Roundup Ready Soybean Seeding Rate

Steve Ruhl, Agriculture and Natural Resources Extension Agent Ed Lentz, Extension Agronomy Specialist, Northwest District

Objective

To determine if Roundup Ready soybean seeding rates can be decreased and yields maintained.

Background

Cooperator: Tom Weiler Fertilizer: None

County: Morrow Herbicides: PRE: Canopy (3 oz/A)

Nearest Town: Chesterville POST: Roundup (1.0 qt/A) \

Soil type: Chili Variety: Dekalb CX303RR
Tillage: Conventional Planting Date: May 4, 1999
Previous Crop: Corn Harvest Date: October 4, 1999

Soil Type: pH 6.8, P 104 ppm,

K 208 ppm

Methods

A study using four replicates in a randomized complete block design was used to determine the effect of seeding rates of Roundup Ready soybeans on yields. DeKalb CX 303RR soybeans were used. They had a seed count of 3,200 seeds per pound. We used a John Deere 750 drill and dropped 42 pounds (134,400 seeds), 50 pounds (160,000 seeds), and 65 pounds (208,000 seeds) on a per-acre basis for our treatments. The beans were in 10-inch-row spacings. The plots were 567 feet in length and 30 feet wide. A 20-foot width cut was made in the center of the plots. Yields were determined by weigh wagon.

Results

Planted Population (seeds/A)	Harvest Population (plants/A)	Yield (bu/A)
134,400	125,000	48.4
160,000	145,500	44.8
208,000	186,500	45.3

F=1.93, treatment mean yields not significantly different at P=0.05 LSD(0.05)=4.8, CV=6.0%

Summary and Notes

Roundup Ready soybean seed cost is in the range of \$20 to \$26 per 50-pound unit. Planting at rates of 65 to 95 pounds per acre will bring seed cost from \$25 to \$50 per acre. This is typically two to three times the seed cost for non-Roundup Ready soybeans. From this study it looks as though seeding rates can be dropped and yields maintained. This trial will be repeated in future years.

For additional information, contact: Steve Ruhl

The Ohio State University Extension

ruhl.1@osu.edu