

Soybean Response to Rate of Mn Foliar Fertilization

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Objective

To determine yield response of soybeans to rate foliar fertilization with manganese containing fertilizers on known deficient soils.

Background

Cooperator:	Nate Andre	Variety:	Rupp
County:	Fulton	Planting Date:	May 28, 2004
Soil Type:	Mermill loam	Seeding Rate:	220,000 seeds/A
Tillage:	No-till	Row Width:	10 inches
Previous Crop:	Corn	Herbicides:	26 oz. Roundup
Soil Test:	7.1 pH, 42 P ppm, 157 K ppm, Mn 9 ppm, 4.9 % OM, 14.3 CEC meq/100g	Harvest Pop:	200,000 plants/A
Fertilizer Rate:	No broadcast	Harvest Date:	October 6, 2004

Methods

A field area known to be manganese deficient was divided into plots 10 feet wide by 40 foot long in a randomized complete block design with 6 replications. Treatments were applied at four different rates from 1 pint to 2 quarts per acre. Manganese was applied at growth stage V2-V3 with plants showing foliar deficiency symptoms. Symptoms were not severe and varied during the growing season even on the check. Treatments were applied on 6/23/2004 with an ambient air temperature of 75 degrees F. Applications were made with a CO2 sprayer with a 10 foot boom; nozzles were TeeJet XR11004VS, 20 gallons of water was applied per acre at 20 PSI pressure. The manganese source was White Label Manganese, a 5% chelated solution.

Treatment (Volume /A)	Yield (Bu/A)
1 pt	55.1
2 pt	54.6
1 qt	55.5
2 qt	55.4
Check	55.9
LSD (0.05)	NS

For additional information, contact:

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