Pennsylvania On Farm Soybean Network

Field Trial Report

2012 Molybdenum Study

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Field Information

Location: Southeast Research and Extension Center, Landisville

Field Name: Z Acres: 15

2011 Crop: Corn Tillage: No-till

Planting Date: 4/26/2012 Variety: Pioneer 93M11

Seed Treatment: Trilex/Gaucho Planter: JD 1250 Drill

Planting Depth: 1 inch Seeding rate: 180,000

Herbicide: Glyphosate plus Canopy f/b Extreme plus Dakota

Harvest Date: 10/05/2012 Plot size: 20 x 100 feet

Design: Randomized Complete Block Replications: 4

Treatments

1. Untreated
2. MolyPower and water 5 oz/100 lb seed
3. MolyPower and water 5 oz/acre @V2

Results

	Yield	Moisture	Nodulation	pH	Final Height	Plant N	Plant Mo
	Bu/ac	%	no./plant		in.	%	mg/kg
Untreated	55.8	16.1	17.0	5.0	26.4	5.5	<0.15
Moly on seed	59.0	16.2	19.8	5.1	26.8	5.2	<0.15
Moly at V2	57.7	15.9	24.0	4.9	26.7	5.8	0.17
Significance	ns	ns	ns	ns	ns	P=0.10	-
CV	15.0	2	17.0	13.0	15.0	2	-
LSD	-	-	-	-	-	0.4	-

Comments

This study was conducted to assess the need for Mo in seed treatments following small but significant responses in 2010 and 2011. This study was conducted on field with soil pH values between 4.9 and 5.1. Yields tended to be higher with Moly treatments in this study but were not statistically significant. When we contrasted between the moly treatments combined and untreated, we found a 2.5 bushel/acre difference which was significant at the p=0.1 level. Differences in plant Mo, N, nodulation and height were not consistent among treatments. This study suggests there may be small benefits to Mo addition on acid soils but continued research is needed at more sites to confirm this.