage (PLC) – PLC is considered a disaster loss program and covers price risk when the market year average price falls below the reference price. The reference price can adjust over time, but even with the higher prices in recent years, they will remain the same for 2023 at Corn \$3.70; Soybeans \$8.40; and Wheat \$5.50. The market year average price (MYA) for the 2023 crops is from harvest to the following year's harvest (July through June for Wheat and September through August for Corn and Soybeans). PLC is paid on 85% of program (base) acres not planted acres as well as the program (base) yields not actual yields. If your actual planted acres vary significantly from the base acres, this may not cover your actual risk. In a November 2022 article from Chad Hart, Extension Economist from Iowa State University, prices were projected to be \$5.70 for corn and \$13.00 for soybeans [click here](#). These projections are clearly above the PLC reference prices for corn and soybeans.

Agricultural Risk Coverage County (ARC-CO) – ARC County is a revenue risk management program compared to the price loss component of PLC. It is considered a shallow loss program that works well when there is a 1- or 2-year revenue decline. It compares actual revenue to a calculated county revenue guarantee which is different in each county. The ARC-CO benchmark revenue is the 5-year Olympic average MYA price multiplied by the 5-year Olympic average county yield. Benchmark yields and MYA's are calculated using the 5 years preceding the year prior to the program year.

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The ARC-CO guarantee is determined by multiplying the ARC-CO benchmark revenue by 86%. Payments under this program are also tied to 85% of the base acres and not actual planted acres. Calculating the eighty-six percent of the revenue guarantee, using an Ohio average yield and the estimated MYA for 2023, results in a \$645.65 guarantee for corn and \$466.35 guarantee for soybeans. With the previously mention projected prices, it is unlikely that ARC-CO will make a payment for the 2023 crop year unless there are significant production issues.

Agricultural Risk Coverage Individual (ARC-IC) – ARC Individual is similar to ARC County with a few adjustments. This program still compares a benchmark revenue calculated the same way as ARC County with the 86% reduction factor. The difference is this program uses 65% of the base acres to calculate payments. Additionally, the actual revenue is based on the actual planted crops, not the base acre crops, tying this closer to actual crop income. This is a good option under certain circumstances such as high year-to-year production variability or relatively large acreage of fruits and vegetables.

2023 Program Year Decision – If crop yields and market prices were predictable, then electing the farm bill program that protects the farm business best would be easy. The question one should be asking is which component of revenue am I more concerned with, price or yield. If one believes that prices will not fall below the reference prices, then one of the ARC programs would be a better election. This is especially true if one believes that yields in 2023 may be reduced by weather conditions such as a widespread drought. However, if one uses the Supplemental Crop Insurance (SCO) product in their crop insurance portfolio, then PLC would need to be elected. The reason is that SCO insurance and ARC Farm Bill programs cover similar risk and the USDA will not permit farms to participate in both at the same time on the same acres. Either Farm Bill election, PLC or ARC, is not expected to make a payment with the current price and trend yield projections for 2023. The real question is will price and yield expectations be realized in 2023? If you want additional information on the Farm Bill programs, go to https://www.fsa.usda.gov/programs-and-services/arcplc_program/index.

Army of pest-munching ducks keep South African vineyard blooming

By: Anait Miridzhanian

Source: <https://www.reuters.com/business/environment/army-pest-munching-ducks-keep-south-african-vineyard-blooming-2023-01-16/>



A Flocks of white, black and brown ducks hunt for snails and bugs as they patrol the grapevines at a vineyard in South Africa's winemaking town of Stellenbosch, helping the owners steer clear of pesticides and synthetic fertilizers.

Around 500 Indian runner ducks work as a natural pest control at the Vergenoegd Löw Wine Estate, but also entertain wine-quaffing tourists.

"We call them the soldiers of the vineyards," the managing director of the estate, Corius Visser, told Reuters.

Ducks are at the heart of the winery's regenerative agriculture practices, and specifically Indian runner ducks, which have long legs and an upright posture, meaning they are able to reach for snails between the leaves.

Nutrient-rich manure from the ducks and other animals ensure the vineyard runs as sustainably as possible.

Following their leader, the ducks march in convoy through the vines.

"It's amazing how they behave themselves, walk in a row, and it's like they're in the army," said Merle Holdsworth, a tourist.

The ducks follow a daily routine: In the morning, they go to the vineyards to prevent crop damage, and in the evening they return to their paddocks to peck at pellets of nutritious bird food.

Worker Yodell Scholtz has been rearing the ducks for the past two years.

"It's almost like raising your own children, so I enjoy it a lot," Scholtz said.

Help us...Help you! Ohio Cropland Values and Cash Rent Survey 2022-2023

Agricultural professionals with a knowledge of Ohio's cropland values and rental rates are invited to complete the 2022-2023 Ohio Cropland Values and Cash Rent Survey by **April 30, 2023**. This may include rural appraisers, agricultural lenders, professional farm managers, ag business professionals, farmers, landowners, and Farm Service

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Agency personnel. Your thoughts and responses are greatly appreciated and will help build a platform for your portion of the state. The more responses, no names asked, the better the data set to provide information to clientele.

Complete the survey in one of these formats.



1. Online at <https://go.osu.edu/ohiocroplandvaluesandrentssurvey2223>
2. You can also access the online survey through this QR code:
3. Paper format – Long version [Ohio Cropland Values and Cash Rents Long Survey 2023](#)
4. Paper format – Short version [Ohio Cropland Values and Cash Rents Short Survey 2023](#)

EXTENSION TALK: Save the Date: Agronomy School & Pesticide Training

By: Andrew Holden

Extension Educator, Agriculture & Natural Resources

The Ohio State University Extension

Hello, Ashtabula County! Finally, we received some winter weather in January. Personally, I like when the snow covers everything in a white blanket. I'm sure I will change my tune here in a month or so, but for now I enjoy looking out at snow covered roofs and branches. The winter is also a time to take advantage of the weather by doing some indoor trainings! We have many trainings lined up in the new year, and today I want to share some of those upcoming programs to put on your calendar, along with how to receive my weekly newsletter so that you are always informed on future events. I hope that you stay warm this winter, enjoy the snow, and have a fantastic 2023!

Save the date! The Northeast Ohio Agronomy School Returns March 28th, 2023.

After not being able to hold this event in the past two year, we are excited to offer this great agronomic education day again to local producers and other ag professionals. A wide variety of topics will be discussed throughout the day including a soybeans disease update, a weather/climate update, farm & roadway safety, precision ag, and an energy outlook, with more to be announced.

We will be at a new location this year. The Agronomy School will be held at the Colebrook Community Center, downtown Colebrook at 682 US-322, Orwell, OH

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44076. Mark your calendar for this day of agronomic education. The day will include snacks, lunch, and handouts as well as the ability to earn pesticide, and CCA credits.

The day will cost \$15 to attend and we will be opening registration soon. If you want to be the first to know, sign up for my weekly NE Ohio Agri-Culture Newsletter. The e-newsletter is delivered directly to your email each Tuesday and includes articles on the latest issues facing agriculture, information on all types of ag, with a focus on agronomy, and all the information for any upcoming extension programming in NE Ohio. This newsletter is a one stop shop for anyone involved in agriculture in NE Ohio.

If you are not signed up already for the NE Ohio Agri-Culture Newsletter, sign up today at this link: <https://lists.osu.edu/mailman/listinfo/northeastohioag>

For questions about the agronomy day or to have us sign you up for the newsletter, please call 440-576-9008. We are also looking for local ag businesses and entities to help sponsor this event, if interested please call my office at the number above.

New Pesticide Applicator Training - Thursday, January 26th

The Ashtabula County Extension Office is also offering New Pesticide Applicator Training, on Thursday, January 26, 2023 from 1:00 PM to 4:00 PM. The training will be held at the OSU Extension Office in Jefferson and cost \$35 per person. 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.

Again, the 3 hour training cost \$35 per person and includes CORE training materials, handouts, and light refreshments. Category study materials can be purchased at an additional cost at each Extension Office. Please mail a check made out to 'OSU Ext. – Ashtabula', stop in the office, or call 440-756-9008 to reserve your spot. RSVP by January 20th to secure your spot for this training.

Andrew Holden is an Agriculture & Natural Resources Extension Educator for Ohio State University Extension. Andrew can be reached at 440-576-9008 or Holden.155@osu.edu

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

Upcoming Extension Events

Pesticide and Fertilizer Applicator Trainings

January 24 – 5PM to 9PM – Trumbull County Extension Office

February 1 – 1PM to 5PM – Geauga County Extension Office

March 21 – 1PM to 5PM – Ashtabula County Extension Office

March 30 – 5PM to 9PM – Online ZOOM

New Applicator Pesticide Training

Thursday, January 26, 2023 – 1:00 PM to 4:00 PM - Ashtabula 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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Ashtabula County

New Pesticide Applicator Training

January 26th, 2023

A Private Pesticide Applicator's License is required 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: Thursday, January 26, 2023

Time: 1:00 PM to 4:00 PM

Location: Ashtabula Co. Extension Office, 39 Wall St., Jefferson, OH 44047

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 out to 'OSU Ext. – Ashtabula', stop in the office, or call to reserve your spot. RSVP by January 20th to secure your spot.

For more information call: 440-576-9008



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Planning for the Future of Your Farm Webinar Series

OSU Extension

January 23 and 30 & February 6 and 13, 2023

6:30 to 8:00 p.m. via Zoom

OSU Extension will host a virtual four part “**Planning for the Future of Your Farm**” webinar series on January 23 and 30 and February 6 and 13, 2023 from 6:30 to 8:00 p.m. This workshop is designed to help farm families learn strategies and tools to successfully create a succession and estate plan that helps you transfer your farm’s ownership, management, and assets to the next generation.

Topics discussed during this series include: Developing Goals for Estate and Succession; Planning for the Transition of Management; Planning for the Unexpected; Communication and Conflict Management during Farm Transfer; Legal Tools and Strategies; Developing Your Team; Getting Your Affairs in Order; and Selecting an Attorney.

The instructors for this series will be:

Robert Moore, Attorney with the OSU Agricultural & Resource Law Program. Prior to joining OSU, Robert was in private practice for 18 years where he provided legal counsel to farmers and landowners.

David Marrison, OSU Extension Field Specialist, Farm Management. David has worked for OSU Extension for 25 year and is nationally known for his teaching in farm succession. He has a unique ability to intertwine humor into speaking about the difficulties of passing the farm on to the next generation.

Because of its virtual nature, you can invite your parents, children, and/or grandchildren (regardless of where they live in Ohio or across the United States) to join you as you develop a plan for the future of your family farm. Pre-registration is required so that a packet of program materials can be mailed in advance to participating families. We appreciate the support of the Ohio Corn & Wheat Growers Association in sponsoring the mailing of these materials. Electronic copies of the course materials will also be available to all participants. **The registration fee is \$75 per farm family.** The registration deadline is January 16, 2023. More information and on-line registration can be obtained at go.osu.edu/farmsuccession

Contact information: David Marrison, 740-722-6073 or marrison.2@osu.edu



farmoffice.osu.edu



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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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trumbull.osu.edu

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2023 Fertilizer Applicator Training Trumbull County

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ Email _____

Number of People Attending: _____ X \$35/person _____

Please make checks payable to: **Ohio State University Extension**

Mail form and payment to: OSU Extension Trumbull County,
520 West Main Street, Suite 1, Cortland, OH 44410

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



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-2trjgoH9YK246JIRsCGL44GZQv8KyF>

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



Trumbull Soil and Water
Conservation District



USDA is an equal opportunity provider, employer, and lender.

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



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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.