

RESEARCH: SOIL TEMPERATURE AND SOIL MOISTURE

STRIP TILL AND COVER CROPS SHOW HIGHER SPRING SOIL TEMPS



Currently, the Heron Lake Watershed District is partnering with three southwest Minnesota farmers to measure soil temperatures and soil moisture in cover crop fields versus non-cover crop fields. Strip till and conventional tillage were also compared. Funds were awarded in 2018 by the Minnesota Department of Agriculture.

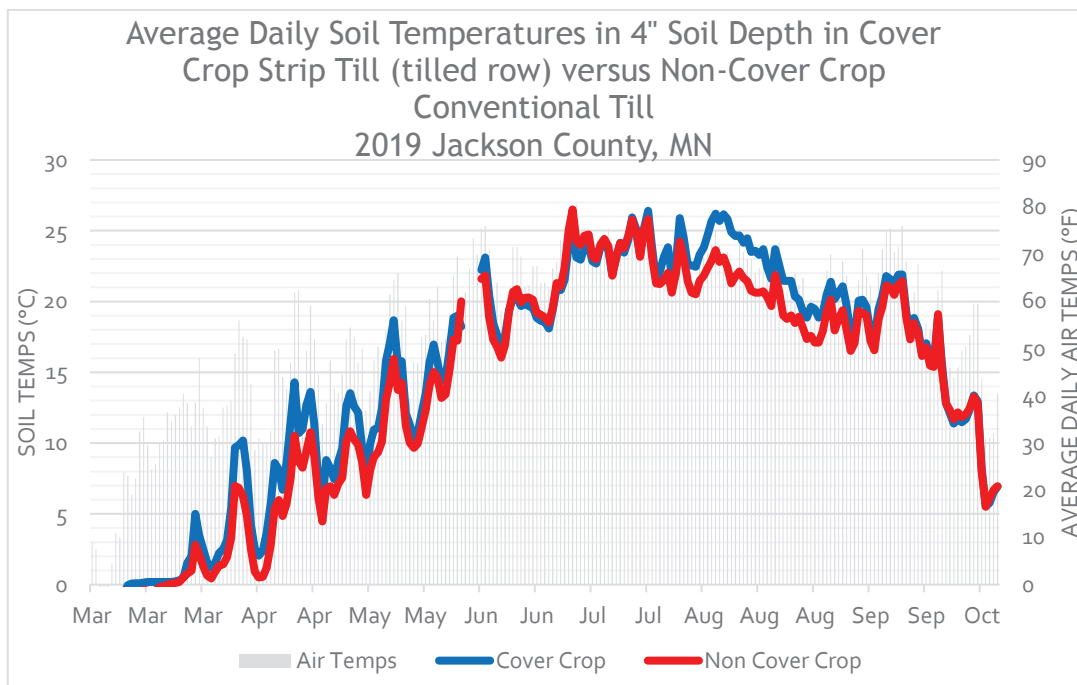
THE PROJECT

Four test plot locations were selected for this research project. They are located in Jackson and Nobles County. Soil moisture readings, soil temperatures, and soil samples are collected every year in all four field plots. The plots include a cover crop strip till management, non-cover crop strip till management, and a non-cover crop conventional till management. Probes were placed in the ground at four and eight inch depths to measure moisture and temperature. In the plots with strip till management, a probe was placed in the tilled row and the non-tilled row.

All soil readings are collected at 15 minute intervals over the entire year. Rainfall and air temperatures are also recorded at each test plot during the growing season.

THE RESULTS

In the spring of 2019, the data shows that the cover crop strip till management soils warmed up before the non-cover crop conventional tillage management soils.



"In 2019, all acres were planted and harvested. We feel the cover crops helped warm the soil earlier, which was a benefit for germination. The cover crop roots and plants also helped carry the planting equipment to minimize compaction."

"Extreme moisture in 2019 did take the top end off yields in the area. Even with excess moisture, we did not have any drowned out spots in this field, while neighboring fields did. Harvest was completed on all acres without any deep ruts from equipment. We attributed this to having a living root in the soil to carry the equipment and minimize compaction."

-Jerry Ackermann
Jackson County, Farmer





Farm Economics
& Soil Health

Winter Workshop

Monday,
February 24,
2020
8:30 AM

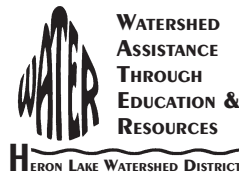
Heron Lake Community Center
312 10th Street • Heron Lake, MN

Workshop Agenda

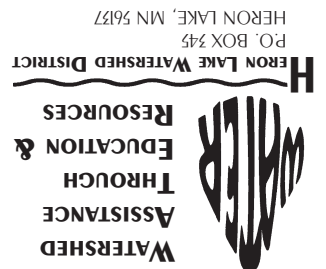
- 8:30 AM Registration, Coffee, and Rolls
- 9:00 AM Rick Clark, Williamsport, IN
Farmer
- 9:45 AM Matt Alford, Blue Earth, MN
Farmer
- 10:45 AM Break and Vendor Booths
- 11:15 AM Rick Clark, Williamsport, IN
Farmer
- 12:00 PM Lunch (Provided)
- 12:30 Free Raffle Drawing and Social
Come enjoy free food, a free raffle,
and talking with other farmers!

Please RSVP by February 17th. Go to <https://covercrop2020.eventbrite.com>
or call the Jackson SWCD at 507-662-6682 Ext 3.

Soil and Water Management CEU Credits Available.



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