Hello Northeast Ohio Counties!

We finally had a significant snowstorm for most of our area this week. Some folks were thrilled (count Lee in this group), and many were not too happy to dig out of the 10+ inches that blanketed the region.

We have our first pesticide applicator training session Wednesday night. We are looking forward to seeing you all again! There are now online recertification options available for those that would like to take advantage of it. See in the newsletter for details.

Have a good week!

Lee Beers
Trumbull County Extension Educator

Andrew Holden
Ashtabula County Extension Educator

Angie Arnold
Portage County 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.
Do you need to plan for the future of your farm?
By: Peggy Kirk Hall
Source: https://farmoffice.osu.edu/blog/tue-01182022-924am/do-you-need-plan-future-your-farm

Whether it's to protect family farmland, bring future generations into the operation, address special needs like retirement, disability, or remarriage--taking legal steps now can make your goals for the future of your farm a reality. Farm transition planning is so important to keeping a farm and a farm family together, but it's easy to make mistakes that can bring unintended problems in the future. Consider this this list of seven common mistakes farmers make in farm transition planning:

1. Procrastination.
2. Thinking joint property titles will do.
3. Overlooking expenses at time of death.
4. Assuming no federal estate taxes.
5. Trying to be fair to all beneficiaries.
6. Failing to consider disability as well as death.
7. Avoiding communication.

We'll discuss and address all of these issues in our "Planning for the Future of Your Farm" workshops this winter. We can help you get over that procrastination hurdle, develop your goals, deal with communication issues and understand legal strategies. Join me, attorney Robert Moore, and farm management educator David Marrison for either a day-long live program or a four-part live webinar this winter, where we cover these topics:

- Developing goals for estate and succession planning
- Planning for the transition of control
- Planning for the unexpected
- Communication and conflict management during farm transfer
- Legal tools and strategies
- Developing your team
- Getting your affairs in order
- Selecting an attorney
Dates and locations for the workshops are:

- Live Zoom webinar on January 31 and February 7, 21 and 28 from 6:30--8:30 pm.
  - Because of its virtual nature, parents, children, and grandchildren can easily attend this workshop, regardless of where they live!
- Day-long in-person workshops:
  - February 10, 2022--OSU Extension Greene County, Xenia, Ohio
  - February 25, 2022--OSU Fisher Auditorium, Wooster, Ohio
  - March 4, 2022--Wood County Fairgrounds, Bowling Green, Ohio

Pre-registration is necessary for all workshops. For registration and further information, visit this link: go.osu.edu/farmsuccession. Together, let's make 2022 the year that you make plans for the future of your farm.

**Join Us for the 2nd Annual Virtual Corn College and Soybean School**

Due to popular demand, the AgCrops Team will host the 2nd annual virtual Corn College and Soybean School on February 15, 2022 from 9:00 AM – 4:00 PM featuring your OSU Extension state specialists, including the new corn agronomist, Dr. Osler Ortez, and new soybean pathologist, Dr. Horacio Lopez-Nicora. CCA CEUs will be available during the live presentations.

To register, please go to: http://go.osu.edu/cornsoy There is a $10 registration fee for this event, which goes directly to support OSU AgCrops Team activities. Presentations will be recorded and uploaded to the
AgCrops Team YouTube channel after the event (https://www.youtube.com/c/OSUAgronomicCrops).

MORNING SESSION 9:00-noon
9:00-9:40              Laura Lindsey                      Soybean Management for 2022
9:50-10:30           Osler Ortez                         Corn Management for 2022
10:40-11:20         Horacio Lopez-Nicora      Soybean Disease Management
11:20-noon         Pierce Paul                          Corn Disease Management

AFTERNOON SESSION 1:00-4:00
1:00-1:40              Kelley Tilmon        Soybean Insect Management
1:50-2:30              Andy Michel          Corn Insect Management
2:40-3:20              Mark Loux            Weed Management for Corn and Soybean
3:20-4:00              Steve Culman      Meeting Nutrient Needs for Corn and Soybean

**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 Little Celebration for National Popcorn Day

BY MIKE GASTIER
SOURCE: HTTPS://AGCROPS.OSU.EDU/NEWSLETTER/CORN-NEWSLETTER/2022-02/LITTLE-CELEBRATION-NATIONAL-POPCORN-DAY

January 19, 2022, is National Popcorn Day. While I doubt Hallmark makes a card for that, popcorn has played a significant role in the history of Ohio agriculture. Until recently, Ohio was third in popcorn production nationally behind Nebraska and Indiana, but in the last few years, Ohio’s popcorn production has dropped significantly and that has meant significant production changes on many Ohio farms.

What has changed?

The most impactful change came several years ago when one of the popcorn industry giants sold its popcorn processing facility in central Ohio and severed its relationship with growers in the Buckeye state. Most of these production acres moved to Nebraska. Some local growers continued to raise popcorn, but after just a few years, production contracts became very scarce. Historically, most popcorn production in Ohio has been under contract, so with an abundance of potential acres and few companies writing contracts, prices for popcorn stagnated. The premiums that producers had come to expect from this value-added specialty crop had all but diminished.

Like most specialty crops, popcorn production looks less appealing (at least relatively) when commodity prices are high. In 2021, historically high corn yields that were realized in many parts of the state combined with strong commodity prices has removed the luster of popcorn production even further. This has forced some long-time popcorn producers to re-evaluate their production plans because the profitability of the crop is no longer better than field corn or soybeans as it has been historically.

For many farms that have produced popcorn in the past, the crop has intrinsic value that is hard to walk away from. Perhaps it stems from the idea that popcorn is something
different than the norm or a nice alternative crop that requires no additional equipment to manage. As a former popcorn grower myself, I miss the aspect of producing a high quality product that requires very little processing to become a desirable snack food.

While it’s unlikely that popcorn acres in Ohio will increase dramatically in the short term, never say “never again”. Nebraska, which is now the largest producer of popcorn, grows most of its crop on irrigated fields in areas that have ever increasing concerns about the availability of water. Ohio remains a player in the popcorn production game, and we stand poised to increase production if the opportunity presents itself. Ohio has the soils and the climate to raise excellent popcorn and we can usually produce the crop without adding water.

**FIGHTING WEEDS IN A CHANGING WORLD**

By Eric Hamilton


The world is warming. And fast. By 2050, it’s likely the planet will have warmed by about 3.6 degrees Fahrenheit compared to before the Industrial Revolution. That warming brings substantial changes. Storms will be stronger. People will run their air conditioners more. It will even change when and where our crops grow — and how well they perform.

“Globally, temperature and moisture stresses drastically affect crop productivity leading to substantial yield losses,” says researcher, Sarah Kezar. “Under the

Sarah Kezar evaluating and observing Palmer amaranth in the lab. Palmer amaranth is a weed that is invading crops, stealing their nutrients and sunlight. Kezar recently presented her research about the weed at the 2021 ASA-CSSA-SSSA Annual Meeting. Credit: Sam Craft, Texas A&M Agrilife
changing climate, minimizing agricultural losses caused by these stresses have become a major challenge and has created a global concern to assure food security.”

But it’s not just our crops that will be affected. For as long as humans have farmed crops, we’ve also fought weeds. These pesky plants fight for water, light and nutrients with the crops we use for food. By their very nature, weeds are typically more robust than domesticated crops. How will the permanent race between weeds and crops change in a warming world?

“The response of crops to anticipated changes in temperature and available water has been well documented, but little has been studied with weed species,” she says. So, to complement research on the changing growing conditions for crops, Kezar and her team have been focusing on how weeds will adapt as well. They’ve discovered that pernicious weeds may grow stronger compared to most crops.

That’s not good news. But the knowledge of weeds’ strengths can help scientists plan for better ways to combat them as our world continues to change. Kezar presented her research at the 2021 ASA-CSSA-SSSA Annual Meeting, held in Salt Lake City.

Kezar explained how Palmer amaranth grows in hotter and drier conditions like those the U.S. faces in the future. Palmer amaranth is a giant weed, growing over six feet tall if left unchecked. The weed can produce as many as a million seeds from a single plant. It originally hails from the desert Southwest. But it has recently spread far and wide, reaching 28 states. Palmer amaranth’s range is likely to expand as the warm conditions it prefers spread northward.

To assess how Palmer amaranth will fare in the future, Kezar set up an experiment under highly unusual conditions. In the image, you can see a comparison of Palmer amaranth leaves from no temperature and moisture stress (left) to increasing temperature and moisture stress (left to right). Kezar’s research found that this weed is especially tolerant to various weather conditions – helping it compete against food crops. Credit: Sarah Kezar
controlled conditions. She tested growth at four different temperatures, which ranged up to daily high temperatures of 104 degrees Fahrenheit. Kezar also varied how much water the weed received, to simulate wetter and drier conditions.

“Palmer amaranth growth was affected by elevated temperature and moisture stress conditions in terms of magnitude, but this weed was still able to grow,” says Kezar. “The fact that Palmer amaranth…maintained adequate growth under high temperature and moisture stress shows that Palmer amaranth can still remain highly competitive by exhausting soil water and nutrients available to crops to impact yield.”

Sarah Kezar evaluating and observing Palmer amaranth in the field. The weed can grow very tall – over 6 feet – and produce up to a million seeds from one plant. Kezar’s research shows that this weed is still efficient under stress conditions, informing future research on how to combat it. Credit: Texas A&M Agrilife
Palmer amaranth has an advantage growing under these conditions. The weed has a **highly efficient metabolism**, like corn and sorghum. These types of plants are better at capturing energy from the sun (photosynthesis) under hot weather. Most crops don’t have this ability. The scientists saw evidence of the weed’s special abilities in their experiments. “We did see that Palmer amaranth actually had an increase in photosynthetic capabilities,” Kezar says.

Research like this can help farmers and scientists plan for the future. By knowing which weeds will outperform crops, we can better prepare systems in place to keep them at bay.

“Developing improved management practices are important for effective control of this species in the face of climate change,” says Kezar. “When we think about climate change impacts on the future of agriculture, we need to keep weed responses in the conversation.”
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
January 19, 2022 – Trumbull County
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

Northeast Ohio Agronomy Breakfast Weekly Webinar Series
February 23, 2022 – Register at u.osu.edu/NEOAB

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
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. 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.

This training will focus primarily on the CORE test.

Training Dates:

- **Wednesday, January 26, 2022 – 6:00 PM to 9:00 PM**
  Ashtabula Co. Extension Office
  39 Wall Street, Jefferson, OH 44047
  Call: 440-576-9008

- **Monday, February 14, 2022 – 1:00 PM to 4:00 PM**
  Geauga Co. Extension Office
  14269 Claridon Troy Rd, Burton, OH 44021
  Call: 440-834-4656

- **Tuesday, March 8, 2022 – 1:00 PM to 4:00 PM**
  Portage Co. Extension Office
  705 Oakwood St #103, Ravenna, OH 44266
  Call: 330-296-6432

All 3-Hour New Pesticide Applicator Trainings will cost $35 per person.
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, 8:00 AM – TBA
- March 30th, 8:00 AM – TBA

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
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