

The Little's big experiment

with cover crops and no-till farming



Where: Northern Rice County

Who: Tim Little and his family

Acres: 300 acres

Crops: Corn, soybeans

Watersheds: Cannon River

Certifications and awards:

MN Agricultural Water Quality Certification

National Association of Soil and Water Conservation

Districts Soil Health Champion, 2012 Rice County

Outstanding Conservationist of the Year

Cover crops and no-till

Tim Little has been farming since 1974 and began experimenting with no-till farming in 2005. In no-till farming the soil is not turned over or disturbed by a plow or cultivator. Crops are planted in the residue of last year's crop.

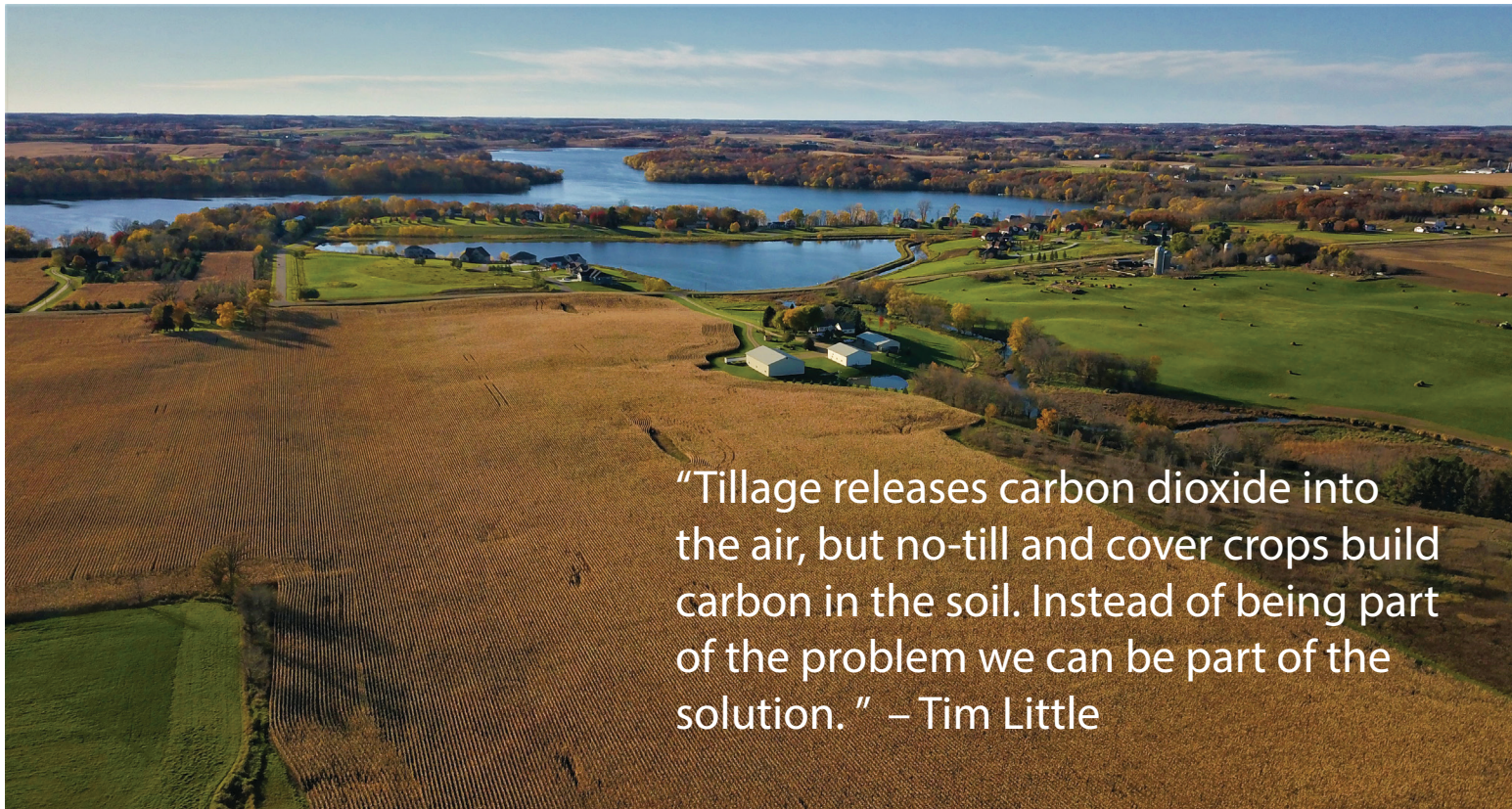
With the help of funding from the Rice County SWCD, Tim tried cover crops for the first time

in 2013. After seeding rye, radish, and clover late that summer, the weather turned dry and only the radish thrived. Tim examined the soil and still noticed a difference —the roots of the radish plants worked into the earth and broke up the soil, resulting in reduced compaction in just one season. This initial success inspired him to continue experimenting with cover crops, especially in his no-till fields. Within a few years, there was a noticeable increase in the number of earth worms in the soil. Earth worms are an indicator of soil health and improve nutrient cycling, boost water holding capacity of the soil, and stimulate beneficial microbial activity.

Tim also benefits from improved rain water infiltration, decreased water runoff, and reduced nutrient loss and erosion. This means that after a heavy rain there is less standing water in the field, and in the springtime these fields can often be planted earlier.



Corn planted in the Little's no-till field with last year's residue holding the soil and suppressing weeds.



“Tillage releases carbon dioxide into the air, but no-till and cover crops build carbon in the soil. Instead of being part of the problem we can be part of the solution.” – Tim Little

Economics

Transitioning to no-till and using cover crops is not easy and involves upfront costs. Over the years, Tim has been able to offset the cost and has noticed financial benefits.

When beginning to work with no-till, Tim stopped doing heavy tillage in the fall and tilling in the spring. This saved approximately \$35-38 per acre in labor and fuel costs. The money saved fully covered the cost of seed and aerial seeding of the cover crop. Tim has also been able to reduce the use of herbicides because cover crops help suppress weed growth.

Tim is hoping to reduce the use of seed treatments and fungicides too. Cover crops can defend against soil borne illnesses, such as white mold in soybeans, because the soil doesn't splash and the soybeans don't come in contact with potential diseases.

Comparing notes with fellow farmers

When Tim first tried cover crops he coordinated with four other local farmers to hire a pilot to fly the seed onto their fields. After this initial collaboration the farmers started talking about the various conservation practices they were trying out. Now several years later the group has grown to seven farmers who collaborate, explore new practices, and aerial seed cover crops on 2,500 acres in the area. This group of seven like-minded farmers still farm in their own way, yet come together and compare notes to cultivate innovative solutions for this new farming practices. Tim is also working with the Cannon River Watershed Partnership, a local non-profit organization, and ten other farmers to learn how cover crops can help improve and protect the water quality of a local trout stream.



The connection between conservation farming and clean water is something the Little family is proud of. This is one of their photo creations. High five, Littles!