

Effect of T-22 Biological Fungicide Treatment on Two Soil Management Systems

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Objective

To evaluate the effect of T-22 biological fungicide seed treatment on corn yields on two different soil management systems.

Background

Cooperator:	Tom Weiler	Fertilizer:	N (see Tables), 114 lb/A
County:	Morrow		P ₂ O ₅ , 120 lb/ A K ₂ O
Nearest town:	Chesterville	Herbicide:	PRE 2 lb/A Atrazine,
Drainage:	Systematically tiled		1.5 pt/A Dual,
Soil Type:	See Tables		2 oz/A Balance Pro
Tillage:	Conventional till	Row Width:	30-inch
Previous Crop:	Soybeans	Planting Date:	May 20, 2002
Soil Test:	pH 6.0, P 49 ppm,	Planting Rate:	40,000 seeds/A
	K 253 ppm	Harvest Date:	October 22, 2002

Methods

The study was set up as a split-planter design. Three units of the six-row planter had T-22 applied to them. The treatments were six rows wide and approximately 600 feet long. The entire plot area was harvested and weighed using a weigh wagon. The amount of T-22 used was 3 ounces per 100 pounds of seed. Five replications were used in this study.

Results

Table 1. Corn Yield on Sloan Silty Clay Loam and 246 lb/A N as Anhydrous Ammonia.

Treatment	Yield (bu/A)
T-22	159.2 a
No T-22	175.4 b
LSD (0.05)	7.1
F test	34.3

Table 2. Corn Yield on Chili Loam and 172 lb/A N as Anhydrous Ammonia.

Treatment	Yield (bu/A)
T-22	52.8 a
No T-22	59.8 b
LSD (0.05)	3.4
F test	32.2

Summary

T-22, produced by BioWorks, Inc., is a biological fungicide that is applied as a dry powder to seeds in the planter box. The rate used is 3 ounces per 100 pounds of seed. T-22 is promoted to protect roots from soil-borne pathogens such as Pythium, Fusarium, and Rhizoctonia. Healthier roots are thought to better utilize nitrogen and withstand drought.

The 2002 growing season was very dry. These plots received a total of 1.1 inches of rain in July and 2.0 inches in June. The results obtained this year do not support the improvement in yield with the use of T-22 as found in a similar study in 2001. The 2002 growing season included excessive soil moisture at planting, soil compaction, high temperatures, flea beetles, and drought-caused stresses that can undermine the value of test plot data. More studies with T-22 need to be completed.

Acknowledgment

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