Using Starter Fertilizer in Corn

Trial Objective

- Previous research at the Bayer Learning Center at Monmouth, IL has not shown benefit in the ability of in-furrow starter fertilizer to result in grain yield increases in soils with adequate fertility.
- There are many different starter fertilizer products available, with varying claims of efficacy.
- The objective of this research was to evaluate a newer starter fertilizer product for corn.

Research Site Details

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield (bu/acre)	Seeding Rate (seeds/acre)
Monmouth, Il	Silt loam	Corn	Conventional	6/4/20	10/27/20	250	36K

- This trial consisted of two treatments:
  - An untreated check (UTC).
  - A starter fertilizer treatment applied in-furrow at 2.5 gal per acre with an analysis of 7-17-3 plus the following micronutrients in chelated form:
    - .07% Cu
    - .20% Fe
    - .06% Mn
    - .95% Zn
- All other conditions were the same between the two treatments.
- Soil testing at the site indicated high fertility levels.
- There were six replications in this trial.

Understanding the Results

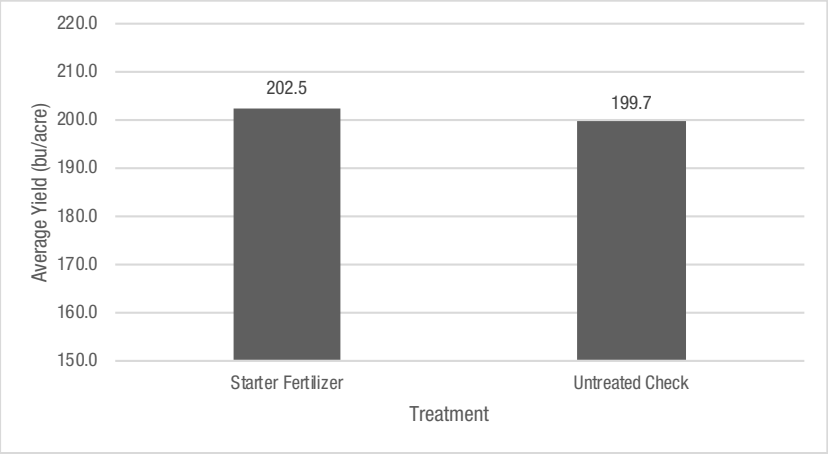

Figure 1. Effect of starter fertilizer on corn yield compared to untreated check in 2020.

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- There was no significant yield difference between plots that received starter fertilizer and the untreated checks in this demonstration trial (Figure 1). This agrees with previous testing at the Bayer Learning Center at Monmouth, IL.
- The late planting date may have led to other factors being more limiting than early season nutrient availability, but these results agree with previous Learning Center results at more typical planting dates.

Key Learnings

- Results suggest that there may be little benefit to starter fertilizer applications in-furrow under the conditions of this testing. It is important to understand the conditions at planting to help with decisions on starter fertilizer in-furrow applications.
- There is some evidence in university data that starter fertilizers may provide a benefit in prolonged cool, wet soil conditions early in the season.1
- Consult your local Field Sales Representative or Technical Agronomist for tailored recommendations for your farm operation.

Source

[1] Hoeft, R. 2000. Will starter fertilizer increase yield? University of Illinois. http://bulletin.ipm.illinois.edu.

Legal Statements