

Midwest Cover Crops Council (MCCC) 2019 Ohio Report

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Ohio State Extension



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Ohio Research

Does not include 100% of research projects in Ohio – only those submitted for the MCCC report



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Research and reports area available via Efields or the Ag Crops Team Website

- www.agcrops.osu.edu
- www.digitalag.osu.edu/efields

eFields

eFields

connecting science to fields



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eFields

eFields

connecting science to fields

- **Driven by a collaboration between extension educators, state specialists and farmers**
- **Uses a OSU Plots app**
- **Quick turn around of summary of results in short team projects**



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Agronomic Crops Network

Ohio State University Extension



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CFAES

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Corn Newsletter

The C.O.R.N Newsletter is now incorporated into this site.

C.O.R.N Newsletter >



- **Longer Term Projects**
- **Peer Reviewed**
- **Located Under the On Farm Research Tab**



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Ohio Research

- Interseeding Research Projects
- Cover Crop growth in Organic Systems
- Red Clover Research
- Cover Crop Termination Research
- Cover Crop seeding after manure application
- Legume vs Non-legume research
- Cover Crops in vegetable production
- Summer seeding of cover crops in soybeans and corn
- Soil Health Survey to develop recommendations based on in-field analysis
- Selecting versatile winter cover crops for continuous no-till corn-soybean rotation
- Response to long-term no-till and crop rotation on soil health with and without cover crops
- SHARP site research on long term tillage and use of cover crops
- Measuring soil compaction with and without Cover Crops
- Edge of Field Studies measure various management practices (manure, cover crops, and their effect on soil health
- Corn Yield response to nitrogen, phosphorous and potassium (with sulfur) after winter rye



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Edge of Field Studies

- Soil silt loam, silty clay loam and clay loam
- Soil test range 9-380 ppm M3 of P
- Manure 12 sites (6 pairs)
- Tillage (No-till, strip till, conservation)
- Base line period



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Ohio Education

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Major Educational Events In Ohio

- Conservation Tillage Conference (March 2018) – over 750 attendees in the two day event
- No-till Field Day (175) and Workshops (192)
- Dave Brandt Cover Crop Workshop (April 2018)-
- Advanced Soil Ecology and Soil Health Workshops – Four (Over 150 attendees)
- Youth Soil Health Challenge Series
- Webinars: NRCS Soil Health (934)



Major Educational Events In Ohio

- Collaboration on the Soil Health Nexus
- Series on Soil Health Videos
- The Nature Conservancy Partnered Field Day – Over 150 attendees
- Cover Crop Workshops – 11 total over 100 attendees
- Cover Crops Roundtables – Averaging 12 attendees per monthly meetings.
- Revised Tri State Fertilizer Guide
- Small Scale Summer Field Days on Cover Crops 12 total



Websites



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Healthy Soil Healthy Environment Website

- www.agbmps.osu.edu

Healthy Soil Healthy Environment

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4-H Youth

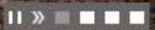
Urban Ag

OSU Extension

Let the worms do your tillage!

Bioturbation is the mixing of (plant) residues into soils and sediments by biotic activity. Checkout the processes in soil with earthworms, potworms, collembola, mites and isopods over a 15 weeks period.

[Read more >](#)



Best Management Practices Website

- www.agbmps.osu.edu

AgBMPs

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Critical Concerns

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Critical Concern - Gully Erosion
Via Concentrated Surface Flow

Read more >



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Soil Health Website

- www.soilhealth.osu.edu
 - *Both Youth and Adult side to the website*



OSU - 4-H Soils Challenge from Halffletter on Vimeo.

Nutrient Education Website

- www.nutrienteducation.osu.edu

Nutrient Education & Management

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Fertilizer Certification

Get Certified! Attend a training or exam option is now available!! Recertification Now Available. Find a training near you!

Find a training >



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Publications

Agriculture BMPs for Soil and Water Health

- Published in 2018
- Available at No Cost
- Minimum of 100 copies were sent to all local SWCDs in all 88 counties.

Ohio Updates on Laws requiring additional education and use of cover crops



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How is Fertilizer Defined under the New Law?

- Contains a recognized plant nutrient element..... which is used for its plant nutrient content or for compounding mixed fertilizers
- Does not include lime, limestone, marl, unground bone, water, residual farm products, animal or vegetable **manures** unless distributed with a guaranteed analysis***



Fertilizer Certification is *Not Required* if you:

- Apply fertilizer to less than 50 Acres
- Produce a crop primarily for **livestock feed**
- Use only starter fertilizer through the planter
- Hire a **custom applicator** to apply fertilizer for you
- Custom Applicators responsibility to be certified & keep the fertilization records



Initial Certification

- Attend a 3 hour approved fertilizer certification program or take a state fertilizer test offered by Ohio Department of Agriculture
- CCA and CLMs may apply for the certificate without the class or test due to their additional requirements of those credentials
- ODA will send the Fertilizer Certificate
- (It's a certificate, not a license!)
- Fee of \$30 plus additional cost of the class if choosing that option
- Over 21,000 applicators certified



Recordkeeping requirements enforced by local SWCD and ODA

Record Keeping for Agricultural Fertilizer Certification-FAQ

What records are required to be kept by Agricultural Fertilizer Applicator Certificate holders?

All fertilizer certificate holders shall maintain fertilizer application records. For each application of fertilizer applied for the primary purpose of agricultural production, the certificate holder or the applicator acting under their instructions and control shall document the following information within twenty-four hours of application:

- (1) The name of the individual who applied the fertilizer;
- (2) The name of the certificate holder, if applicable;
- (3) The date of the application of fertilizer;
- (4) The place of application of fertilizer;
- (5) The number of acres on which fertilizer is applied;
- (6) The rate of application of fertilizer;
- (7) The total amount of fertilizer applied, either by weight or volume;
- (8) The analysis of the fertilizer applied;
- (9) The soil conditions at the time of the application;
- (10) The type of application method (soil injected, incorporated, surface, etc.);
- (11) The weather conditions at the time of application, including temperature and precipitation;
- (12) The weather forecast for the day following application; and
- (13) For surface application only, whether the land at the time of application was frozen and/or snow covered.

Ohio Requirements for Fertilizer Recordkeeping

- Record the information *within 24 hours of application*
- Applicator working under direct supervision must submit record to the certificate holder within 10 days
- Certificate holders must submit record to farm operators within 30 days
- No set form required - Electronic or paper records acceptable
- Must keep records for **3 years**
 - Employers of certificate holders may elect to keep the records
- Required to submit records to ODA upon request



Record Keeping Form

Ohio Agricultural Fertilizer Applicator Recordkeeping Form

Maintain records for 3 years from date of application									
Who: Name of certificate holder:									
Name of Applicator (if different than above):									
When: (mm/dd/yyyy)									
Application date									
Where:									
Location									
What:									
Fertilizer analysis									
Rate applied									
Number of acres applied									
Total amount of fertilizer applied									
Application method									
Application conditions:									
Soil conditions									
Air temperature									
Precipitation									
Soil frozen or snow covered (Y/N)									
Weather forecast:									
24 hour forecast following application									
Notes:									

Direct Supervision

Uncertified applicators may apply fertilizer if acting under **instruction and control** of a **certified** fertilizer applicator

- The applicator must be:
 - Within 25 miles or 2 hours travel of certificate holder
 - Employed by the same business or farm
 - Instructed where, when, and how to apply the fertilizer



Affirmative Defense for Private Civil Action

Three Conditions:

1. Fertilizer applicator is **certified** or is applying fertilizer under the direct supervision of certified applicator
2. Fertilizer application **records** maintained
3. The fertilizer has been applied according to and in substantial compliance with a **Voluntary Nutrient Management Plan (VNMP)**
 - VNMPs submitted for approval every five years to the Soil and Water Conservation District or ODA director's designee



What questions do
you have?



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Thank You

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