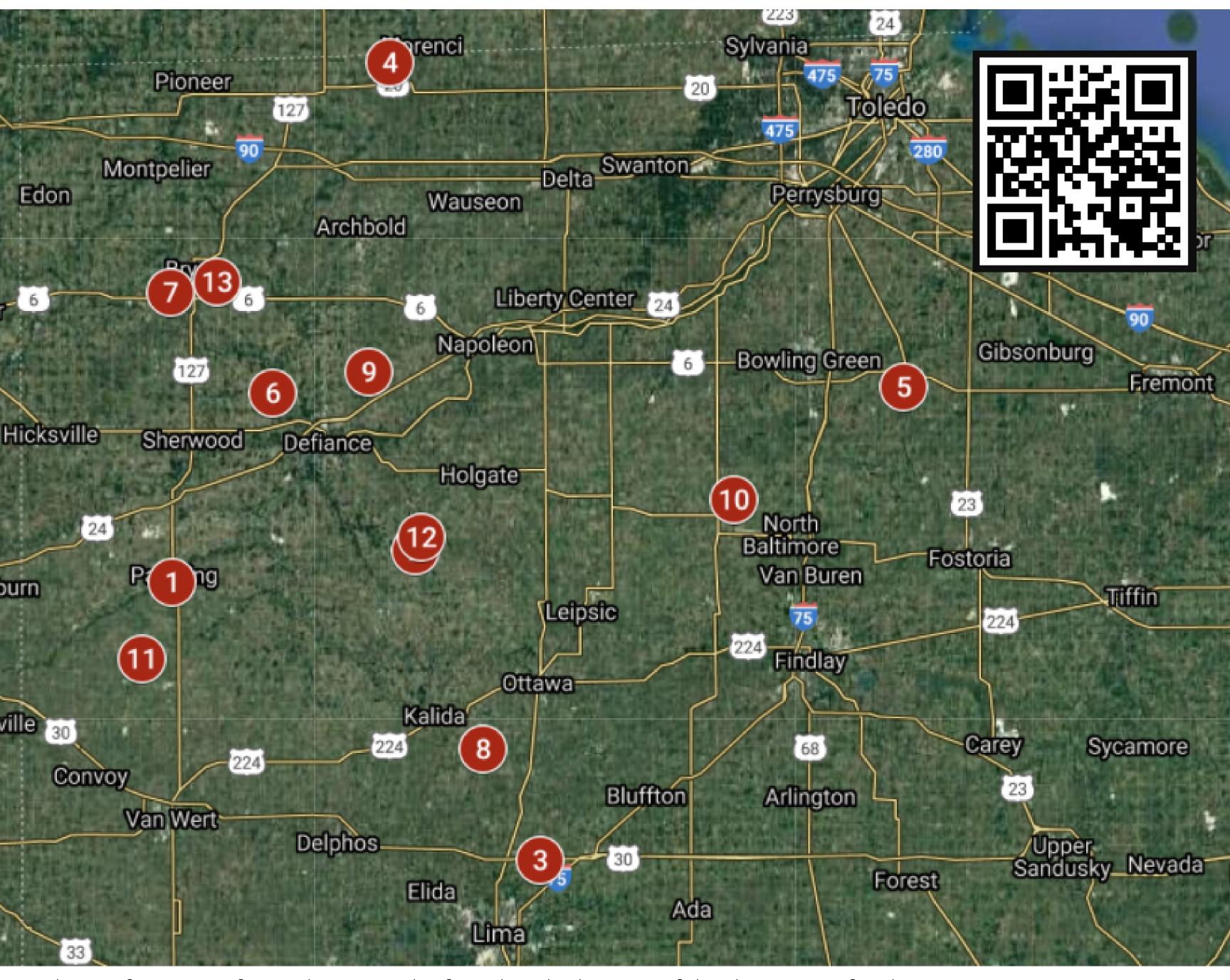


Soil Health Tour Site Locations



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

- 1) Paulding County Extension Building
- 2) Oedy Farms Defiance County
- 3) Burkholder Healthy Farms Allen County
- 4) Seiler Farms, Inc. Fulton County
- 5) Snyder Farms Wood County
- 6) Defiance Agricultural Research Association Defiance County
- 7) Dean Farms Williams County
- 8) Mark Siebeneck, Farmer Advocate for The Nature Conservancy Putnam County
- 9) Lenhart Family Farm, LLC Defiance County
- 10) OARDC Northwest Research Station Wood County
- 11) Leon Klopfenstein Paulding County
- 12) Sun Mountain Dairy Henry County
- 13) Dean Farms/OSU Cooperation Williams County

- 1) **OSU Extension Paulding County:** Location where closing event will take place on August 19th from 6:30-8:30 PM
- 2) **Oedy Farms Defiance County:** We have been using a 2 year rotation of corn for silage and then wheat then back to corn. Once every 4 years, we will follow the wheat with red clover or alfalfa and keep it for several years. We keep the farm covered with something green during the winter and then plant into it in the spring. We have filter strips on each side of the drainage ditch and wildlife strips along the west side of the farm and along Rd 19. They have been in existence for over 20 years. We have grassed waterways that are used for phosphate runoff studies. We are doing these things to reduce nutrients leaving the farm and to increase soil organic matter, which increases soil health *Parking: Grass area north side of ditch, enter at Oedy Farms sign*
- 3) **Burkholder Healthy Farms Allen County:** There are 2 separate fields at this location. The field on the south side of the driveway has been no till and covers for the last 10 years. The field on the north side of the driveway has been no till for the last 5 years and covers the last 2 years. Both were planted to cereal rye last fall. No insecticides or fungicides were used on the soybean seed this spring. Only living microbes and inoculant was applied to the seed. Soybeans were planted on May 25th. No salt based fertilizer has been applied to my soybean fields. Only 2 liquid applications of a mixture of N, P, K, and micronutrients. Also these are non-GMO soybeans. 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" My goal is to leave my children as healthy soil as possible.

Parking: visitors can drive up the long lane and turn around near the house and barn.

4) **Seiler Farms, Inc. - Fulton County:** The 2 stage ditch was created in 2014 - it is 660 feet long and has 11 foot of fall in that distance, with a winding channel. The waterway on the north side of the ditch is 1,400 foot long has 14 foot of fall, installed in 1986. Corn growing on the south side of the ditch was planted green into 4-6 foot tall cereal rye that was roller crimped. The soybeans growing on the north side of the ditch are double crops planted after barley harvest July 6th. We are doing what we do because it improves water quality and soil health.

Parking: there are filter strips on both sides of the two stage ditch







5) Snyder Farms - Wood County: This farm has been in continuous no-till for the last 12 years. The current cover crop was seeded at the end of July. The blend contains, winter pea, oats, flax, pearl millet, sorghum sudan grass, cow peas, balansa clover, crimson clover, berseem clover, brown mustard, radish, rape and buckwheat. The wheat fertilizer program used Haney soil testing, a soil test that gives recommendations based off multiple parameters, including a measure of carbon dioxide release, indicating biological activity. The goal is to understand nutrient availability. No starter fertilizer was applied. The Haney-based recommendation for Nitrogen was 60 units for a 90 bushel yield goal, which is 45 units less than the traditional recommendation for our area. These two rates were compared sideby-side with 3 replicates of each rate. PRELIMARY analysis showed an average yield of 92.21bu/A for the lower Nitrogen rate, and 99.20 bu/A for the higher rate. However, these results have not yet been analyzed for economic comparisons, which is the main purpose for reducing the nitrogen rate, among environmental benefits. We anticipated a yield difference, but the thing to decide is, did the extra nitrogen pay? For these, and other finalized results, please look for OSU Extension's 2021 eFields Report, a summary of on-farm research, and/or reach out to myself, Ron Snyder, at the end-of-tour event. On the bean field I am using plant sap analysis to determine what nutrients are needed and will be foliar applied, based on what is physiologically active in the plant. Additionally, this field is included in a study whose goal is to connect drone imagery to cover crop biomass and nutrient uptake. Results from last years' cereal rye cover crop are currently being analyzed. The main reason for the the testing is "profit". The soil health practices have increased the bottom line. I like to monitor CO2 bust numbers to follow the microbiology in the soil. The more microbiology in the soil the more necromass which in turn increases fertility.

Parking: In front of the barn

6) **Defiance Agricultural Research Association - Defiance County:** 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.







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7) **Dean Farms - Williams County:** The field we would like to showcase is a long term no-till and cover crop field. It was planted last fall with cereal rye at 112 lbs per acre with the intentions of harvesting it this summer for seed. The cereal rye crop started to go down in late May and we decided to terminate it and plant it to soybeans. On June 5, we ran our roller crimper over the field with our no-till drill following right behind. What is unique about this field is that we have a low cost (\$6.33 per acre) early herbicide on it and as of today we think that is all we will have to apply this season due to the mat of rye straw on the field. We will have our roller crimper in the yard for people to observe and ask any questions if needed. This farm has some slope on it and our goal every year is to have a cover crop on it to stop all soil erosion and nutrient loss. The farm has several soil types on it, with some being poorly drained. Being a long term no-till and cover crop field, we have been able to increase organic matter, allowing for better water infiltration and less runoff during large rainfall events.

Parking: Large front yard across the road from field

8) Mark Siebeneck, Farmer Advocate for The Nature Conservancy - Putnam County: The corn field has been no-tilled since 2010. Cover Crop interseeded along with VRT subsurface nitrogen for side dressing and VRT subsurface Phosphate were needed following our 2 acre soil gridding maps and Tri State Recs. Annual Rye Grass is our cover crop - June 16th was date applied. South of the creek which has Grass Buffer on both sides are Soybeans which were planted green into Cereal Rye. Cereal rye was terminated after planting. The Cereal Rye was broadcasted into the corn stalks after harvest in Fall of 2020 . This field has been continuous No-Till since 2009. Feel free to walk on out into the corn and see the Annual Rye Grass at this point sitting idle until corn starts drying down. Step out into the soybeans and check out the cereal rye residue and corn stalk stover, which is slowly decaying and building soil health.

Parking: Stone drive by grain bins

9) **Lenhart Family Farm, LLC - Defiance County:** There has been reduced tillage practiced here for many years as well as winter wheat some years with corn & soybean. Wetlands were restored in 2007 on the back, northern 40 acres. There is an experimental wetland facility right off Behrens Road used to study phosphorus removal by wetlands. The low till reduces soil loss and improves soil sustainability. wetlands improve water quality, support wildlife habitat and provide payments to us through USDA programs.

Parking: On gravel driveway and in grass near shed







10) **OARDC Northwest Research Station - Wood County:** This plot is in a corn-soybean rotation. There are three treatments: Incorporated 28% UAN to provide 200 lb per acre of nitrogen, incorporated swine finishing manure at 5,000 gallons per acre to provide 200 lb per acre of nitrogen, and 5,000 gallons per acre of swine finishing manure surface applied, then cultivated in the next day, to provide 200 lb per acre of nitrogen. This practice is an H2Ohio approved practice so farmers can be eligible to receive payments. A livestock producer could have a commercial manure applicator surface apply manure to a corn crop driving at an angle across the field and the livestock producer could cultivate the manured field and better capture the nitrogen.

Parking: Off Range Line Road in front of the plot (pinned location on map)

- 11) **Leon Klopfenstein Paulding County:** Continuous no-till for over 10 years. 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. *Parking: 1/8 mile South of Road 60 on East side of Road 87*
- 12) **Sun Mountain Dairy Henry County:** Using cover crops and manure management in this field has increased the tilth of the soil by increasing the organic matter from 2% to 5% over a period of ten years. By increasing the organic matter, the water holding capacity and the nutrient uptake of the soil also increase, thereby creating a more fertile, productive environment for crop growth. *Parking: Along County Road B or along the filter strip next to the ditch*
- 13) **Dean Farms/OSU Cooperation Williams County:** A phosphorus removal filter in the grass buffer is treating the tile discharge from the field prior to entering the stream. Field has also been in long term cover crops + no-till. Soybeans planted into a standing rye cover crop, recently sprayed to terminate. This field has high levels of Soil Test Phosphorus, so the implementation of the Phosphorus Filter helps to clean the water and remove phosphorus in the water before it gets into the stream. This practice is beneficial for water quality while not impacting the in-field practices. Project contact from Ohio State: Nathan Stoltzfus, stoltzfus.12@osu.edu

Parking: Along County Road 15C; <u>Sign will be located back in the field next to the actual Phosphorus filter, not up near the road for this site.</u>







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For more information, visit: go.osu.edu/soilhealthtour