SPREADIN' THE NEWS

Fall/Winter 2025

A Detailed Guide to Stockpiling and Utilizing Composted Manure

Do you ever find yourself "racing" around this time of year? I know I do. I find myself racing to get home to help shell corn or cut soybeans after a day of work in the office, I watch my dad race out of the driveway to get to the co-op with a semi before they close for the day, we race around feeding cows while the dryer unloads hoping it will pick up the pace, so we can get an empty truck back to the fields, you get the picture. We all constantly race around this time of year, and just when harvest is all said and done, we naturally want to race to apply manure. But let me tell you, there's beauty in the waiting.

A Pile of Brown Gold

There are many benefits to stockpiling manure. From a public perception standpoint, stockpiling manure means we keep manure off the fields and protect the watershed, but what if I told you the manure nutrient content actually gets better as it continues to breakdown? In a study starting in 2021, conducted by The Ohio State University, six agronomic evaluations were completed across 20 windrows of composted manure from Holstein-beef feeder calves with a diet of distillers dried grains and solubles (DDGs) or other corn by-products. The goal of the research was to evaluate if composting manure positively or negatively affected the major nutrient (N, P, and K) loads or if the concentrations remained unchanged. The windrows included in the study were located under a structure or outside in the elements; utilized sawdust, wheat straw, or cornstalks as the composting amendment; and were turned weekly, biweekly or were left in a static state. The temperature of each windrow was recorded weekly to analyze breakdown, and each windrow was subject to a manure analysis at various stages of composting to better understand the nutrient content. The results? Staggering. Not only was there a 48% reduction in weight from composted manure compared to fresh pen-pack but the nutrient concentration was also higher. On average, phosphorus at the beginning of the trial was eight lbs./ton and

Did you know?

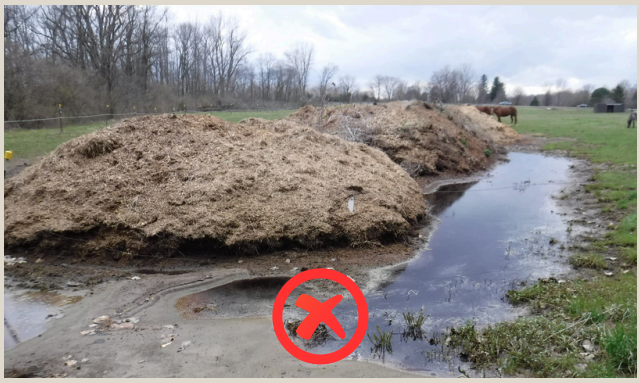
Grazing sticks aren't just for summer use! Using a grazing stick in the fall and winter months can provide an estimate of how much forage will be available to stockpile for winter grazing. Stop by our office to learn how to use a grazing stick and receive a **FREE** grazing stick of your own!

measured 25 lbs./ton at the conclusion of the trial. Potassium also exhibited an increase from 14 lbs./ton to 30 lbs./ton, as did sulfur and calcium respectively. Some key takeaways from the study were the following:

- Turning the windrows regularly not only increased microorganism performance but also added necessary aeriation for better breakdown of manure and amendments.
- Wheat straw and cornstalks performed the best as amendments with the highest resulting nutrient concentration.
- Increased composting duration (>56 days composting the manure) showed the best resulting nutrient concentration.
- Nutrient concentration doubled or at times even tripled from fresh pen pack to the final composted manure result.

Cost Effective Composting

In such a climate where commodity inputs are costly, and are projected to continue to increase, composted manure can serve as a great option for supplementing some necessary nutrients, increasing profitability. The decrease in weight from composted manure also means less weight across the field, decreased compaction concerns and less wear on your manure spreader. So, why not take the leap of waiting faith and harness the return of composted manure?



Left to right: manure stockpiled outside away from water sources, underroof manure storage away from water sources, manure stockpiled in a floodplain beside a creek.

Stockpiling Specifics

The following list outlines the criteria for a short-term manure stockpile based on USDA-NRCS standards:

- Manure to be stockpiled must be solid, containing bedding (minimum 25% solids) or dry poultry litter.
- Planned **(outdoor)** stockpile cannot be stored for more than a 6-month period.
- Stockpile must be located on soils that are deep to bedrock (>40 inches to bedrock).
- Stockpile may not be located on soils with a rapid or very rapid permeability (>2.0 in./hr.) in the topsoil, subsoil or substratum to a depth of 40 inches.
- Stockpile may not be located on slopes greater than 6%.
- Stockpile cannot be located on occasionally or frequently flooded soils or below the 100-year floodplain elevation.
- Limit the height of the stockpile to 7' and shape it to shed precipitation.
- Locate the manure stockpile in or near the field where the manure is to be applied. The volume of manure in the stockpile should equal the amount which will be applied to the field considering agronomic rates and current soil tests.
- Consider covering the manure stockpile if planned to be stored more than 4 months or over the winter.

Similar to manure application, a producer must also follow specific location setback minimums for a short-term manure stockpile:

- 100 feet from a public road
- 300 feet from spring water collection systems, wells, sink holes, ponds, streams, waters of the state, tile inlets, broken tile, and areas of concentrated flow such as waterways or surface drains located down gradient of the manure stockpile
- 500 feet from neighboring residences
- 1500 feet from public surface drinking water sources

FALL MACROPORE MADNESS

Hauling liquid manure? Consider the threat of macropores!

What are macropores and why are they a concern?

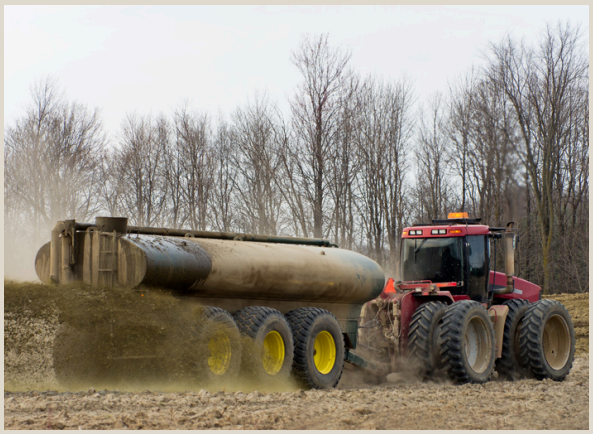
Macropores are defined as large cavities in the soil from plant roots, natural soil cracks, or worm holes, and can be caused by drought conditions/lack of rain. Macropores can be especially disastrous to producers or Certified Livestock Managers (more well-known as customer manure applicators) hauling or applying liquid manure in tiled fields as they can serve as preferential flow channels to water courses (i.e., fast tracking liquid manure to field tile).

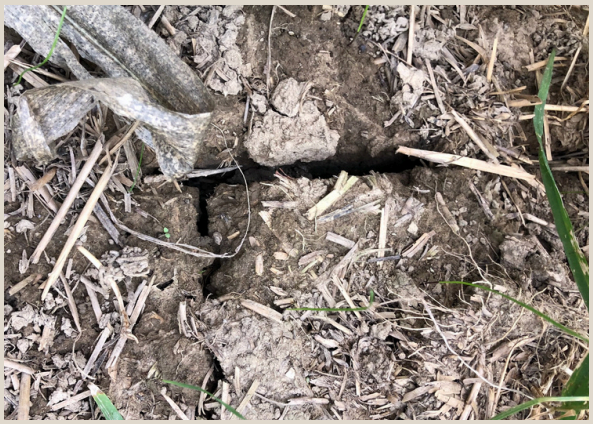
Who should be concerned about macropores?

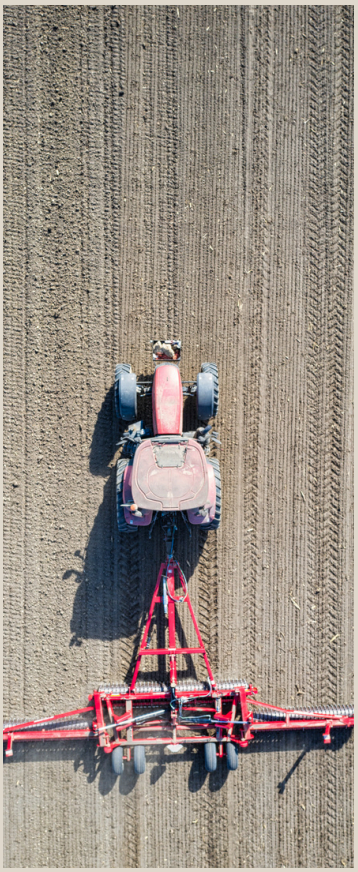
Everyone! Whether you're applying liquid manure or considering a phosphorus application of any kind, with dry conditions macropores are everywhere!

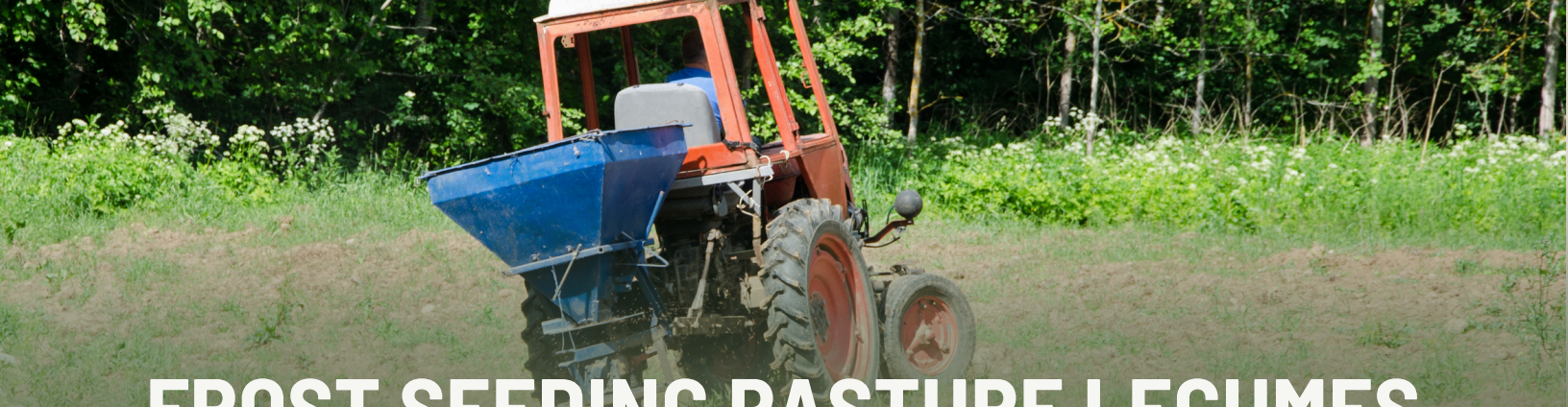
How and when should we address macropores?

Whether you are injecting or surface applying liquid manure or fertilizer, it is important to disturb the top 2" of soil via tillage or another method (dependent on soil type and condition) before application to help break up compaction in the surface layers of the soil thus "closing" the macropores.









FROST SEEDING PASTURE LEGUMES

The introduction of legumes into a grazing system has the potential to increase the overall nutritional value, creating more Crude Protein (CP) for livestock to consume, and decrease the need for supplemental nitrogen to promote forage growth, unlike in monoculture (single species) pastures. Legumes convert organic nitrogen into plant-available inorganic nitrogen, allowing cool-season grasses (CSG) and warm season grasses (WSG) to uptake the macronutrient. A great way to implement legumes is by frost seeding, which is the process of broadcasting seed on the surface and allowing the freeze-thaw action to work the seed into the soil. So, it's as easy as that? Well...maybe not. Before you consider a new pasture management practice like frost seeding legumes, consider the following criteria:

1. **Soil Test** – Finding hidden deficiencies in each paddock, applying supplemental nutrients based off soil test recommendations in the fall after grazing, and controlling any weeds by mechanical means or herbicide application gives your pasture a chance to perform at its fullest potential. One of the most crucial considerations when frost seeding legumes is achieving a soil pH between 6.5-7.0 which can be improved with regular lime applications.

2. **Inoculation** – It's important to consider whether or not legumes have been dispersed across the pasture area in recent seasons or if an entirely new seeding will take place. If the answer is the latter, it is likely the soil lacks the correct biology or rhizobia which legumes require to do their nitrogen-fixing job. A producer can address the issue by seeding inoculated seed or inoculating the seed they acquire no more than 24 hours prior to seeding. Not all inoculants are created equal, but all are cultures of specific living organisms with short shelf lives; each manufacturer label should be followed regarding specific legume type and expiration date. Utilizing inoculants makes the forage legume more resilient and provides a greater chance for regrowth after intensive grazing.

3. **Grazing** – Before frost seeding the pasture area, graze or clip the area late into the fall, leaving roughly 2-3" of forage on the ground. Bare ground and short forage height is favorable in this case to reduce other forage competition giving the new, planned seeding a chance to establish and increase the new seedings seed to soil contact.

4. **Seeding** – The best time to frost seed is in late February when the weather conditions allow for freezing at night and thawing during the day. Having a light dusting of snow can be helpful to visualize your seeding pattern, but not so much snow to hinder the seed to soil contact "washing" it away in a major thaw event. Always remember, genetics matter, utilizing quality seed is best for the integrity and longevity of the seeding. Make sure to also increase your seeding rate, contact the Crawford SWCD for assistance in doing so.

Crawford, Marion & Wyandot Soil and Water Conservation District

UPCOMING EVENTS

LIVESTOCK MORTALITY COMPOSTING WORKSHOP

Date: Thursday, December 11, 2025

Time: 5:30 – 8:30 p.m.
(5:30 – Catered Meal, 6:00 – Program Begins)

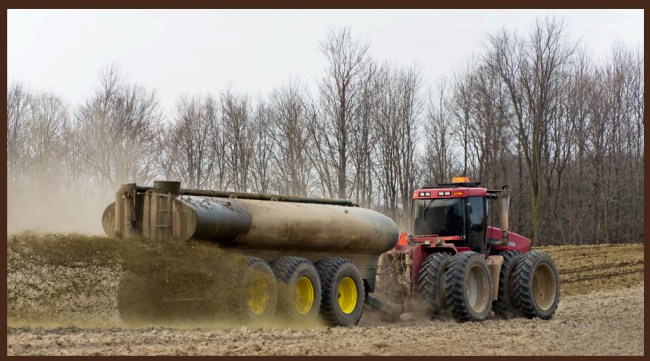
Location: Crawford County Extension Office
808 Whetstone Street, Bucyrus, OH 44820

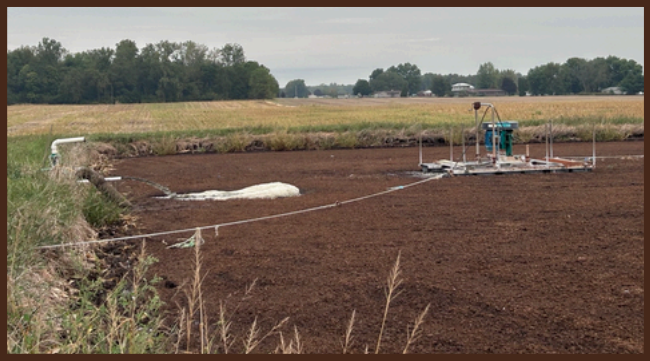
Composting deceased livestock is one option available to producers to address livestock mortality. Join us for this **FREE** program intended to provide livestock producers with Mortality Composting Certification.

To register: scan the QR code, visit go.osu.edu/crawfordmcw, or call 419-562-8731

RSVP by December 4, 2025

Thank you to our event sponsors: Walnut Grain Farm, Linn Acres Farm, and MKB Farms LTD





Mark your calendar!

WINTER MANURE MEETING

Date: Thursday, February 19, 2026

Time: 5:30 – 8:30 p.m.
(5:30 – Catered Meal, 6:30 – Program Begins)

Location: Whetstone Township Hall
1820 State Route 19, Bucyrus, OH 44820

Manure management is important! Join us for our annual program discussing manure, its benefits, and best management practices. Thanks to the ongoing support of our affiliate members this program is **FREE** again for 2026!

Formal invitation and addtional information to follow on our Facebook page at Crawford Soil & Water Conservation District!

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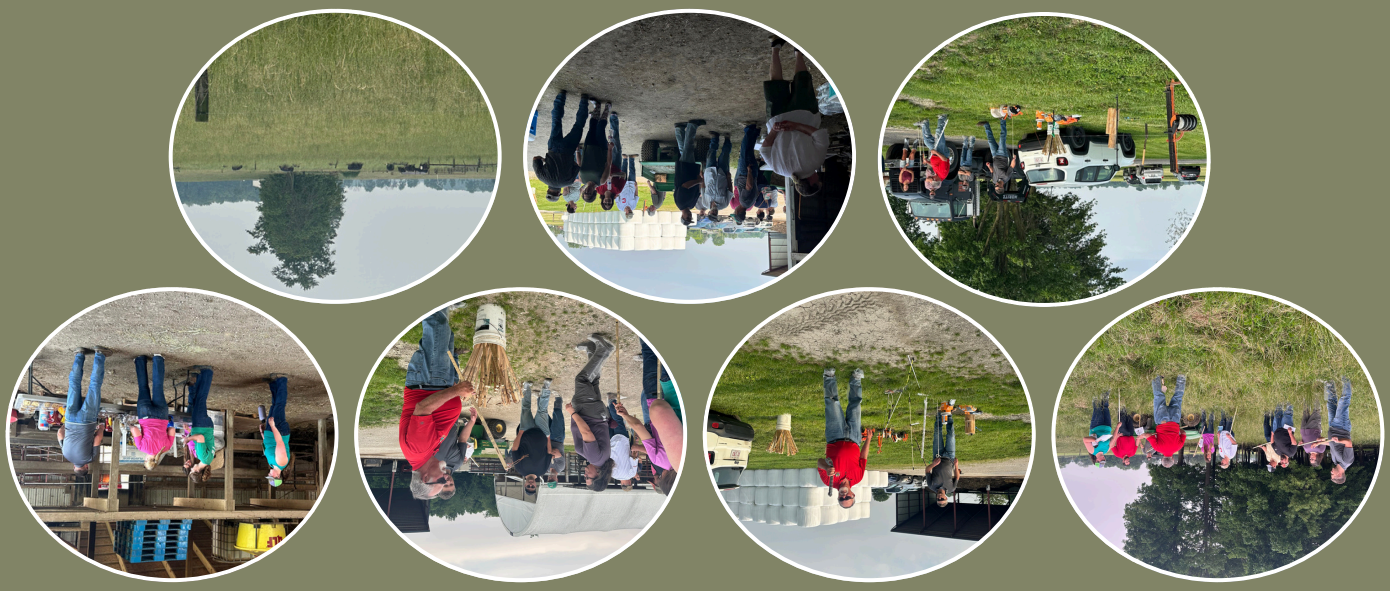
If you would like to receive this newsletter in electronic format, please contact Hannah Ziegler.

Serving the Soil and Water Conservation Districts in Crawford, Marion and Wyandot Counties.



••• PASTURE WALK RECAP •••

Plentiful Pastures

Over the summer we held a pasture walk at Brad and Christine Stahl's Farm! Bob Hendershot, ODA State Grazing Program Administrator, and Jarrod Hittle, ODA State Grazing Specialist, led the discussion! We learned about rotational grazing strategies, equipment (fencing, chargers, etc.), forage identification, and the importance of water sources! A special thanks to our hosts, presenters, and everyone who attended!