

Chisel vs. No-Till Soybeans Following Corn

Dennis Baker, Agriculture and Natural Resources Extension Agent

Objective

The objective of this trial was to determine the effect of tillage on soybean yields when following corn in a field with a four-year no-till history.

Background

Cooperator:	Darke County Farm	Fertilizer:	0-0-60 (125 lbs/A)
Nearest Town:	Greenville		00-46-0 (100 lbs/A)
Soil Type:	Miami	Herbicides:	PRE: Roundup (1.5 pt/A)
Drainage:	Tile		Firstrate (3 oz/A)
Previous Crop:	Corn		POST: Roundup (1.5 pt/A)
Soil Test:	pH 6.8, P 51 ppm, K 149 ppm	Hybrid:	Countrymark 3975
		Planting Rate:	175,000 seeds/A
		Row Width:	30 inches

Methods

A replicated study using five replicates in a randomized complete block design was planned to determine whether tillage affected soybean yields when following corn. Individual strip plots were 15' x 1,465' in size. The field had been in a no-till corn and soybean rotation for at least the past four years. The tilled plots were prepared using a chisel plow and disk unit followed by two passes with a conventional disk. Countrymark 3975 was planted on May 16 into adequate moisture.

Results

Treatment	Avg. Yield (Bu/A)
No-till	47.05
Chisel	47.65

F = 1.6, No significant difference among treatment means at P = 0.05, CV = 1.6%, LSD = 1.3 bu/A.

Summary and Notes

Emergence was uniform in all plots and soybeans looked very good all summer. There was no significant yield increase when using tillage on this particular site when planting soybeans after corn in a field with a four-year no-till history.

For additional information, contact:

Dennis Baker
The Ohio State University Extension
baker.5@osu.edu