

Effect of Roundup and Other Herbicides on Roundup Ready Soybean Yields

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

Objective

The adoption of Roundup Ready soybeans has been rapid. However, there are a few weeds that Roundup Ultra doesn't control satisfactorily and it has no residual effect. As a result, producers may want to use other herbicides with Roundup Ultra. This trial was conducted to examine the effect of applying other herbicides with Roundup Ultra on the yield of Roundup Ready soybeans.

Background

Cooperator:	Tom Weiler	Fertilizer:	0-0-60 (200 lbs/A)
County:	Morrow	Variety:	Callahan 7391RR
Nearest Town:	Chesterville	Planting Date:	May 12, 1998
Soil Type:	Chili	Planting Rate:	200,000 seeds/A
Drainage:	Systematic	Harvest Date:	October 1, 1998
Tillage:	Fall chisel and cultivate	Harvest Pop.:	168,000 plants/A (avg.)
Previous Crop:	Corn		
Soil Test:	pH 7.0, P 23 ppm, K 154 ppm		

Methods

The field chosen has tremendous giant ragweed, lambsquarter, and giant foxtail pressure. The field was chisel plowed and weeds worked out at planting time. The additional herbicides used were Cobra (5 oz./A), Canopy XL (3 oz./A), and Pursuit (1.44 oz./A). Canopy XL was applied preemergence. Pursuit and Cobra were applied post-emergent within an hour after an application of 1.5 quarts of Roundup Ultra and 3 pounds of AMS per acre at the V-3 stage of soybean growth. These treatments were compared to 1.5 quarts of Roundup Ultra sprayed alone at the V-3 stage.

Giant ragweed pressure was severe with 24- to 36-inch tall weeds at the time of the postemergence application. The treatments were replicated three times with individual treatment plots being 20 feet x 500 feet.

Results

Herbicide Treatment	Soybean Yield (bu/A)	Herbicide Cost (\$/A)
Cobra + Roundup + 3# AMS/A	62.99	27.33
Canopy XL fb Roundup + 3# AMS/A	61.6	30.71
Roundup + 3# AMS/A (V3 Stage)	60.06	21.75
Pursuit + Roundup + 3# AMS/A	58.99	46.33

F = 0.83 No significant differences among treatment means at P = 0.05 CV = 11.0%

Abbreviations: A = acre, AMS = ammonium sulfate, fb = followed by

Summary and Notes

Weed control was excellent for all treatments. According to the results of this trial, the addition of the other herbicides used did not significantly effect yields of the Roundup Ready soybeans.

For additional information, contact:

Steve Ruhl
The Ohio State University Extension
ruhl.1@osu.edu