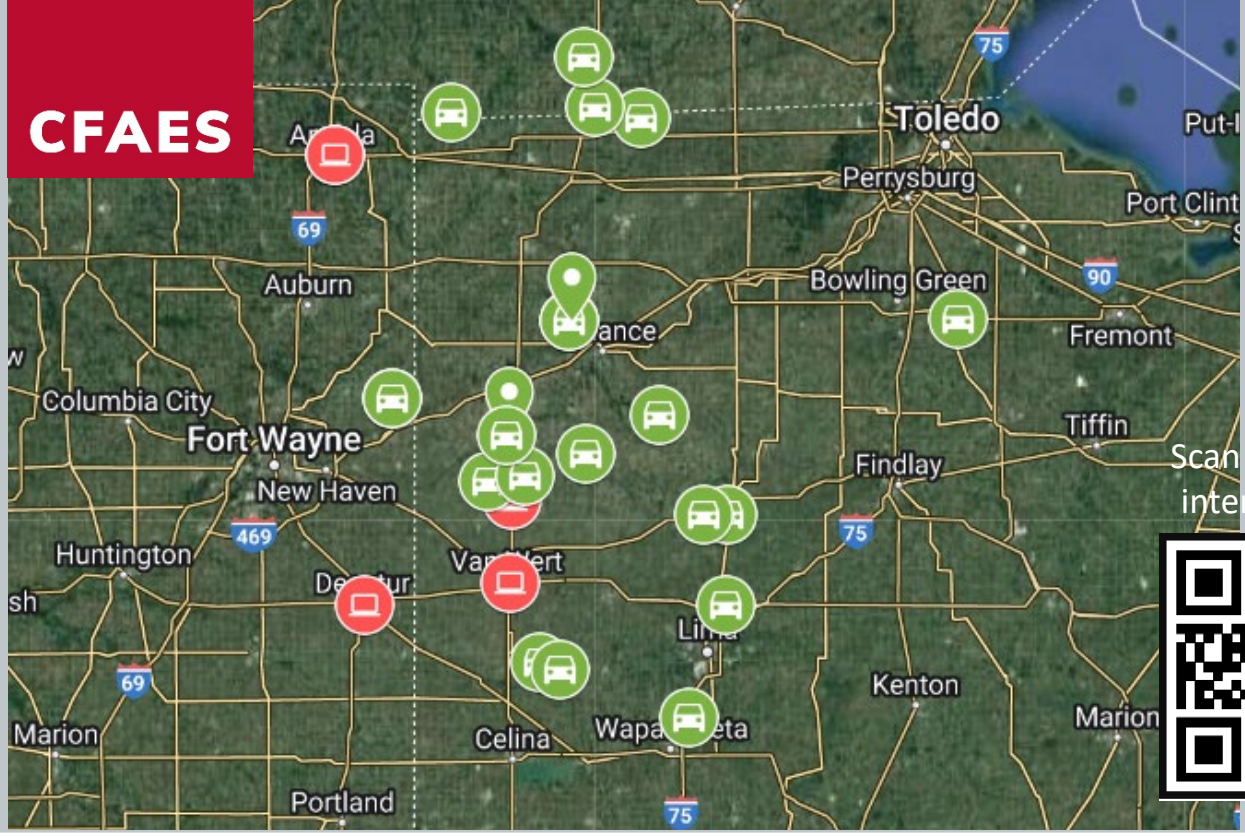

PAULDING COUNTY EXTENSION PRESENTS

Soil Health Tour 2022 Site Locations

Parking information for each site can be found at the bottom of the description for that site

In-Person Tour Stops are represented by the *green* circles with the *car emblem*, and denoted with a *number*

Virtual Tour Stops are represented by the *red* circles with the *computer emblem*, and denoted with a *letter*

In-Person Tour Stops:

1) Tom Jones – Mercer County, OH
2) Mercer Landmark – Mercer County, OH
3) Davis Farms – Auglaize County, OH
4) Burkholder Healthy Farms – Allen County, OH
5) Duling Family Farms A – Putnam County, OH
6) Duling Family Farms B – Putnam County, OH
7) Leon Klopfenstein – Paulding County, OH
8) Joe and Pete Woods – Paulding County, OH
9) Keith Klopfenstein – Paulding County, OH
10) Oedy Farms – Defiance County, OH
11) *Hybrid* Defiance Agricultural Research Association (DARA) – Defiance County, OH
12) Ron Snyder – Wood County, OH
13) Seiler Farms, Inc. – Fulton County, OH
14) Denny Person – Hillsdale County, MI
15) Stoney Ridge Farms, LLC – Hillsdale County, MI
16) Ransom Chicken Lady – Hillsdale County, MI
17) Roemke Farms A – Allen County, IN
18) Paulding County Extension Office – Paulding County
19) Roemke Farms B – Allen County, IN

Virtual Tour Stops:

A) Mike Werling Farm – Adams County, IN
B) Carl Renner – Van Wert County, OH
C) Leon Klopfenstein – Paulding County, OH
D) *Hybrid* Defiance Agricultural Research Association (DARA) – Defiance County, OH
E) Dewey and Marcia Powers – Steuben County, IN
F) Moody Farms – Steuben County, IN

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For an interactive map, and photos and videos of the virtual tour stops, visit **go.osu.edu/SoilHealthTour or scan the QR code above**

Be sure to *fill out the survey* at the link above to **show us where you went** and to **register for the door prize drawing!**

EVENT SPONSORS: The Nature Conservancy, Farmer Advocates for Conservation

Description of Site Practices

1) **Tom Jones – Mercer County, Ohio:** This field was planted on 8/6 with an 11-way cover crop mix. The mix includes Oats, Buckwheat, Austrian Winter Pea, Sunflower, Sudangrass, Daikon Radish, Annual Ryegrass, Crimson Clover, Rape, Japanese Millet, & Flax. This field has been no-till for the past 12-14 years, and deep tillage is utilized before the cover crop is seeded in the rotation of cover crop - soybean - corn. 50-ft tile spacing, and 3 ton/A chicken litter was applied before seeding the cover crop. The clover and annual ryegrass should overwinter out of this mix. I do this for soil health. We need to sequester Carbon from the atmosphere. I've been seeing higher corn yields in the sand ridges on dry years because of this cover crop. I'm able to no-till into ditch bottom fields now because of the change in the soil. I have 150 acres of this cover crop mix out this year.

Parking: Along road

2) **Mercer Landmark – Mercer County, Ohio:** This Cover crop plot is 5 acres with 15 different cover crop mixes. Everything from straight cereal rye to an 11-way summer annual mix. This field was conventionally tilled and planted on July 1st. There are mixes for interseeding, nitrogen fixation, forage mix, and summer/ winter annuals. We are trying to improve overall soil health on this plot. Trying to show what these cover crops can do for your cash crop, your soil, and your ROI.

Parking: Grass lawn area to the West side of the corn, soybean, cover crop plot

3) **Davis Farms – Auglaize County, Ohio:** Continuous no till and covers for the last 5 years. Water management is key, as well as time and equipment savings.

Parking: Road ditch or pastures

4) **Burkholder Healthy Farms – Allen County, Ohio:** This field is in its 7th year. No-till and cover crops have been planted the last 5 years. No insecticide/ fungicide seed treatments on this field since 2019. No granular salt-based fertilizers are applied for corn or soybeans. The cover crop mixture planted in this field is Sorghum-Sudan grass, cow peas, buckwheat, annual rye grass, cereal rye, radish, and crimson clover. There are grass lanes on each side of this farm where we are trying to get clovers, milkweed and other species established. I am involved in Regenerative Agriculture practices because I believe it is the best practice for the land. Our goal at Burkholder Healthy Farms is "Turning dirt into healthy soil, one acre at a time“. A goal of mine is to leave my children as healthy soil as possible.

Parking: Along grass lane

5) **Duling Family Farms A – Putnam County, Ohio:** This field is a corn field (planted May 24th) that was interseeded with covers at V4/V5 on June 24th. The corn in this field was planted green into a cover crop mix. This helps with improving soil structure, water-holding capacity (prevents runoff), and soil health. The cover crops hold onto the soil fertility, so we need less fertilizer during the growing season. There are multiple benefits from doing this practice.

Parking: Along the road or in farm driveway

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Description of Site Practices

6) **Duling Family Farms B – Putnam County, Ohio:** This field has been continuous minimal tillage for the past several years. Tillage is only done when livestock manure has been applied to the field and needs to be incorporated. The current cover crop was planted the last week of August and is an 8-way mix containing rapeseed, buckwheat, annual ryegrass, oats, sun hemp, radish, sunflower, and hairy vetch. Farmers have abused the soil for the past 50 years or so. I may not see the improvements in my lifetime, but I want the younger generation to be involved in making better decision related to soil health to hopefully get more people involved.

Parking: Along the road

7) **Leon Klopfenstein – Paulding County, Ohio:** Continuous No-till for 2 years. Newly planted multi-species cover crop mix planted on August 27. Species were selected based on characteristics of the species and goals for the field. Spread turkey litter and lime on it this year. Three-year rotation with extensive use of cover crops. Crops are planted green with roller crimper. Results include better water infiltration, reduced equipment cost, improved soil health, and organic matter. One of the best-drained fields that I have, so the cover crops aren't specifically for water infiltration on this field. Cover crop mix includes sweetclover, hairy vetch, buckwheat, sorghum-sudangrass, oats, sunn hemp, chicory, kale, pearl millet, phacelia, radish, mung bean, sunflower, flax, red clover, and crimson clover.

Parking: West of stop sign along CR-60

8) **Joe and Pete Woods – Paulding County, Ohio:** Our farm has been continuously no-tilled with use of cover crops for 18 years. Primarily utilizing cereal rye and red clover, other cover crops have been trialed to some extent. There have been 2 years in which cover crops have not been applied due to weather timing (such as fall of 2021). The practice was started out of necessity to build soil organic material and as a result have increased yields and profit. Earthworms are abundant, and soil health has improved. The field adjacent (north) of the parking spot is red clover, harvested for seed. Soybeans on the south side were re-planted June 13th. Feel free to dig and observe. There are two fields of soybeans on the west side of the farm, surrounded by trees -some walking required down the lane next to the pasture. The use of cover crops works for me. Tillage hasn't proven to be necessary, yields are excellent, and profitability is good. Soil health has very much improved and water infiltration has increased.

Parking: North side of driveway, under oak tree in the grass

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EVENT SPONSORS: The Nature Conservancy, Farmer Advocates for Conservation

Description of Site Practices

9) **Keith Klopfenstein – Paulding County, Ohio:** This field was wheat in 2021. I no-till planted annual ryegrass in September 2021. I no tilled soybeans on June 6, 2022 into standing annual ryegrass that I had sprayed to terminate the day before. I was trying to salvage the field and ARG has good root structure and keeps weeds down. Had struggled with this field, and it needed this species to help improve it. Has worked out, but I only use this species where necessary. Hard to get a stand of ARG to overwinter here, so need to plant it earlier. Biggest benefit has been more roots improving drainage and ground condition. Field has had drainage issues in the past and this has helped to prevent standing water. Satisfied with the field given the conditions this year, as beans around here struggled this year.

Parking: Along road in front of field

10) **Oedy Farms – Defiance County, Ohio:** There is a 2-stage ditch running through this farm. OSU is sampling the water from surface drainage ditches and tile outlets. There is a phosphorus removal filter bed located on the West end of the ditch. We have a 110-ft filter strip on each side of ditch and wildlife strips on East and West sides of the farm. Manure from dairy is applied according to soil tests. Corn and wheat rotation with clover interseeded in wheat for forage and winter cover. The water from this farm ends up in Lake Erie. We are doing this to measure nutrients entering the ditch.

Parking: North of ditch, West side of Rd 19 (grass area) by Oedy Farms sign

11) ***Hybrid*: Defiance Agricultural Research Association (DARA) Site – Defiance County, Ohio:** The Defiance Agricultural Research Association (DARA) site is home to three cascading waterways. Built in 2019, the cascading waterways combine grassed waterways with shallow-constructed, wetland basins. The waterways on-site vary in the number of basins, 1 to 3 basins. The cascading waterways are designed to combine waterways and wetlands to improve water quality. The waterways are installed into naturally occurring, concentrated surface water flow areas of a production field like a traditional waterway. The practice is being evaluated for reducing sediment, Nitrogen and Phosphorus losses in surface water flow.

Parking: Grass along road behind Fort Defiance Humane Society. Approximately 0.5 mile walk from parking to see all three cascading waterways (one-way). Walking path may have mud depending on the weather.

12) **Ron Snyder – Wood County, Ohio:** This farm was classified “Regenerative Certified" in May this year. It was certified by Dr. Liz Haney of Soil Regen and Regen Ag Lab. The farm has been in no-till and cover crops for 10+ years. I began working with nutrient reduction several years ago but, in the last 2 years have made substantial progress. Profit is the number 1 driver for using this management system. This management system also increases the microbiome activity, which drives the system. To develop a nutrient plan, the Haney test is used to see what nutrients are already available in the soil, and the microbial activity. After the crop is up and actively growing, a sap analysis is used. This will determine the level of nutrients taken up by the plant and the imbalances, then additional micros can be added if needed. This has allowed me to cut back on fertilizer rates significantly. The sap test has also started to guide me if a fungicide application is needed.

Parking: Along driveway next to field

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EVENT SPONSORS: The Nature Conservancy, Farmer Advocates for Conservation

Description of Site Practices

13) **Seiler Farms, Inc. – Fulton County, Ohio:** The two-stage ditch project was completed in 2014 to help control streambank erosion. It has worked very well. The ditch on this parcel is 660' feet long has 11' foot of fall (very rapid water movement during high flow times), and the bench width is approximately 35' feet wide. The channel was never altered. Top width is around 70' feet, and bank slope is 2.5 to 1. My best example of change would be slowing water down from 8-10 mph flow to around 3-5 mph. We see a lot less destruction, and it also lets sediment fall out of the water, allowing growing vegetation on the banks and benches to tie up nutrients, improving water quality. Overall, it helps to improve water quality and decreases streambank erosion.

Parking: Anywhere along the filter strip next to two-stage ditch

14) **Denny Person – Hillsdale County, Michigan:** This field was my first ever cover cropped field. I think it was 2010 after wheat when I planted the cover crop. It's been cover cropped most years since then. In the fall of 2017 I brought cows back on the farm to start utilizing the feed these cover crops were producing. This field was first temporary fenced in the winter of 20/21 to graze cornstalks and cereal rye along with the field to the west which was a multi species mix after wheat. Part of this field where the medium red clover has dominated has been hayed and allowed to regrow. This field will be temporary fenced again for winter grazing along with the field to the west which will be cornstalks. The two different feed sources will balance the diet out well. I will also utilize the wet wrapped cover crops for supplemental feed. They will be rolled out on the ground for feed. I started with cover crops because they just made sense to me. Then I started hearing about animal impact from grazing these fields and I started buying cows. Then I went crazy and I have lots of cows along with some sheep and pigs. My goals for the farm have now changed from just trying to improve the soil and reduce erosion. To providing nutrient dense food first to my family, then to neighbors, my community, and across the tristate region. Healthy soil grows healthy plants which feeds healthy animals that make healthy people.

Parking: In the field

15) **Stoney Ridge Farms, LLC – Hillsdale County, Michigan:** This farm is the site of both small-scale manual water testing as well as an ongoing USGS water testing station. The winter of 2022/2023 will also be our third season of grazing beef cows on cover crops in between cash crops. Currently this is an 8-way (oats, soybeans, sunflower, sorghum sudan, turnips, radish, peas, millet) cover mix that was planted following wheat harvest. The farm also utilizes a grass buffer along a major county drain/ditch where soil test P levels have been monitored and managed through hay crop removal. Finally, we have been utilizing drone technology to seed cover crops and apply crop protection products. Our goal through the grazing is to increase nutrient cycling, soil biology and crop diversity. We believe, over time, this will improve soil health through higher organic matter and more soil resilience. Our goal through the water testing is to determine what, if any, impact the water leaving our farm has on regional water quality issues and what practices we can implement to minimize that impact.

Parking: On-site

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EVENT SPONSORS: The Nature Conservancy, Farmer Advocates for Conservation

Description of Site Practices

16) **Ransom Chicken Lady – Hillsdale County, Michigan:** Purchased the property in February of 2021, and we've had two growing seasons so far with soybeans last year and cover crop/wheat in 2022. We seeded wheat last fall with the plan to implement field tile late summer/ fall of 2022 and corn for 2023. No-till practices are implemented on this field as well as rotational continuous cover crop for grazing poultry (1,000 chickens, 100 turkeys, 50 ducks and 300 laying hens) in a growing season. No-till is a priority for the soil type in this farm. Being a muck-type soil, no-till and continuous cover are important for minimal soil erosion, increased water infiltration and accessibility when field conditions are wet. The cover crops are utilized for cover and feed for the poultry.

Parking: On-site

17) **Roemke Farms A – Allen County, Indiana:** This field was interseeded with red clover, crimson clover, annual rye grass, and radish back in early July. We have been doing cover cropping since 2015, when we had 1500 acres of prevent plant. Our agronomist had talked with us about using covers, but we hesitated until that time. We decided to use the covers because of our prevent plant acres and haven't looked back. Since 2016, we have had all of our acres (4,000 when we started) in cover crops. We are a never-till farm. We are seeing weed control in our fields after the cover crop, and they help us with Spring planting. The ground has mellowed, and we've seen 0.75% increase in organic matter since the beginning. It's also been cutting down on our herbicide use – we've cut out our Fall burndown applications altogether.

Parking: Pull in South driveway back to culvert to access field

18) **Paulding County Extension Office – Paulding County, Ohio:** Site of wrap-up event on September 29th from 6-8PM. Guest speaker Hans Schmitz from Purdue's Conservation Cropping Systems Initiative (CCSI) will present, and time for networking and discussion with site providers will be allotted before and after the speaker.

19) **Roemke Farms B – Allen County, Indiana:** In this field, we tried hay. After two years, it wasn't working for our schedule, so we transitioned to corn. We planted corn June 8th because we had to wait for a rain to make the ground soft enough to plant. The corn came up perfect, had a good stand, and looks good now. Hay production helped with organic matter and the Nitrogen value on the corn (alfalfa provided N). Recommend spraying your hay ground and planting corn straight in. The alfalfa opened up the soil with its roots, similar to having a cover crop on the field.

Parking: Along Rd 101

Virtual Tour Stop Information:

A) **Mike Werling Farm – Adams County, Indiana:** This two-stage ditch was installed in 2012, and it was put in with funding from The Nature Conservancy as a demonstration project. The ditch is approximately 1200 feet long, and it drains almost 200 acres. A benefit we have seen is reduced sediment/nutrients into waterways. It has also stabilized side slopes of the ditch; they are now a 2:1 instead of 1:1 slope.

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EVENT SPONSORS: The Nature Conservancy, Farmer Advocates for Conservation

Description of Site Practices

Virtual Tour Stop Information (cont.):

B. **Carl Renner – Van Wert County, Ohio:** we plant cereal rye in harvested soybean field with our bean splitter planter. Oats goes where the corn will be planted next spring, and the splitter units get planted with cereal rye. Next spring, we drive over the cereal rye with the tractor. It helps dry the ground out and gives us a root mass under the tractor tires. We kill the rye at planting time. If it's late in the fall, we skip the oats. We put 45 lbs. of Nitrogen on with the planter. Since we have been doing cover crops, our organic matter keeps going up. We also like how the soil is getting more mellow, and hopefully helping with our water quality.

C. **Leon Klopfenstein – Paulding County, Ohio:** This field has been in continuous no-till for over five years. It is in a three-year rotation that is soybeans, then wheat, which is followed by a cocktail mix cover crop, and then followed by corn. Rye is either broadcast into the standing corn or drilled after harvest. The fields are planted green utilizing a roller crimper at planting. Reduced equipment needs, improved drainage and fertility are benefits that I see.

D. ***Hybrid*** **Defiance Agricultural Research Association (DARA) Site – Defiance County, Ohio:** The Defiance Agricultural Research Association (DARA) site is home to three cascading waterways. Built in 2019, the cascading waterways combine grassed waterways with shallow-constructed, wetland basins. The waterways on-site vary in the number of basins, 1 to 3 basins. The cascading waterways are designed to combine waterways and wetlands to improve water quality. The waterways are installed into naturally occurring, concentrated surface water flow areas of a production field like a traditional waterway. The practice is being evaluated for reducing sediment, Nitrogen and Phosphorus losses in surface water flow.

E. **Dewey and Marcia Powers – Steuben County, Indiana:** This two-stage ditch was installed in 2015 on the West branch of Fish Creek that flows through the property through a cooperative effort between landowners Dewey and Marcia Powers, The Nature Conservancy, NRCS, the Steuben County Drainage Board, the Maumee River Basin Commission, and the Steuben County Soil and Water Conservation District. Fish creek is in the Western Lake Erie Basin Watershed. In addition to the 0.43 mile stretch two-stage ditch that was constructed, this project also focused on streambank stabilization. Installation of the two-stage ditch has significantly reduced the amount of runoff from the adjacent land, and the streambank stabilization has reduced sedimentation in Fish Creek.

F. **Moody Farms – Steuben County, Indiana:** The filter strips on either side of the drainage ditch that runs through the property were planted in approximately 2012. They were planted to control runoff from the adjacent fields. The filter strips benefit the farm operation by controlling runoff. This saves valuable healthy soil for crop production.

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