

Corn Seeding Rate

Chris Zoller, Ohio State University Extension Educator, Tuscarawas County

Objective

To determine the effect of seeding rate on corn yield.

Background

Crop Year: 2017	Tillage: Vertical Till
Location: Bolivar, OH	Planting Date: May 15, 2017
County/Town: Tuscarawas	Fertilizer: Pre-plant 100 pounds DAP per acre & 200 pounds Potash per acre
Soil Type: Sebring, Fitchville, & Licking silt loam	Starter Fertilizer: 5 gal Thiasol and 5 gal 28%N, 10 gal 10-34-0 per acre
Soil Test: pH 6.3, P 78 pounds per acre K 252 pounds per acre	Sidedress: 34 gal 32% Nitrogen per acre
Drainage: None	Harvest Date: November 4, 2017
Previous Crop: Soybeans	

Methods

Five treatments were tested using a randomized complete block design with three replications. The seeding rates included: 22,000, 26,000, 30,000, 34,000, and 38,000 seeds per acre. The plot was planted using a John Deere 8225R tractor and John Deere 1770NT CCS 12 row planter. A John Deere S660 Yield Monitor was used to collect harvest data. All tillage, fertilizer, and pesticide applications were consistently applied across the treatments.

Results

Table 1. Corn Yield Response to Variable Seeding Rates

	Yield (bushels/acre)
22,000	197 a
26,000	180 a
30,000	202 a
34,000	202 a
38,000	188 a
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C.V. = 7.88%	LSD (0.01) 23.19

Summary

There was no statistically significant difference in yield between the treatments. Yields ranged from a low of 180 bushels per acre to a high of 202 bushels per acre with the 30,000 bushels per acre and 34,000 bushels per acre seeding rates resulting in the same (and highest) yield. The plot received a total of 24.51 inches of precipitation and a total of 2442 Growing Degree Days between April and August.



Acknowledgement

The author expresses appreciation to Spillman Farms LTD for cooperating on this project and planting and harvesting the plot.



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For more information, contact:
Chris Zoller
OSU Extension –Tuscarawas County
419 16th St. SW
New Philadelphia, OH 44663
zoller.1@osu.edu



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