

NORTHEAST OHIO AGRI-CULTURE NEWSLETTER

Your Weekly Agriculture Update for
Ashtabula and Trumbull Counties

October 24, 2023



Lodging Corn with Tar Spot in Trumbull County

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Hello Northeast Ohio Counties!

Frost Monday morning and 70s on Tuesday. NE Ohio weather keeps us on our toes.

Harvest continues to slowly advance across the region, with corn and beans being taken between rains. Hopefully, the current weather pattern continues for us.

We have a lot of interesting articles this week, along with the upcoming events section. Check out the upcoming events to see what educational opportunities are available this winter and mark your calendars!

Have a great week!

Lee Beers
Trumbull County
Extension Educator

Andrew Holden
Ashtabula County
Extension Educator

Regional Updates: October 17 – 23, 2023

By: Stephanie Karhoff, CCA, Clifton Martin, CCA, Caden Buschur, Kendra Stahl, Lee Beers, CCA

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2023-37/regional-updates-october-17-%E2%80%93-23-2023>

Corn harvest across Ohio continues to be stalled by [high moisture](#), and [Sclerotinia stem rot](#) (white mold) continues to reveal its impact on soybean yields in parts of northern Ohio. Hear more from OSU Extension Educators and Specialists on field conditions in their regions.

Southeast Ohio

Soybean harvest in the region is moving right along with favorable yield reports according to Muskingum County ANR Extension Educator Clifton Martin. Elevated moisture levels continue to slow corn harvest, but growers are pleased with corn yields so far. Wheat planting continues across southeastern Ohio as the area had its second light frost on October 23.

Central & West Central Ohio

Darke County ANR Extension Educator Caden Buschur reports that corn has been slow to dry down in western Ohio as well. Before scattered showers set in on Thursday, growers continued to apply manure, lime and poultry litter and continue corn and soybean harvest.

Northwest Ohio

Kendra Stahl of Crawford County shared on behalf of Agronomic Crops Team members in Northwest Ohio, that 70% of soybean harvest is complete with average yields. Corn harvest is 20% complete with few yield reports thus far, and moisture at about 25%. Most of the area received about an inch of rain that once again put a pause on further harvest progress. Wheat planting, late forage harvest, and tillage also continued this past week in northwestern Ohio.

Northeast Ohio

Trumbull County ANR Educator Lee Beers reports that soybean harvest continues as corn harvest is just ramping up. Rain delayed harvest for both crops over the weekend. White mold has impacted soybean yields in fields where it is present. Tar spot continues to be reported, but very few fields had yield limited by the disease. Much of Northeast Ohio experienced the first killing frost of the year on Sunday night into Monday. Rain was widespread over the weekend with over half an inch of rain covering many areas.

This will be the last regional update for the 2023 cropping season, and we will resume reports next spring

Northeast Ohio Agriculture

OHIO STATE UNIVERSITY EXTENSION
Ashtabula, Portage and Trumbull Counties

Agricultural Easements Can Address Farmland Preservation and Farm Transition Goals

By: Peggy Kirk Hall, Attorney and Director, Agricultural & Resource Law Program

Source: <https://farmoffice.osu.edu/blog/wed-10182023-1012am/agricultural-easements-can-address-farmland-preservation-and-farm>

Questions from farmers and farmland owners about agricultural easements are on the rise at the Farm Office. Why is that? From what we're hearing, the questions are driven by concerns about the loss of farmland to development as well as desires to keep farmland in the family for future generations. An agricultural easement is a unique tool that can help a farmland owner and farming operation meet goals to protect farmland from development or transition that land to the next generation. Here are answers to some of the questions we've been hearing.

What is an agricultural easement? An agricultural easement is a voluntary legal agreement by a landowner to use land primarily for agricultural purposes and forfeit the right to develop the land for other purposes, either permanently or, less often, for a term of years. In an agricultural easement, a landowner grants an easement "holder" the legal right to enforce the easement against a landowner or other party who attempts to convert the land to a non-agricultural use. A written legal instrument details and documents this agreement between a landowner and the easement "holder." The agricultural easement instrument must be recorded in the county land records, and the agricultural easement is binding on all future landowners for the duration of its term.

A state legislature must authorize the use of the agricultural easement instrument, and Ohio's legislature did so in 1999. At that time, the legislature adopted a detailed legal definition of "agricultural easement" in Ohio Revised Code 5301.67(C):

"Agricultural easement" means an incorporeal right or interest in land that is held for the public purpose of retaining the use of land predominantly in agriculture; that imposes any limitations on the use or development of the land that are appropriate at the time of creation of the easement to achieve that purpose; that is in the form of articles of dedication, easement, covenant, restriction, or condition; and that includes appropriate provisions for the holder to enter the property subject to the easement at reasonable times to ensure compliance with its provisions.

The legislature also required in Ohio Revised Code 5301.68 that a landowner may only grant an agricultural easement on land that qualifies for Ohio's Current Agricultural Use Valuation (CAUV) program under Ohio Revised Code 5713.31.

Is an agricultural easement the same as a conservation easement? No, not in Ohio, but they share the same legal concept of dedicating land to a particular use. Ohio also allows a landowner to grant a conservation easement, which is a promise to retain land predominantly in its natural, scenic, open, or wooded condition and forfeit the right to develop the land for other purposes. A conservation easement might allow agricultural land uses, and an agricultural easement might allow some conservation uses. The terms used in federal law and some other states vary from Ohio, and include “agricultural conservation easement” or “agricultural land easement.”

Who can be a “holder” of an agricultural easement? Ohio law answers this question in Ohio Revised Code 5301.68, which authorizes only these entities to enter into an agricultural easement with a landowner:

- The director of the Ohio Department of Agriculture;
- A municipal corporation, county, or township;
- A soil and water conservation district;
- A tax exempt charitable organization organized for the preservation of land areas for public outdoor recreation or education, or scenic enjoyment; the preservation of historically important land areas or structures; or the protection of natural environmental systems (generally referred to as a “land trust” or a “land conservancy.”)

What kinds of land uses would be inconsistent with keeping the land in agricultural use? That depends on the terms in the written deed for the agricultural easement. Activities that might violate the agreement to maintain the land as agricultural include subdivision of the property, commercial and industrial uses, major surface alterations, and oil and gas development. It’s typical to identify the homestead or “building envelope” area and allow new buildings, construction and similar activities within that area, but those activities might not be permitted on other parts of the land. Review the Ohio Department of Agriculture’s current Deed of Agricultural Easement through the link on this page: <https://agri.ohio.gov/programs/farmland-preservation-office/landowners>.

Can a landowner transfer land that is subject to an agricultural easement? Yes. An agricultural easement does not restrict the right to sell or gift land, but it does carry over to the new landowner. That landowner must abide by the terms of the agricultural easement.

Are there financial incentives for entering into an agricultural easement? Yes. There are several financial incentives:

- The Ohio Department of Agriculture’s Office of Farmland Preservation oversees the [Local Agricultural Easement Purchase Program](#), which provides Clean Ohio grant funds to certified local sponsors to purchase

permanent agricultural easements in their communities. It's a competitive process that requires a landowner to work with an approved local sponsor to apply for the program and to donate at least 25% of the agricultural easement's value if selected. A landowner can receive up to 75% of the appraised value of the farm's "development rights," with a payment cap of \$2,000 per acre and \$500,000 per farm per application period.

- Federal funds are also available through the Natural Resource Conservation Service's [Agricultural Conservation Easement Program](#). This program is also competitive and requires a landowner to work with an approved partner to determine eligibility and apply for easement funding. NRCS may contribute up to 50 percent of the fair market value of the agricultural land easement.
- There are also federal income tax incentives for donating a portion or all of an agricultural easement's value to a qualified charitable organization. Internal Revenue Code section 170(h) allows a landowner to deduct the value of the easement up to 50 percent of their adjusted gross income (AGI) in the year of the gift, with a 15-year carryover of excess value. That AGI percentage increases to 100% for a "qualified farmer" who earns more than 50% of their gross income from farming.
- There can also be federal estate tax benefits for land subject to a permanent agricultural or conservation easement. The land is valued at its restricted value, which lowers the estate value. Additionally, Section 2055(f) of the Internal Revenue Code allows donations of qualifying easements to a public charity to be deducted from the taxable value of an estate. Up to 40% of the value of land restricted by an agricultural or conservation easement can be excluded from the value of an estate if the easement meets Internal Revenue Code section 2031(C) provisions, limited to \$500,000.

How can a family use an agricultural easement to enable farm transition goals? Here's an example. John and Sue are fourth generation owners of 250 acres of farmland they plan to leave to their child Lee, and they want the land to remain as farmland into the future. Lee is committed to farming and wants to farm, and John and Sue would like Lee to have more land to improve the viability of the farming operation. They find a local sponsor and apply to Ohio's Local Agricultural Easement Purchase Program, offering to donate 25% of the agricultural easement value to the program. They are selected for the funding and receive a payment of \$2,000 per acre for the agricultural easement. They use the \$500,000 in easement proceeds to purchase additional farmland for Lee. John and Sue receive a federal income tax credit for the portion of the easement value they donated to qualify for the program, and carryover the amount until it is fully used, up to 15 years.

What are the drawbacks of agricultural easements? There are challenges and drawbacks of agricultural easements, and we'll discuss those in our next blog post.

Agricultural easements require legal and tax advice and careful planning. Our short Q&A doesn't address all of the nuances of agricultural easements. It's a big decision, and one that should align with current goals and estate and transition plans. To determine if an agricultural easement works for your situation, seek the advice and planning assistance of knowledgeable legal and tax professionals.

Zinc Application to Wheat – Is it Needed?

By: Dr. Manbir Rakkar, Laura Lindsey, Ed Lentz, CCA

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2023-37/zinc-application-wheat-%E2%80%93-it-needed>

We have had a question about whether wheat would benefit from zinc (Zn) fertilizer. Zinc is one of the essential plant nutrients. An optimum amount of Zn is needed for the synthesis of carbohydrates, proteins, and chlorophyll in plants. It also plays a critical role in various enzymatic activities. Therefore, Zn should be available for crops in adequate amounts to avoid yield reductions.

Would we expect to see a deficiency or the need for Zn in wheat in Ohio? – probably not. Table 30 in the Tri-State Fertilizer Recommendations only shows corn and soybean as crops where a deficiency may occur on high pH soils and soils with low soil test Zn level, not wheat. Keep in mind, field crops in Ohio have a very infrequent response to micronutrient fertilization (<https://ohioline.osu.edu/factsheet/agf-519>). For example, this year, winter wheat yields were extremely high, which can be primarily attributed to good environmental conditions during grain fill. Cool temperatures resulted in a long grain fill period and low disease. Although it was dry (also contributing to low disease), there was adequate soil moisture, and thus, high yielding conditions. No micronutrients or biostimulants were needed for the extra yield.

Past Ohio research has not shown any benefit from adding Zn to wheat. We compared a phosphorus-zinc fertilizer to other phosphorus fertilizers, such as MAP and DAP, at the OARDC Northwest and Western Agriculture Research Stations in 2009-2010 and only at the Northwest station in 2011. Soils at Northwest were not responsive to any phosphorus fertilizer, there was no yield increase either from the additional Zn. Soils at Western were responsive to phosphorus fertilizer but there was not an increase in yields from the Zn product compared to the other phosphorus fertilizer products without Zn. Thus, these studies showed no benefit to adding Zn to wheat at two sites. In addition, we have measured flag leaf Zn concentrations at flowering from wheat studies for the past 20 years and have not detected sub-sufficiency levels. We have not seen any environmental change to suggest that we may now need Zn fertilizer on wheat compared to old research studies. However, Zn is an essential nutrient for plant growth, so we want to give some general background even though we would not expect a response on wheat.

Where to expect Zn deficiency?

Soil type and conditions: Zinc deficiency can be prominent in peat, muck, and mineral soils with pH more than 6.5. However, we do not recommend planting wheat on organic soils because of the high risk for lodging. Plants may also show Zn deficiency under cool soil temperatures as the reduced mineralization rate of organic matter slows down the release of Zn into the soil solution. Additionally, sandy soils with low organic matter could be deficient in Zn. Some studies also show that the high level of phosphorus may cause Zn deficiency, especially when Zn soil test levels are in low range.

Crop type: Wheat is unlikely to be deficient in Zn whereas crops such as corn and beans are highly sensitive and can respond to Zn application.

How to diagnose Zn deficiency?

The deficiency symptoms appear as interveinal chlorosis (yellowing) on the young to middle leaves (Fig. 1). The plants are usually stunted, and maturity is delayed.

However, keep in mind, environmental stress and deficiency of other nutrients may also cause yellowing.



Fig. 1. Zinc deficiency symptom in wheat (photo courtesy of IPNI)

It is recommended to do soil and plant analysis to diagnose Zn deficiency. Most labs in the region use Mehlich-3 as an extractant to determine Zn in soils, however there are uncertainties about this test. Therefore, supplementing soil test levels with plant analysis is crucial for Zn diagnosis. For plant analysis, upper leaves should be collected

prior to initial bloom. If possible, collect soil and plant samples from ‘good’ and ‘bad’ areas of the field to compare results.

When to apply Zn fertilizer?

Zinc can be applied if soil test levels are low, we do not have a recommendation based on tissue tests. Since the availability of Zn is regulated by soil pH level, the fertilizer recommendations are as:

Pounds Zn/acre = (5.0 x soil pH) - (0.4 x 0.1 N HCl extractable Zn in ppm) – 32

An important consideration is that most of the research indicates low probability of yield increment with Zn application. It could be beneficial to test it before large scale application by applying it on a strip to identify if Zn response is economical under your field conditions.

How to apply Zn fertilizers?

Zinc banded with the starter fertilizer is the most economical method to ensure Zn availability throughout the growing season in row crops. Incorporating before planting would be desirable if unable to band. The 1995 Tri-State Fertilizer Recommendations has a table for the Zn rate based on soil test Zn (based on 0.1 N HCL extractant) and soil pH (Table 1).

Table 1. Zinc fertilizer recommendations for responsive crops (1995 Tri-state fertilizer recommendations; Vitosh et al. 1995)

Soil test Zn	Soil pH					
	6.6	6.8	7	7.2	7.4	>7.6
ppm	lb Zn per acre ³					
1	1	2	3	4	5	6
2	0	1	2	3	4	5
4	0	0	1	2	3	4
6	0	0	1	2	3	4
8	0	0	0	1	2	3
10	0	0	0	0	1	2
12	0	0	0	0	0	1

Broadcast application of 5-10 lb/ac of Zn is recommended to correct Zn deficiency or build Zn levels in Zn deficient soils. Foliar application of Zn sulfate (36% Zn) at 0.3-0.7 lb of Zn per acre mixed with 20-30 gallon of water is another option. Caution should be

taken if the source of Zn is in chelated form as over application can cause foliar injury and under-application is not effective. Other commonly used Zn fertilizers include Zn-ammonia complex (10% Zn), Zn oxysulfates (variable % Zn), Zn oxide (50 to 80% Zn) and Zn chelate (9 to 14% Zn).

Key points/summary

- Zinc is an essential plant nutrient required for optimum plant growth and yields.
- Wheat is unlikely to be deficient in Zn, so less likely to respond to Zn application.
- Zinc can be banded, broadcasted, or applied as foliar application, however, banding it with starter fertilizer is the most economical method.

Battle For The Belt: Episode 33- Wrap Up

By: [Taylor Dill](#), [Laura Lindsey](#), [Osler Orteiz](#)

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2023-37/battle-belt-episode-33-wrap>

Episode 33 of Battle for the Belt is now available: <https://www.youtube.com/watch?v=4igcFhvU16k>
In episode 33, we talk with our Soybean and Small Grain Specialist Laura Lindsey, and Corn Specialist, Osler Orteiz about the season and upcoming winter extension programs.



The season started out cold and wet at all three locations with emergence starting three weeks after planting the first planting date. This caused stand issues at the Wooster location in soybeans specifically. Early season disease presence at the Wooster location in soybeans was observed and sampled. The early season disease data will be shared in the near future. After this wet and cool period, all locations experienced very dry weather. During our normal optimum planting date of May 11, there was little soil moisture during this planting date all the way through to our May 25th planting dates at the Western and Northwest locations. The predicted optimum planting dates for corn are our late April to mid-May planting dates, and our predicted soybean optimum planting dates are the early and late April planting dates.

We will be holding four in-person regional meetings and one online to present the first year of Battle for the Belt data over the winter. Look for the meeting invitations from the C.O.R.N newsletter!

Battle For the Belt Location Updates

This week at the **Wooster** location, all of the soybean planting dates have entered into R8 and harvest will take place either this week or next week. In the corn, planting date five is still mostly at R5, a few hybrids reached R6, but this planting date needs more time.

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The **Western** location harvested planting date four soybeans and planting date five reached R8. The first three planting dates of corn were harvested. Planting dates four and five in corn needs to dry down more before harvest.



*Small Plot
Combine*

Harvest of plots



The **Northwest** location had planting dates one, two, and three in corn harvested last week. The last two planting dates also need to dry down at this location. All of the planting dates in soybean are at R8 and will likely be harvested this week.

Location	Precipitation (Inches) (Oct. 16- Oct. 22)	2-inch soil temperature (Oct. 16- Oct. 22)	Air Temperature (Oct. 16- Oct. 22)	Planting date	GDDs (Cumulative)	Corn Growth Stage	Soybean Growth Stage
Wooster, Wayne County	0.87	Max: 58°F Mean: 56°F Minimum: 54°F	Max: 63°F Mean: 50°F Minimum: 33°F	April 14 th	2417	R6	R8
				April 27 th	2354	R6	R8
				May 11 th	2301	R6	R8
				May 30 th	2107	R6	R8
				June 21 st	1802	R5	R8
Western, Clark County	0.00	Max: 60°F Mean: 56°F Minimum: 50°F	Max: 54°F Mean: 50°F Minimum: 35°F	April 13 th	3037	R6	R8
				April 27 th	2952	R6	R8
				May 11 th	2868	R6	R8
				May 25 th	2674	R6	R8
				June 8 th	2413	R6	R8
Northwest, Wood County	0.58	Max: 58°F Mean: 52°F Minimum: 45°F	Max: 65°F Mean: 51°F Minimum: 35°F	April 12 th	2909	R6	R8
				April 26 th	2815	R6	R8
				May 11 th	2747	R6	R8
				May 25 th	2579	R6	R8
				June 8 th	2333	R6	R8

Table 1. Planting dates one, two, three, four, and five in the trial at all three locations with the day of planting, precipitation, soil, air temperature averages, and Growing Degree Days (GDDs). Information from CFAES Weather System, <https://weather.cfaes.osu.edu/>.

Keep following the ‘Battle for the Belt’ this growing season to learn more and get further updates! You can find the full video playlist of Battle for the Belt on the [Ohio State Agronomy YouTube](#) channel.

Income Tax Schools At The Ohio State University

By: Barry Ward & Jeff Lewis, OSU Income Tax Schools

Source: <https://farmoffice.osu.edu/blog/fri-10202023-913am/income-tax-schools-ohio-state-university>

Tax provisions related to new legislation as well as issues related to trusts and estates, retirement, sales of business property, and income for both individuals and businesses are among the topics to be discussed during the upcoming Tax School workshop series offered throughout Ohio in October, 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 2023 tax returns.

The 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.

Our instructors are what make the difference in our program. Most have been teaching OSU tax schools for over 20 years and make themselves available long after the class to make sure attendees get through the tax filing season.

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 by visiting:

[2023 National Income Tax Workbook Topics](#)

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:

October 26-27, Ole Zim's Wagon Shed, Gibsonburg/Fremont

October 30-31, Presidential Banquet Center, Kettering/Dayton

November 2-3, Old Barn Restaurant & Grill, Lima

November 7-8, Muskingum County Conference and Welcome Center, Zanesville

November 16-17, Hartville Kitchen, Hartville

November 20-21, Ashland University, John C. Meyers Convocation Center,

Ashland

November 28-29, Nationwide & Ohio Farm Bureau 4-H Center, Columbus

Virtual On-Line School presented via Zoom:

December 1, 4, 6, & 8, 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 \$425. 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 \$475.

Additionally, the 2023 Checkpoint Federal Tax Handbook is available to purchase by participants for a discounted fee of \$70 each. Registration information and the online registration portal can be found online at: <https://go.osu.edu/tax2023>

In addition to the tax schools, the program offers a separate, two-hour ethics webinar that will broadcast Monday, December 11th 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 Wednesday, December 13th 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 \$180 if registered at least two weeks prior to the webinar. After November 29, registration is \$230. Register by visiting: <https://go.osu.edu/tax2023>.

NEW! Introduction to Tax Preparation Course.

New this year, we are offering an introduction to tax preparation course. Our instructors are highly qualified tax professionals presenting a real-world approach to tax preparation. This course is designed for professionals with 0-5 years of experience and seeks to help build a foundation for which all tax professionals can continue to build off of. To read more about our introductory course and the topics covered visit, <https://farmoffice.osu.edu/tax/new-introduction-tax-preparation-course>.

The introductory course will be held on November 13th and 14th at the Der Dutchman in Bellville, Ohio. The course has been approved for continuing education credits by the IRS, the Ohio Accountancy Board, and the Ohio Supreme Court. Registration is \$425 prior to October 30th. Registration fees increase to \$475 beginning November 1st. Registration includes a 300+ page workbook created by our instructors to help you throughout the beginning of your career!

Contact Barry Ward at 614-688-3959, ward.8@osu.edu or Jeff Lewis at 614-247-1720, lewis.1459@osu.edu for more information.

Bale Grazing – Could it work for you?

ByL: [Christine Gelley](#)– OSU Extension ANR Educator, Noble County, Ohio

Source: <https://u.osu.edu/beef/2023/10/18/bale-grazing-could-it-work-for-you/>

Extending the grazing season is one of the best ways to reduce labor on the farm. In order to add grazing to your operation, you must approach grazing with a plan and the will to succeed. Bale grazing, utilizing multiple forage species and controlled stocking rates, adding fertility when needed, and proper management increase chances for success.

Whether you have the ability to graze for a couple of months, the benefits of preparation will show up in the spring when purchasing supplemental feed. Regardless of your plans, it is difficult to provide sufficient grazing for your livestock. Eventually you'll be relying on stored feeds to supplement. There are still benefits to utilizing your pasture rotation. Bale grazing may be a practice to consider.



Some of the original bale grazing research happened at EOARDC in Noble County.

What is bale grazing?

Simply put, bale grazing consists of stockpiling pasture in late summer to early fall and then strategically placing round bales throughout your pastures before the weather turns sloppy and cold. When you are ready to begin grazing the stockpile and supplementing with hay, you strip graze the pasture where the round bales are set. Utilizing temporary fencing, you can allocate an area containing several bales and allow the livestock access to both the stockpiled pasture and the hay. Once the hay is consumed, you move the animals forward to the next section of pasture.

This practice is often successful at reducing damage to pasture from hoof traffic caused by feeding and drinking in the same place throughout the winter. It also allows for nutrient dispersal from the hay and livestock manure without the need to gather, compost, and spread manure in another season. Due to less mud and manure accumulation while bale grazing, animals that are due to deliver young when conditions can be harsh will likely have fewer complications than if they were in a condensed and damaged sacrifice lot.

Having the bales placed in the pasture when the weather is nice will save time and frustration later. The trek out to the pasture should be safer and easier when you only need to take yourself and a pocketknife along to feed the livestock. The livestock will be

happy to see you as they anticipate moving to a fresh section of pasture. It will be easier to account for each animal's wellbeing when their grazing space is allocated just to last long enough to consume the bales you provided.

However, along with the benefits, there can be challenges with bale grazing.

There will be nutrient and dry matter loss from the hay while bale grazing. Ohio's humid climate and fluctuating temperatures during the winter will cause dry hay to draw moisture from all directions. If you don't get a good freeze, the bottom portion of the bale will have significant loss from saturated ground. Net wrapped or plastic wrapped hay will have less loss than twine tied bales, but the wrap can also be difficult to remove if conditions are icy.

Does this mean you will need more hay on hand to account for the loss? Maybe, but maybe not if there is grass still to graze from being stockpiled. Fortunately, the hay that is lost will return nutrients to the soil. It will also leave behind bare spots where the forage underneath the bale was smothered. It may grow back if allowed to rest or it may need reseeded when the seasons begins to change again.

Another concern is hay history. Do you know where the bales came from?

If you made the bales yourself, hopefully you'll make note of the harvest timing and any potential concerns with the hay. Think about when the animals will need feed of best quality and stage your best bales to be accessible to align with those needs. It is common to see quality differences from one field to another and from harvest timing too. If you had struggles with weeds, you can anticipate having greater hay waste due to lower intake and you should be prepared to scout the feeding areas in the seasons to follow, because the hay will likely contain weed seed. Another concern is herbicide carryover. Some herbicides may have residual that stays in the hay while stored and this hay should not be moved off the applicator's farm. Make note of any field and resulting bales that may have associated herbicide activity and avoid staging those bales in sensitive areas of the pasture. These restrictions will be described on the herbicide label and should be reviewed before application.

Hay without a history is a mystery. Bale grazing with purchased hay may lead to unforeseen issues in seasons to come. Gather information before you buy hay to determine if it is worth the money to buy and the labor to transport it. If you have doubts about the hay, have it tested before you buy to make sure it is sufficient for your livestock and do not use it for bale grazing. Many harmful weeds have been spread through naive hay sales.

Bale grazing has potential for the mindful grazing manager and success may vary from farm to farm and year to year. If you'd like to give it a try with caution, maybe set out

enough bales to last a month and see what you think. The number of bales you will need to last a given time frame will depend on the species of livestock, the number you have, their lifecycle needs, and the quality of your hay.

Additional information about bale grazing feasibility and best management practices can be accessed from a variety of Land Grant Universities. Reach out to your local Extension Office for customized recommendations.

Management zone maps of little use to corn growers

By: [Materials](#) provided by [University of Illinois at Urbana-Champaign, News Bureau](#).

Original written by Diana Yates.

Source: <https://www.sciencedaily.com/releases/2023/10/231016122737.htm>

A multiyear analysis tested whether management zone maps based on soil conditions, topography or other landscape features can reliably predict which parts of a cornfield will respond best to higher rates of seeding or nitrogen application. The study found that -- contrary to common assumptions -- crop-plot responses to the same inputs vary significantly from year to year. The most unpredictable factor -- the weather -- seemed to have the biggest impact on how the crops responded to these inputs.

The new findings are reported in the *Agronomy Journal*.

Management zone mapping grew out of a surge in interest in digital agriculture -- the use of new data-gathering and analysis technologies to better understand the interplay of factors that contribute to crop yields, said University of Illinois Urbana-Champaign crop sciences professor Nicolas Martin, who conducted the analysis with former U. of I. postdoctoral researcher Carlos Agustin Alesso. Such approaches use field-based sensors, satellite data and other digital tools to track how crops respond to local conditions, fertilizer, seed rates and other inputs. The goal is to minimize wasteful or destructive practices while maximizing yield, Martin said.

The new study used an unusual approach to test management zone map predictions. "We used our farm equipment as a printer, creating a patchwork of inputs like a quilt with different colors," Martin said. "We printed our experiment on multiple sites, using a completely randomized design."

The researchers conducted the work on seven typical non-irrigated Illinois corn production sites, each of which was subdivided into hundreds of plots. Each plot received a randomized rate of corn seeding and nitrogen application. Each plot also had its soil composition, topography and other site-specific landscape features measured. All other variables except weather were standardized across the fields. The trials took place from 2016 to 2021.

By measuring the yield of each plot during harvest over multiple years, the researchers determined which plots were the most responsive to inputs each year. They used an advanced random-forest algorithm to determine which factors -- weather conditions, soil characteristics or slope, for example -- best predicted whether higher nitrogen application or a higher seeding rate would improve yields.

"We found that weather variables are the most important factors determining the spatial patterns of response to the nitrogen rate or the seed rate, followed by landscape and soil attributes," Martin said. "We also found that the responses vary from year to year depending on the weather effects. They are very inconsistent, at least in the fields we tested."

This means that a plot that responds well to a higher nitrogen rate one year might not respond so well the next time it is planted in corn, he said. This makes the management zone mapping concept an unreliable predictor of crop responses to inputs.

"We think that these findings can explain in part why precision agriculture technologies have been unevenly adopted by farmers," Martin said.

The researchers believe more multiyear data and better on-site sensor and analysis tools can eventually improve the predictive ability of management zone mapping.

The U.S. Department of Agriculture's Natural Resources Conservation Service and National Institute of Food and Agriculture supported this research.

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

BQA training – Bloomfield

October 25th - RSVP contact Andrew at 440-576-9008 or at Holden.155@osu.edu.

Northeast Ohio Small Farm Financial College

Postponed to February 2024 TBD - Learn more or register at <https://go.osu.edu/NEOSFFC>

Ashtabula County Beef Banquet

November 4, 2023

For tickets contact Andrew

Private Pesticide/Fertilizer Applicator Training

November 14, 2023 – Lake County ***EARLY BIRD***

December 14, 2023 – Online via Zoom

January 18, 2024 – Trumbull County

February 14, 2024 – Geauga County

March 11, 2024 – Ashtabula County

March 28, 2024 – Online via Zoom

Weeds University

February 21, 2024

More information to come!

Northeast Ohio Agronomy School

March 27, 2024

Registration Opens Feb. 1st

Pruning Classes

March 2nd – Hartford

March 30th – Sages

CFAES

Wednesday
October
25

6:00 PM – 7:30 PM
Bloomfield Livestock
Auction
North Bloomfield, OH

BEEF QUALITY ASSURANCE (BQA)

This program offer the opportunity to earn your certification or renew you expiring one. The certification cycle is 3 years.

Andrew Holden and Noelle Barnes will cover a multitude of topics, including carcass quality, injection protocol, and animal handling, that will provide your BQA certification and ultimately impact your success at marketing.



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Call 440-576-9008 to RSVP


**Please arrive at least 10 minutes
prior to 6:00 PM**

College of Food, Agricultural, and Environmental Sciences

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Pesticide License Expires 2024? Attend the NE Ohio “Earlybird” PAT Session

The Ohio State University, Lake County Extension. Ann Chanon Agriculture and Natural Resources Educator



Save the date! Tuesday,
November 14th, 2023

1:00 p.m. to 5:00 p.m.

The Richard L. Martin Learning Center
1981 Blase Nemeth Rd. Painesville,
Ohio 44077

Pesticide Recertification	- \$35
Fertilizer Recertification	- \$10

Does your Private Pesticide Applicator and/or Fertilizer license expire in 2024? Want to get your PAT credit done early? Want to learn about what new pests and diseases are on the horizon? OSU Extension in NE Ohio will again be offering our “Earlybird” session on November 14, 2023 at the U-Lab **1981 Blase Nemeth Rd. , Painesville, Ohio 44077** Pesticide recertification will be from 1 p.m. to 4 p.m. with fertilizer recertification following at 4 p.m.- 5 p.m. Register by completing the form on the back of this flyer and mailing with payment to OSU Extension Lake County, 105 Main Street Suite B402, Painesville, OH 44077. Please make checks payable to OSU Extension, Lake County.



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<https://lake.osu.edu/home>

Earlybird PAT/ FACT Recertification
November 14th 1p.m. -5 p.m.
The Richard L. Martin Learning Center (U-LAb)
1981 Blase Nemeth Rd., Painesville, OH 44077

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ Email _____

Number of People Attending:

Private Applicator Recertification	_____ X \$35 per person = \$ _____
Fertilizer Applicator Recertification	_____ X \$10 per person = \$ _____
Late Fee (after Nov. 8 , 2023)	_____ X \$25 per person = \$ _____
Total	\$ _____

Please make checks payable to: **OSU Extension, Lake County**

Mail registration to: OSU Extension Lake County, 105 Main Street Suite B402, Painesville, OH 44077

Contact Ann Chanon at 440-853-2630 or by email at chanon.1@osu.edu for more information.

Can't attend on Nov. 14th? Other PAT offerings will occur in 2024 in Ashtabula, Geauga, and Trumbull Counties. Beat the Snow and Cold; sign up NOW!



Planning for the Future of Your Farm Workshops



Join OSU Extension to learn how to transition your farm to the next generation at one of our **“Planning for the Future of Your Farm”** workshops. These workshops are designed to jump-start your family’s discussion on farm succession and estate planning. Both on-line and in-person workshops are available.

Choose the Location/Format Which Best Fits You

Zoom Webinar Workshop (6:30 – 8:00 p.m.)

February 5, 12, 19, and 26

In-Person Workshop Locations (9:00 to 4:00 p.m.)

Southern State Community College - Mt. Orab Campus:
November 29, 2023 (Brown County)

Celina, Ohio: December 7, 2023 (Mercer County)

Lisbon, Ohio: January 19, 2024 (Columbiana County)

Urbana, Ohio: January 26, 2024 (Champaign County)

Tiffin, Ohio: February 2, 2024 (Seneca County)

Instructors: David Marrison, OSU Extension Farm Management Field Specialist and Robert Moore, Attorney with the OSU Agricultural & Resource Law Program

More Information at: go.osu.edu/farmsuccession

farmoffice.osu.edu



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