



More from Every Acre, More from Every Animal

# REGENERATIVE APPROACH TO CORN PRODUCTION: Improving Yield While Reducing Inputs

Across corn country, growers are facing the same challenge:

- Fertility costs remain high
- Yield stability matters more than ever
- Inputs must work harder – not just cost more

Regenerative agriculture isn't about abandoning modern production. It's about making every input more efficient by improving soil biology and plant function.

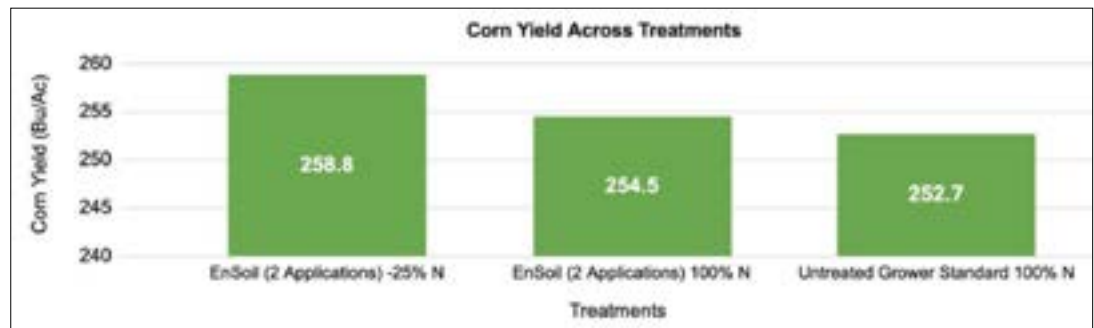
Recent field trials demonstrate how biological tools like EnSoil Algae and microbial inoculants can enhance crop performance – whether used alone or in combination.

## Trial #1: Producing More Corn with Less Nitrogen

Performance Crop Research irrigated corn trial near Great Bend, Kansas evaluated whether biological stimulation could reduce nitrogen requirements without sacrificing yield.

### What Was Tested

- Standard fertility program (100% nitrogen)
- EnSoil Algae with full nitrogen
- EnSoil Algae with 25% reduced nitrogen



Data from Performance Crop Research irrigated corn trial, Great Bend, KS.

### What Happened

Even with 106 pounds less urea applied per acre, the EnSoil program:

- Produced 258.8 bu/ac
- Out-yielded the full-nitrogen control
- Delivered strong ROI through both yield and fertilizer savings

### What It Means for Growers

Biological activity improves nutrient cycling and plant efficiency. Instead of pushing yield solely through fertilizer rates, growers can begin unlocking nutrients already present in the soil system.

## Trial #2: Enhancing Fungicide Performance Through Biology

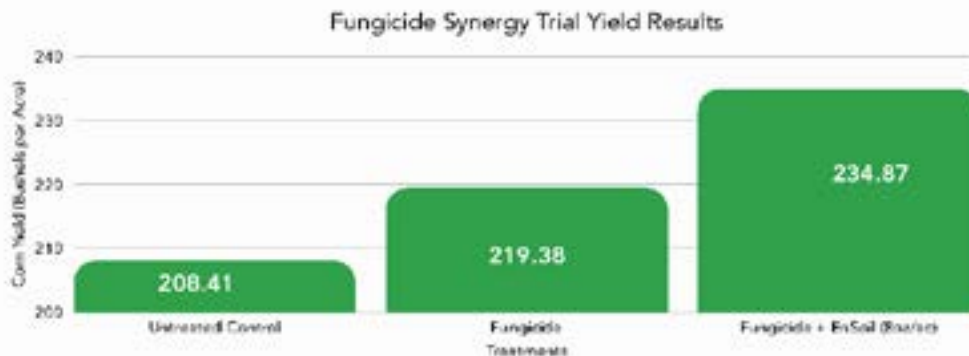
At JRH Grain Farms in Hickory, North Carolina, Russell Hedrick evaluated whether EnSoil Algae could complement a standard fungicide program.

### Treatments Compared

- Untreated control
- Fungicide alone
- Fungicide + EnSoil Algae (8 oz/ac)

### Results

- Fungicide alone added 10.97 bu/ac
- Fungicide + EnSoil added 26.46 bu/ac over control
- Biological + chemical together produced the strongest response



Data from Russell Hedrick of JRH Grain Farms Fungicide Synergy Trial, Hickory, NC

### Agronomic Insight

Plant health isn't controlled by disease management alone.

When biological stimulation improves nutrient flow, root signaling, and microbial activity, crops respond more effectively to protection products already being applied.

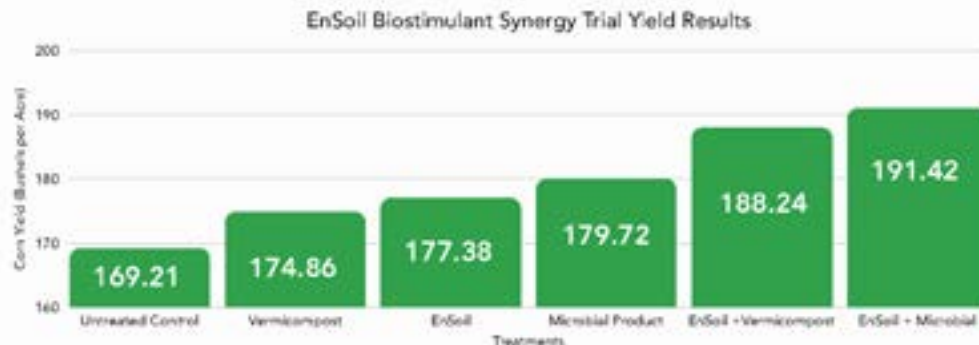
**Biology amplifies chemistry.**

## Trial #3: Biological Synergy at Planting

Another Hedrick trial evaluated in-furrow biological combinations applied at planting.

### Products tested included:

- EnSoil Algae
- Vermicompost extract
- A microbial inoculant (Fish Sh!t)
- Combination treatments



Data from Russell Hedrick of JRH Grain Farms Biostimulant Synergy Trial, Hickory, NC

### Key Findings

- EnSoil alone increased yield by 8.17 bu/ac
- The microbial product (Fish Sh!t) alone increased yield by 10.51 bu/ac
- EnSoil + Microbial (Fish Sh!t) combination produced the highest yield gain – 22.21 bu/ac

### Why the Combination Worked

Each product plays a different role:

- EnSoil Algae → stimulates plant metabolism, nutrient efficiency, and stress adaptation
- Microbial inoculants (Fish Sh!t) → activate soil biology and nutrient mineralization

Together, they create a stronger biological system around emerging roots.

## **The Regenerative Principle: Synergy Over Substitution**

A common misconception is that regenerative agriculture replaces conventional practices.

The data suggests something different.

Biological tools work best when they enhance existing programs:

- Reduce nitrogen dependence
- Improve fungicide response
- Strengthen early root development
- Increase overall system efficiency

Regeneration isn't subtraction — it's optimization.

## **What This Means for 2026 Crop Planning**

Growers are asking better questions today:

- How do I maintain yield with less nitrogen?
- How do I get more ROI from inputs already applied?
- How do I rebuild soil function while staying profitable?

Biological systems offer a practical pathway forward.

## **Ready to Evaluate Your Fields?**

Every farm responds differently based on soil biology, fertility history, and management goals.

If you'd like help evaluating where biological products fit into your operation this spring, contact:

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*We encourage growers to review full trial methodologies, treatment designs, and yield data included in the original reports.*

*Trial results represent specific environments and management systems. Results may vary based on soil type, weather conditions, and farming practices.*