

Pasteuria Biological Seed Treatment on Soybean Grain Yield

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Objective

To evaluate the effect of Pasteuria biological seed treatment on soybean yield.

Background

Crop Year: 2013	Soil Test: pH 6.3, P 34 ppm, K 137 ppm
Location: Wauseon, OH	Planting Date: May 15, 2013
County: Fulton County	Fertilizer: 125 lbs 0-0-60 at planting
Soil Type: Mermill loam	Seeding Rate: 165,000 seeds/acre, 15" rows
Drainage: Systematic on 25 foot centers 0-2% slope	Herbicide: 8 oz Tricor pre-emerge; 1.5 pt glyphosate on June 22, 2013
Previous Crop: Corn	Insecticide/Fungicide: none
Tillage: Conventional	Harvest Date: October 15, 2013

Methods

This study was designed with three treatments replicated three times in a randomized complete block design. The plot size was approximately 28 feet wide by 150 feet long. Treatments were planted with an eleven row planter (15" spacing) after light spring tillage. Seed used was NK 34-Z1 in all treatments. Plots were harvested with a commercial combine. Grain yield measurements were taken with a weigh wagon for increased accuracy.

Treatments

- 1) Untreated soybean seed (check)
- 2) Soybean with CruiserMaxx seed treatment
- 3) Soybean with CruiserMaxx plus Pasteuria biological (Clariva)

Results

Table 1. Comparison of Mean Soybean Yield (Bu/ac) with different seed treatments

Treatment	Yield (bu/ac)
Soybean – Untreated check	78.3
Soybean with CruiserMaxx	77.2
Soybean with CruiserMaxx and Pasteuria	82.3

LSD (0.05) 13.6, CV 7.55 – No significant difference between treatments

Summary

There was not a significant difference in yield among the untreated check, CruiserMaxx soybean or soybean with CruiserMaxx and Pasteruria. However, Soybean Cyst Nematode (SCN) counts in all plots were considered low to very low (1880 eggs/ 100 cc soil). Further data in the form of multi-year replications will add to the validity of these results.

Acknowledgement

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