

# Row Starter Compared to Broadcast Fertilizer on Corn

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## Objective

To determine whether yields will be affected when fertilizer that is normally put on corn in the row is broadcast instead.

## Background

Cooperator:	Darke County Farm	Fertilizer:	7-34-20 (200 lbs/A in row plots)
Nearest Town:	Greenville		0-46-0 (25 lbs/A broadcast)
Soil Type:	Miami		0-0-60 (100 lbs/A broadcast)
Drainage:	Tile		150 lbs/A nitrogen sidedressed as 28%
Tillage:	No-till	Herbicide:	Extrazine (5 qt/A), Banvel (1/4 pt/A)
Previous Crop:	Wheat	Hybrid:	Pioneer 33G26
Soil Test:	pH 6.6, P 28 ppm, K 142 ppm	Planting Rate:	30,000 seeds/A

## Methods

A replicated study using five replicates in a randomized complete block design was planned. The field had been in a no-till corn, soybean, and wheat rotation for several years. The corn was planted on May 18 into adequate moisture and with adequate rainfall to activate herbicide and move nitrogen into the soil. A Buffalo planter set up for slot planting was used. Fertilizer that was broadcast was spread just prior to planting. Emergence was uniform in all plots. Nitrogen was sidedressed on all plots as 28% when the corn was about 18 inches tall.

## Results

Treatment	Yield (Bu/A)
Row Starter	105.45
Broadcast Fertilizer	109.61

F = 1.14 No significant difference among treatment means at P = 0.05, LSD = 10.8 bu/A, CV = 5.7%

No significant difference among treatment means at P = 0.20, LSD = 6.0 bu/A,

## Summary and Notes

There was no significant yield increase when using row fertilizer in this particular trial. The low yields in all plots may have been due to dry weather in late July and August. Some producers have also had problems with lower corn yields following wheat with no tillage. Reasons may be soil moisture loss from a wicking effect of wheat straw or a toxicity effect of wheat straw decomposition.

The fertilizer openers on the Buffalo planter do not get the starter fertilizer down to two inches beside and two inches below the seed as recommended for good fertilizer placement. This

planter places fertilizer about one inch below the surface and one inch to the side of seed drop.  
This trial will be repeated in future years.

For additional information, contact:

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