

Yellow Nutsedge Control in Soybean – Fosston, MN – 2003

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An experiment was conducted on soybean to evaluate soil applied and postemergence herbicides on yellow nutsedge at the Olson brothers farm near Fosston, MN. 'Gold Country 3202 Roundup Ready' soybean was planted at 160,000 seeds per acre in 22 inch rows on May 13. Preplant incorporated (PPI) herbicides were incorporated with a tractor mounted roto-tiller to a 3 inch depth. Treatments were arranged in a randomized complete block design with four replications. Herbicide treatments were made to the center 6.6 ft of 10 x 25 ft plots with a CO₂ backpack sprayer delivering 10 gpa at 30 psi and equipped with XR80015 flat fan nozzles. Poast and crop oil (1.5 pt + 1.5 pt) were applied to provide foxtail control. Environmental conditions at the time of application and herbicide efficacy results are in Tables 1 and 2 respectively.

Table 1. Environmental conditions at time of herbicide application

Date	May 13	June 22	June 30	July 8
Application	ppi	POST	POST	POST
Sky	P Cloudy	Cloudy	P Cloudy	Clear
Wind mph	4-6 NW	0-2 SE	4 SW	Calm
Temp	63°F	68°F	82°F	70°F
Soil	moist	wet	Moist	Moist
Crop stage	-	3 trifoliates	Early flowering	Early flowering
Nutsedge stage	-	4 inches	6-8 inches	10-14 inches

Table 2. Yellow nutsedge control

Treatment	Rate (product/a)	Timing	July 14		August 14	
			Injury	Control	Injury	Control
			%			
Lasso	8 pt	ppi	0	74	0	55
Lasso/Glyphomax Plus+AMS ¹	4pt/2pt	ppi/6-8 in	0	87	0	94
Lasso/Basagran+COC ²	8pt/2pt+2pt	ppi	0	89	0	76
Dual II Magnum	2 pt	ppi	0	80	0	57
Dual II/ Glyphomax Plus + AMS	1.3 pt/2pt	ppi/6-8 in	0	97	0	89
Dual II/ Basagran+COC	2 pt/2 pt	ppi/6-8 in	2	97	6	95
Outlook	21 oz	ppi	21	90	23	72
Outlook/ Glyphomax Plus	16 oz/2pt	ppi/6-8 in	14	97	17	82
Outlook/ Basagran+COC	21 oz/2 pt	ppi/6-8 in	30	96	27	92
Basagran+COC/Basagran+ COC	2 pt /2 pt	4 in/14 day	0	95	0	94
Glyphomax Plus+FirstRate+ AMS/ Glyphomax Plus + AMS	2pt + 0.3 oz / 2pt	4 in/14 day	0	91	0	97
Glyphomax Plus+AMS	2pt	4 in	0	57	0	57
Glyphomax Plus+AMS/ Glyphomax Plus+AMS	2pt /2pt +	4 in/14 day	0	80	0	96
Glyphomax Plus+AMS	2pt	6-8 in	0	65	0	89
Authority/Glyphomax Plus + AMS	4 oz/ 2pt	ppi/6-8 in	0	79	0	96
LSD(0.05)			6	21	5	26

¹AMS= AmStik by West Central Chemical applied at 8.5 lbs/100 gal

²COC= Cornbelt Premium Crop Oil Concentrate applied at 2 pts/a

The yellow nutsedge infestation was uneven at this site with both light and heavy patches scattered across the research area. The best treatments were combinations of either soil plus postemergence herbicides or sequential applications of Glyphomax Plus or Basagran. Single applications of either soil applied or postemergence herbicides did not provide adequate control, except for Glyphomax Plus applied at the 6 to 8 inch timing. Control with single applications of postemergence herbicides was improved in this study and in previous trials when the application timing was delayed. Postemergence applications should target yellow nutsedge that are at least 6 to 8 inches tall. Sequential applications that begin earlier (4 in height) are a better weed control strategy for most soybean producers, as the first application reduces early season competition from other weed species, and the second application is more effective on nutsedge.