

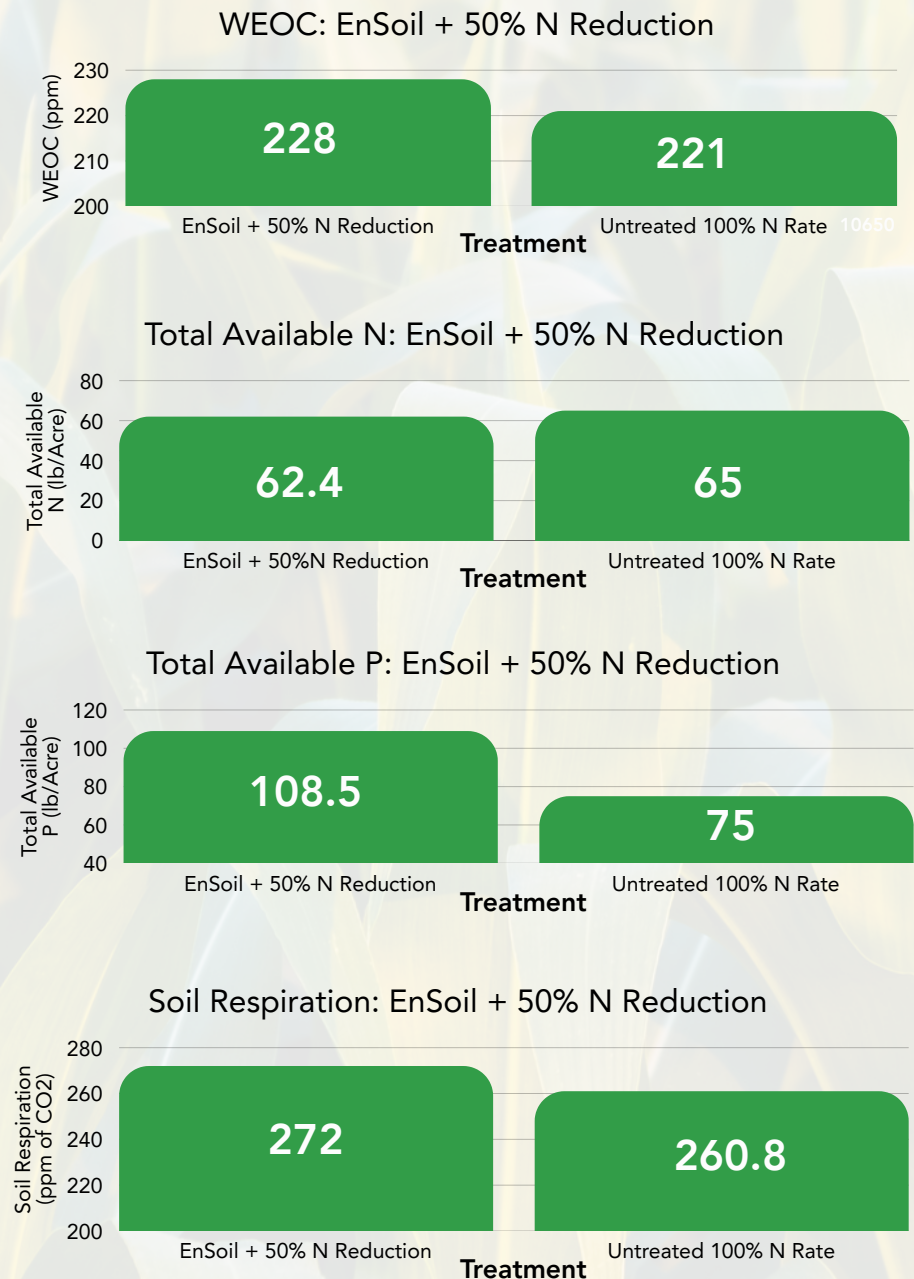


EnSoil Algae® Haney Test Data Highlights

2024 Total Acre Corn Trial in Aurora, IA

Results

- **EnSoil applied with a 50% reduced nitrogen inputs** maintained available soil nitrogen levels at similar levels as the full-rate control.
- **Water extractable organic carbon (WEOC)** was slightly higher with EnSoil, indicating more food for soil microbes.
- **Available phosphorus jumped** by more than 30 lb/ac in the EnSoil treatment compared to the control.
- **Soil respiration, a sign of microbial activity**, was higher in the EnSoil block.
- Overall, **EnSoil helped maintain soil fertility and boosted soil health metrics**, even with half the usual nitrogen rate applied.



Trial Description: This corn trial was conducted by Total Acre in 2024 to evaluate EnSoil's ability to reduce conventional fertility rates while supporting soil health and productivity. The trial site was located in Aurora, Iowa and Haney Tests were taken to better understand the impacts of EnSoil on soil health and fertility. Aside from EnSoil applications and adjustment to the grower standard nitrogen application rate, all grower standard practices were maintained as consistent between the EnSoil block and untreated control block.

Application Description: EnSoil was applied in furrow, via Y-drop at V3-6, and twice as a sprayer broadcast at V8-10 and VT-R1 for a total of 4 applications. Nitrogen applications in this EnSoil treatment were reduced by 50%, with all nitrogen applied at planting.

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Trial Results

Grower: Mike Jenks
Trial Manager: Total Acre
Location: Aurora, IA

TotalAcre.
Trials

Planting Date: 5/17/2024
Harvest Date: 10/17/2024

Treatments:

EnSoil + 50% Nitrogen Reduction:

- EnSoil applied four times (in furrow, Y-drop at V3-6, and two broadcast sprays at V8-10 and VT-R1)
- Nitrogen fertilizer rate reduced by 50%, with all N applied at planting

Untreated Control:

- Standard grower practices with full (standard) nitrogen fertilizer rate
- No EnSoil applied

Notable Soil Metrics:

- Water Extractable Organic Carbon (WEOC)
- Total Available Nitrogen (N)
- Total Available Phosphorus (P)
- Soil Respiration (CO₂ production as an indicator of microbial activity)

Goal: To evaluate whether EnSoil could reduce the need for conventional nitrogen fertilizer while still supporting soil health and productivity in corn. Specifically, the trial aimed to see if applying EnSoil would allow for a 50% reduction in nitrogen application without negatively impacting soil nutrient levels, microbial activity, or overall soil health.

Trial Design

The results from the Aurora, Iowa corn trial demonstrate the ability of EnSoil to support soil fertility at lower nitrogen fertilizer application rates. Even with nitrogen rates slashed by 50%, the EnSoil treatment managed to keep available nitrogen levels on par with the untreated control.

The EnSoil plots showed an uptick in water extractable organic carbon—a key food source for soil microbes—which supports biological nutrient cycling. Phosphorus availability also saw a significant increase, climbing over 30 pounds per acre compared to the control. Soil respiration, an indicator of microbial activity, reflected a notable rise in the EnSoil-treated block as well.

Taken together, these findings suggest that using EnSoil doesn't just maintain fertility under reduced nitrogen programs—it actively supports better soil health and productivity.



EnSoil enabled a 50% reduction in nitrogen fertilizer while boosting soil health and enhancing nutrient availability in corn.