

Study Name: Grassy weed control in sunflower with Dual II Magnum and other soil-applied herbicides

Study Number: 9932

Objectives: Evaluate yellow foxtail control in no-till with Dual II Magnum and other soil-applied herbicides.

Results: The wet spring delayed initiation of this study. Soil conditions were very dry following herbicide application. Very little weed emergence occurred for several weeks after planting. Because of the poor weed emergence, we felt that little information would be gained from this study. However, in late summer yellow foxtail began to emerge. It was surprising to see that the best weed control occurred in the treatments containing Roundup applied either early preplant (EPP) or preemergence (PRE). The control was quite consistent between replications. It really doesn't make sense that a product with no soil activity could control weeds that emerge weeks after application.

There is a grower near Kenmare that routinely applies Roundup immediately after barley harvest. He has indicated that when he does so, he does not have problems with volunteer barley. It is recommended that growers do not apply Roundup to barley pre-harvest that will be used for seed because there will be a reduction in germination.

Could there be a similarity in what the barley grower has experienced and our sunflower study? Our sunflower field has been in no-till for at least two years. The only explanation we have is that weed seed on the soil surface may be intercepting some of the Roundup resulting in lower weed germination. On the other hand, there almost certainly would be some weed seed under the soil surface that was not sprayed that could germinate and emerge. This is an issue we need to pursue either with more field studies or greenhouse studies.

Table. Grassy weed control in sunflower with Dual II Magnum and other soil-applied herbicides

Treatment	Rate	Timing	Sunflower	Sunflower	Yeft
			% injury	% injury	% control
			July 26	Sept 19	Sept 19
Dual II Magnum	2 pt	EPP	0	0	15
Dual II Magnum + Roundup Ultra	2 pt + 1 pt	EPP	0	0	89
Dual II Magnum + Spartan	2 pt + 0.125 lb ai	EPP	0	0	58
Dual II Magnum	2 pt	EPP	0	0	37
Dual II Magnum + Roundup Ultra	2 pt + 1 pt	PRE	0	0	84
Dual II Magnum + Spartan	2 pt + 0.125 lb ai	PRE	0	0	52
Valor	1 oz ai	PRE	2	0	32
Prowl	3.6 pt	PRE	0	0	60
Sonalan	3 pt	PRE	0	0	43
Spartan	0.125 lb ai	PRE	0	0	52
DPX-R6447	2 oz ai	PRE	0	0	43
Untreated			0	0	0
LSD			1	0	30
CV			600	0	37