

Improving Soil Health in Outagamie County



Planting into a green cover crop

In Spring, the cover crop residue will prevent runoff until the manure finds its way into the soil.



Applying low-disturbance manure to a planted corn field with a cover crop residue.



Applying low-disturbance manure to a growing cover crop after corn silage harvest.

This type of manure application allows the cover crop to keep growing and helps reduce manure runoff.



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Soil health is a growing interest in Outagamie County. Soil health is an assessment of how well soil performs all of its functions now and how those functions are being preserved for future use. Producers' involvement in soil health ranges from implementing soil health practices across their whole farm to beginning with trials. The process to build healthy soils and capitalize on its benefits can take several years. The amount of long-term benefits received by improving soil health depends on a year-to-year commitment to continuous soil health practices, covering crops, and reducing tillage. This multi-year process requires a continuous commitment by the producer to plan for the future to avoid missteps.

Practices are typically cost-shared on a yearly basis without an incentive for continuous soil health practices which leads to a lack of an annual commitment to follow continuous soil health practices. For example, we've seen many producers plant a fall cover crop with cost-share funding, but the following spring the field would be traditionally tilled with no other soil health practices used during the remainder of the year. We've also seen a lack of planning result in unforeseen challenges that lead to a failure or little gain towards healthy soils.

To combat the planning and commitment challenges, in 2019 Outagamie County Land Conservation was awarded grants from the Great Lakes Sediment and Nutrient Reduction Program (GLSNRP) and the Great Lakes Restoration Initiative (GLRI) through Fox-Wolf Watershed Alliance. These grants provided 3 years of cost-share funding to 7 producers. The cost-share programs consisted of a commitment to continuous no-till and cover crops for 3 years on the acres the producer chose. This cost-sharing helped with practice installation and provided producers with the additional planning needed to avoid challenges or failures. The commitment to continue soil health helps producers find a system of soil health practices on their farm that works in most years and allows them to see the benefits of soil health in their fields sooner.

Overall, implementing the soil health practices and planning has been successful. Each cropping season we've learned new things that we use to make adjustments for the following year. These things include correcting planter setup for proper seed placement and adjusting fertilizer rates to adapt to conservation tillage and cover crop use. This spring we learned that manure needs to be applied at lower rates in the spring to avoid corn germination issues. We will be compiling and sharing all the things we've learned throughout the remainder of the grants. It is our goal to provide this information to producers to use as a tool to aid in decision-making as they build their soil health.

- Andy Kiefer