

# MAXIMIZE NUTRIENT UPTAKE FOR INCREASED KERNEL PRODUCTION AND HIGHER YIELDS

iNvigorate is part of the AMVAC® expanding line of biological products. iNvigorate creates a highly productive microbial community when applied to the soil, assisting in nutrient availability, improving fertilizer use efficiency, and enhancing crop growth and yield potential.

### Features

- Contains multiple microbes
- Strains adapted to aerobic and anaerobic conditions
- Up to 3-year shelf life

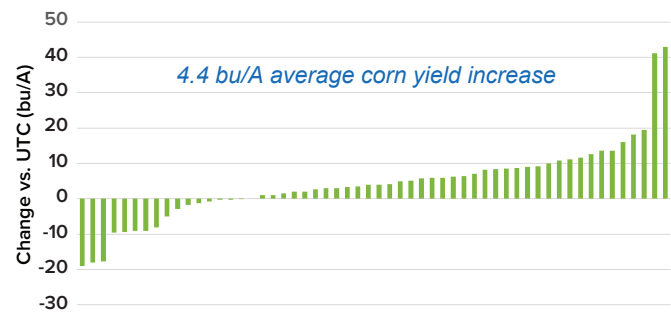
### Key Benefits

- Improves soil health by creating a diverse soil microbial community
- Strains with overlapping functionality ensure consistent results across multiple soil environments
- Microbes enhance soil-based macro- and micro-nutrient availability

### Application Timing/Rates

- Recommended use rate: 1 Quart/Ac
- Carrier and tank mix partner flexibility
- Application timing:
  - At-Planting
    - In-furrow, 2x2 or 2x2x2
  - Side-dress
    - V-3 to V8 growth stage
    - Sub-surface applications preferred to optimize microbial performance

### Yield Data



56 observations (2016-2023) from third party trials. All iNvigorate rates, treatment combinations and tank mixes included.

### The iNvigorate Advantage

When applied to the soil, iNvigorate interacts with the plant root system to increase the productive capacity of both the soil and the plant by:

- Freeing up nutrients bound to soil particles, manure and crop residue
- Increases root biomass enabling increased nutrient uptake

### iNvigorate in Conjunction with Injected Manure



Untreated

iNvigorate  
1 Quart/Ac  
2X2

Untreated  
214.6 bu/ac

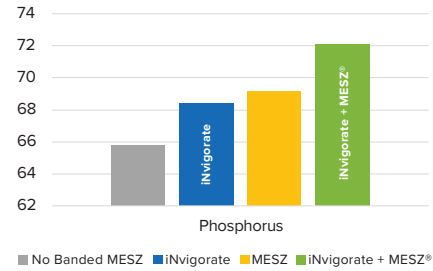
iNvigorate  
1 Quart/Ac  
2X2  
228.5 bu/ac

Source: AMVAC Grower Trial, Clinton, KY, 2023

# iNvigorate helps improve nutrient utilization resulting in increased kernel production and yield.

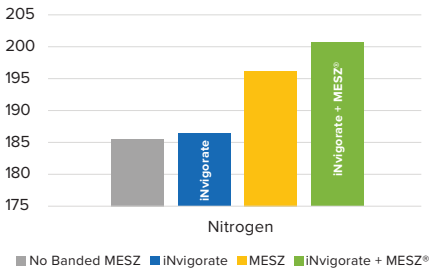
“A 2023 Graduate Dissertation under Committee Chair Dr Fred Below from the University of Illinois, stated that “compared to banded fertilizer alone, an application of iNvigorate® further increased maize P (4%), N (2%), S (3%), and Zn (8%) uptake as well as promoting a 2% increase in grain yield.”

Phosphorus Accumulation

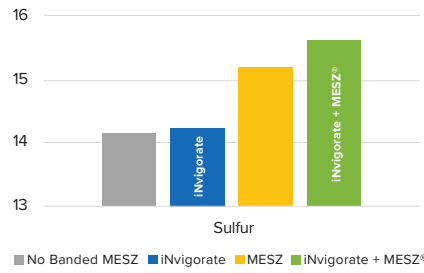


## iNvigorate nutrient accumulation in lbs/ac at R6 (by nutrient)

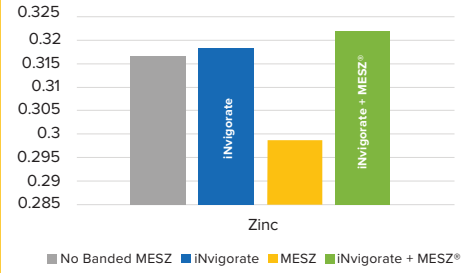
Nitrogen Accumulation



Sulfur Accumulation



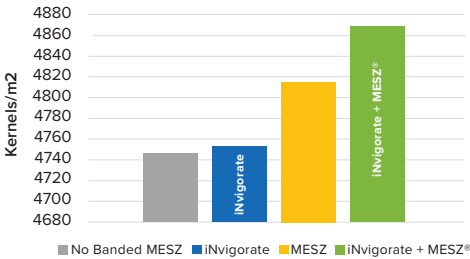
Zinc Accumulation



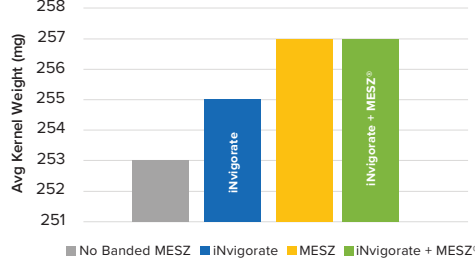
**When banded fertilizer was applied, iNvigorate (applied at planting in-furrow) demonstrated a significant increase in total P, N, S and Zn accumulation.**

## iNvigorate impact on kernel number and weight

Kernel Number



Kernel Weight



**When banded fertilizer was applied, iNvigorate promoted higher kernel numbers.**

Source: Woodward, L. P. (2023). ENHANCING EFFICACY OF AGRONOMIC MANAGEMENT OF MAIZE THROUGH SYNERGIES WITH BIOSTIMULANTS [PhD Dissertation, University of Illinois Urbana-Champaign]. Illinois Library IDEALS. <https://www.ideals.illinois.edu/items/127355>

iNvigorate®

Visit our website at [www.amvac.com/greensolutions](http://www.amvac.com/greensolutions)

Important: Always read and follow all label instructions.

