Hello Northeast Ohio Counties!

As harvest continues, we are getting more reports of troublesome weeds in our fields. Waterhemp is the biggest concern but common ragweed has been awful this year.

Be sure to scout your corn this year to identify issues before going to beans next year. I’ve found several pigweeds going to seed in corn rows, so it is worth stopping the combine if you see something unusual. Give us a call if you need help with any weed identification.

Have a great week!
October Harvest Weather Looks Good
By: Jim Noel
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2021-34/october-harvest-weather-looks-good

After a brief period of wetness to start October, harvest season looks pretty good. October temperatures will be well above normal. Rainfall will average close to normal after the brief wetter period this week.

https://www.cpc.ncep.noaa.gov/products/predictions/long_range/lead14/

The result will be that the first freeze date will likely be later than normal from October into early November.

As we head into the later part of harvest season beyond October, the warmer than normal weather will likely persist into November and possibly December. Rainfall will average close to normal. Some rainfall enhancement could develop later this fall near Lake Erie though with the warmer than normal lake waters.

https://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=1

For the winter, we expect a warmer than normal start with a trend toward normal or slightly colder than normal finish. Precipitation is likely to increase to above normal as we go through winter.


You can stay up-to-date on all the seasonal risks at the OHRFC websites: https://www.weather.gov/ohrfc/SeasonalBriefing
Over the next two weeks we expect 0.75 to 1.75 inches of rain across the state with isolated lower and higher totals as seen in the attached image.

**Corn Pre-Harvest Check**

By: Taylor Dill, Jason Hartschuh  
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2021-34/corn-pre-harvest-check

Corn harvest started earlier than normal this year across Ohio with many farmers taking advantage of higher grain prices and hauling in high moisture corn. This is causing more producers to switch back and forth between corn and soybean harvest. Considerations for choosing fields to harvest aside from weather are both stalk and ear quality.

Stalk strength and quality is affected by stalk rot, root growth, leaf health, and fertility. Most stalk rots are caused by a fungus in the genus *Fusarium*. Compounding stressors will heighten the severity of the stalk rot if the plant is infected. Stalk rot fungi survive in corn residue and enter the plant by wounds from corn borers, mechanical injury, or hail. Post silking is usually when the fungus will move from the roots to the stalks.

Root growth and leaf health both determine stalk strength by providing key nutrients for grain fill. The roots bring in water and nutrients to sustain the plant and leaf tissue is the source of photosynthetic bodies that create carbohydrates in conjunction with the roots. Cold and waterlogged conditions can restrict root growth, which many producers faced this spring with receiving both snow and pounding rain on early planted corn. This season has also been perfect for Gray Leaf Spot, Northern Corn Leaf Blight, and Tar Spot. These fungi kill photosynthetic material at the end of the season during grain fill, which can cause the plant to “cannibalize” or to take carbohydrates from the stalk to provide energy to finish grain fill. Similar to inhibited root growth and disease pressure at the end of the season, insufficient fertility, usually a nitrogen stress can cause cannibalization of the stalk. We have had many reports of premature plant death this year due to leaf disease mostly tar spot and plants running out of nitrogen.
There is no end of season management to mitigate stalk deterioration, but producers can minimize yield loss from lodging by harvesting fields with stalk quality issues early. One can use the “squeeze test” or “push test” to evaluate lodging potential. Use the thumb and the forefinger to squeeze the internodes and if the node is easily compressed then the stalk integrity has been compromised. For the push test, push the stalk 6 to 8 inches from vertical at the ear and if the stalk breaks between the ear and the lowest node, stalk rot is likely present. Assess approximately 20 plants in various location in each field, if more than 10-15% of stalks are rotted then the field should be considered for early harvest.

Ear quality should be taken into account when deciding which fields to harvest first. To assess ear quality, remove the husks from several ears in multiple areas of the field and observe the ear. If Giberella ear rot or Fusarium kernel rot is present in a considerable population, then consider harvesting these fields earlier. If ear rots are present, consider possible combine adjustments such as increased fan speed to decrease infected grain in the final grain sample.

The decision to harvest wet grain increase drying cost, but down corn also increases harvest challenges, ear losses, and decreased grain yield. The average cost to dry corn is 0.02 gallons of propane per point per bushel of corn dried. Drying corn an extra 5% takes an extra 0.1 gallons of propane. The decision to harvest early can maintain bushels in the bin and make for a safer fall harvest.

Fusarium Kernel Rot

Giberella ear rot
Healthy Soil, Healthy Farms

By: Eric Hamilton
Source: https://www.agronomy.org/news/science-news/healthy-soil-healthy-farms

Soils, like people, can be healthy or unhealthy. We’ve recently learned how important the microbes inside our bodies are to human health. Likewise, soil health depends on a complex group of microbes. These bacteria and fungi recycle nutrients and prepare the soils to better support plants.

But understanding what leads to healthy soils remains a challenge. Even defining “healthy” soils, and then measuring that health, hasn’t quite been settled by science. New research is uncovering the secrets of healthy soil in greater detail. This information can help farmers and, in turn, consumers.
“Understanding the management practices that lead to healthier soils will allow farmers to grow the same crops while reducing costly chemical inputs (fertilizers, pesticides, herbicides) and protecting the environment,” says Lori Phillips, a scientist with Agriculture and Agri-Food Canada.

Phillips and her colleagues recently studied the soil health in a long-term study of different farming practices. They discovered what kinds of plant growth supported healthy soils. And they tested a new system for measuring soil health, which could help other scientists study the same issue in the future.

Their research was published in *Agrosystems, Geosciences & Environment Journal*, a publication of the [Crop Science Society of America](https://www.csosj.org/) and American Society of Agronomy.

The field experiment started in 2001. Located in Ontario, the study is designed to study the long-term effects of different crop-growth systems. They compared pasture systems with those planted with typical corn and soybean crops. Phillips and her colleagues asked how 18 years of continuous growth of corn, soybeans or perennial grasses affected soil health.

To find the answer, they had to first decide how to measure soil health. In years past, this mostly meant how much organic matter is in soil. But organic matter changes slowly. Microbes change fast.

“These microbial communities could be considered to be a ‘canary in a coal mine’ for soil health,” says Phillips. Measuring them quickly yet accurately is important.

So, the scientists turned to a test called “CNPS.” CNPS measures enzymes involved in carbon, nitrogen, phosphorous and sulfur nutrient cycles in the soil. It produces a holistic measure of biological activity. They also looked at the variety of fungi and bacteria in the soil and the ratio between these groups of microbes.

The perennial grasses had the healthiest soils. They had lots of biological activity and diverse microbes. They also hosted lots of fungi. The fields growing both a perennial grass and a legume called birdsfoot trefoil were especially healthy. Fields constantly growing soybeans, another legume, came in last place. Corn fields were between the two.
Legumes like birdsfoot trefoil and soybeans can produce their own nitrogen, a useful trait in agriculture. But that doesn’t always lead to stronger soils, especially for soybeans, says Phillips.

Figure 2 Corn was planted every year on these plots since 2001. While the corn fields had healthier soils than soybean fields, their soils weren’t as healthy as those growing perennial grasses. Credit: Lori Phillips
Many people assume that because soybean is a legume and legumes provide their own nitrogen through nitrogen fixation, that soybean must be healthy for the soils,” she says. But most of the nitrogen gets taken away in the soybeans, and what’s left behind is less useful. “So, it’s the cumulative effect of smaller roots, less residue returned, and the residue that is returned gets broken down too quickly to be stable.”

The perennial systems also had more fungi than the crop fields. Since the perennial grasslands weren’t plowed, they had more time to build up strong microbial communities. “Intensively managed agricultural soils, with more frequent tillage and high fertilizer inputs, tend to be dominated by bacteria. In contrast, more sustainable management practices increase the overall amount of fungi in soil,” says Phillips. Fungi hold onto soil, reducing erosion.

Having tested the CNPS measuring system, the scientists learned that it’s a useful new tool for capturing soil health. And by uncovering what kinds of farm practices produce...
“Agricultural management practices that reduce soil disturbance, reduce chemical inputs, and increase the amount of time the soil is covered by a living crop all contribute to improved soil biological health,” says Phillips. “Improved soil biological health will lead to more profitable and sustainable farms.”

Financial support for the field research in this project was provided by the Agro-Ecosystem Resilience Program (Agriculture and Agri-Food Canada). Sequencing was supported by the Government of Canada GRDI Ecobiomics project (J-001263).

2021 Two-Day Tax Schools for Tax Practitioners & Agricultural & Natural Resources Income Tax Issues Webinar

By: Barry Ward
Source: https://farmoffice.osu.edu/blog/archive/202110

Barry Ward & Julie Strawser, OSU Income Tax Schools

Dealing with the tax provisions of the COVID-related legislation for both individuals and businesses are among the topics to be discussed during the upcoming Tax School workshop series offered throughout Ohio in November and December. The annual series is designed to help tax preparers learn about federal tax law changes and updates for this year as well as learn more about issues they may encounter when filing individual and small business 2021 tax returns.

OSU Income Tax Schools are intermediate-level courses that focus on interpreting tax regulations and changes in tax law to help tax preparers, accountants, financial planners and attorneys advise their clients. The schools offer continuing education credit for certified public accountants, enrolled agents, attorneys, annual filing season preparers and certified financial planners.

Attendees also receive a class workbook that alone is an extremely valuable reference as it offers over 600 pages of material including helpful tables and examples that will be valuable to practitioners. Summaries of the chapters in this year’s workbook can be viewed at this site: https://farmoffice.osu.edu/tax/2021-tax-school-chapters
A sample chapter from a past workbook can be found at: https://taxworkbook.com/about-the-tax-workbook/

This year, OSU Income Tax Schools will offer both in-person schools and an online virtual school presented over the course of four afternoons.

In-person schools:
November 1-2, Presidential Banquet Center, Kettering/Dayton
November 3-4, Ole Zim’s Wagon Shed, Gibsonburg/Fremont
November 17-18, Ashland University John C. Meyer Convocation Center, Ashland
November 22-23, Christopher Conference Center, Chillicothe
November 29-30, Zane State/Ohio University Zanesville Campus, Zanesville
December 2-3, Nationwide & Ohio Farm Bureau 4-H Center, OSU Campus, Columbus
December 6-7, Hartville Kitchen, Hartville

Virtual On-Line School presented via Zoom:
November 8, 12, 15 & 19, 12:30 – 4:45 p.m.

Register two weeks prior to the school date and receive the two-day tax school early-bird registration fee of $400. This includes all materials, lunches and refreshments. The deadline to enroll is 10 business days prior to the date of each school. After the school deadline, the fee increases to $450.

Additionally, the 2022 RIA Federal Tax Handbook is available to purchase by participants for a discounted fee of $50 each. Registration information and the online registration portal can be found online at: http://go.osu.edu/2021tax

In addition to the tax schools, the program offers a separate, two-hour ethics webinar that will broadcast Wednesday, Dec. 15 at 1 p.m. The webinar is $25 for school attendees and $50 for non-attendees and is approved by the IRS and the Ohio Accountancy Board for continuing education credit.

A webinar on Ag Tax Issues will be held Monday, Dec. 13 from 8:45 a.m. to 3:20 p.m.

If you are a tax practitioner that represents farmers or rural landowners or are a farmer or farmland owner that prepares your own taxes, this five-hour webinar is for you. It will focus on key topics and new legislation related specifically to those income tax returns.
Registration, which includes the Ag Tax Issues workbook, is $150 if registered at least two weeks prior to the webinar. After November 29, registration is $200. Register by mail or on-line at https://go.osu.edu/agissues2021.

Participants may contact Ward at 614-688-3959, ward.8@osu.edu or Julie Strawser 614-292-2433, strawser.35@osu.edu for more information.

**Becoming a Certified Crop Adviser and Exam Prep Options**

Practicing agronomists can highlight their knowledge, experience, and dedication to crop production advising through the Certified Crop Adviser (CCA) program. The program provides a professional benchmark for agronomists in the United States and Canada. To become certified, individuals must have a mix of experience, education, sign a code of ethics, and pass two exams. In addition, to maintain their certification, they must earn 40 hours of continuing education credits every two years.

The first step to becoming a CCA is to pass both the international and local exams. Both exams are scheduled and taken online. The International Exam is available continuously throughout the year. The local exam is given during a specific period, twice a year. The next local exam opportunity is February 2-9, 2022. The registration deadline is January 5, 2022. You can schedule for one or both exams today at https://www.certifiedcropadviser.org/exams/.

Ohio State University Extension has provided an annual in-person review course for several years. We are now offering that course in two formats, online and in-person. Both courses provide an overview of the four objective areas of crop management, nutrient management, pest management, and soil and water management tested on the International and local exams. Both courses are a good review for recent graduates beginning their careers or seasoned agronomists who have been away from the classroom.

The online course provides presentations, study references, and quizzes. You can register for the course now through November 15, 2021, at the cost of $155. The course fee covers 24/7 access to course content through February 15, 2022. Purchase of suggested publications is optional. To register and make the secure online payment use the link https://go.osu.edu/ccaonline.

January 12-13, 2022, will be our next in-person course. We will meet at the Shelby County Ag Building, 810-820 Fair Rd, Sidney, Ohio 45365. Course and registration details will be in the October 25 C.O.R.N. Newsletter edition. The course fee of $250
includes publications, instruction, and two lunches. Course registration is limited to 25 participants.

Ohio Agri-Business Association administers the Ohio CCA program. For more Ohio Program information, see https://oaba.net/aws/OABA/pt/sp/cca.

**New bulletin explains Ohio's sales tax exemptions for agriculture**

By: Peggy Kirk Hall, Associate Professor, Agricultural & Resource Law
Source: https://farmoffice.osu.edu/blog/tue-10052021-218pm/new-bulletin-explains-ohios-sales-tax-exemptions-agriculture

If you've ever claimed a sales tax exemption on a purchase of farm goods, you may have experienced some confusion over whether you or the good is eligible for the exemption. That's because Ohio's sales tax law is a bit tedious and complicated. The law has several agricultural exemptions, but it can be challenging to understand who can claim them and what types of goods and services are exempt. Those are the reasons for our newest law bulletin, **Ohio's Agricultural Sales Tax Exemption Laws**. We walk through the different sales tax exemptions that apply to agriculture, offer examples of goods that do and do not qualify for the exemptions, explain who can claim an exemption and how to claim it, and explain what happens when sales taxes are overpaid or not correctly paid. We also offer steps a farmer can take to obtain the full benefits of Ohio's agricultural sales tax exemptions. The bulletin is available in our law library and through this link.
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CFAES provides research and related educational programs to clientele on a nondiscriminatory basis. For more information: http://ca.osu.edu/cfaesdiversity.
Ashtabula County 32nd Annual Beef Banquet

November 6th, 2021 - 7:00 p.m.
Expo Building at the Fairgrounds
127 N Elm St, Jefferson, OH 44047

Tickets for the prime rib dinner are $30 per person. The dinner is dine-in only. Ticket includes your 2021 membership into the Ashtabula County Cattlemen’s Association.

This year’s banquet will include live entertainment, ticket drawing prizes, and a great Prime Rib Dinner!

To purchase/reserve banquet tickets, call or text a director:
David Nye 330-559-9846  Bryan Elliot 330-240-5533
Zach Ward 440-666-3793  Garret Love 419-566-6570
Evan Flack 440-221-1668  OSU Extension 440-576-9008

New this year: Tickets can now be purchased through Venmo
Send your name(s) and $30 per ticket to @ashcattlemans or scan QR:
Ticket reservations are required by October 29th, 2021 to ensure adequate meal preparations can be made.