

Study Name: Sunflower response to Valor herbicide

Study Number:0544

Objectives: To determine sunflower response to Valor applied at different rates and applied at 1, 2, and 3 weeks prior to planting.

Results:

Valor was applied approximately 3, 2, and 1 week before planting (WBP) on May 10, May 19, and May 24, respectively. Preemergence (PRE) treatments were applied on May 30. Individual plots were 10 x 30 ft and replicated three times. The study was initiated on oat stubble from 2004.

The objective of this study was to evaluate sunflower tolerance to different rates of Valor herbicide. Previous studies have shown severe crop injury when applied PRE. Sunflower density was determined by counting all plants in the two middle rows. Valor applied 3 WBP reduced sunflower stand 45-85% compared to the untreated. Valor applied 2 WBP reduced sunflower stand 25-78%. Valor applied 1 WBP reduced sunflower stand 63-79%. Valor applied PRE reduced sunflower stand 31-64%. Spartan was applied PRE as a comparison to the Valor treatments. Sunflower stand in the Spartan treatment was similar to or greater than the untreated. The table below shows the total number of sunflower plants in the two middle rows and sunflower density expressed as a percent of the untreated.

Table. Sunflower response to Valor herbicide.

Treatment	Rate	Timing	Sunflower density	
			Jun 22 # / 2 rows	Jun 22 % of untreated
Valor	2 oz	3 WBP	25	55
Valor	3 oz	3 WBP	19	42
Valor	4 oz	3 WBP	15	33
Valor	6 oz	3 WBP	7	15
Valor	2 oz	2 WBP	34	75
Valor	3 oz	2 WBP	23	51
Valor	4 oz	2 WBP	15	34
Valor	6 oz	2 WBP	10	22
Valor	2 oz	1 WBP	17	37
Valor	3 oz	1 WBP	12	26
Valor	4 oz	1 WBP	14	31
Valor	6 oz	1 WBP	10	21
Valor	2 oz	PRE	31	69
Valor	3 oz	PRE	23	51
Valor	4 oz	PRE	22	50
Valor	6 oz	PRE	16	36
Spartan	4 oz	PRE	50	111
Untreated			45	100
LSD (0.05)			12	28
CV			35	35