

2009 Valor SX in Corn programs (L0914).

A field study was initiated near Lincoln, Nebraska to evaluate Valor SX for crop response and weed control in corn. The experimental design was a randomized complete block with four replications. Plots were 10 feet wide by 30 feet long and located on a Sharpesburg silty clay loam soil with an organic matter of 3.1 % and a pH of 6.6. Dekalb '6166' was planted on May 8. Corn emerged on May 13. Early preplant herbicides were applied on April 21 and post herbicides on June 17. Herbicides were applied with a tractor mounted sprayer calibrated to deliver 15 gallons per acre at 40 psi with Teejet 110015 AIXR nozzles. The environmental conditions at the time of spraying are given in Table 1. Rainfall received April 11 – May1 and June 7 – June 27 is listed in Table 2.

Major weeds consisted of henbit (*Lamium amplexicaule*), tansy mustard (*Descurainia pinnata*), marestail (*Conyza canadensis*), velvetleaf (*Abutilon theophrasti*), sunflower (*Helianthus annuus*), and green foxtail (*Setaria viridis*) species at average densities of 50, 5, 5, 10, 5, 10 plants/ m². Weed densities were taken at the time of spraying in the center of the plot, two ft² samples were taken. Plots were evaluated using visual ratings.

The most notable observation in this trial was an antagonism between Balance Pro and Roundup Original Max for control of henbit. The henbit eventually all died, but it took over 2 weeks longer for it to die. Lexar tank-mixed with glyphosate plots appeared the "cleanest" shortly after crop emergence. There was injury that we believe may have been caused by Valor about 30 days after planting. It appeared as necrotic lesions on tissue that was emerging from the leaf whorl. Following the postemergence herbicide application, weed control in all treatments was excellent.

Table 1. Environmental conditions at the Time of Herbicide Application.

Date	Air Temperature (F)	Soil Temperature At 4 in (F)	Humidity	Wind Speed & direction (mph)	Time of Day	Application Timing	Weed Heights (inches)					
							LAMAN	DESSS	CONCA	ABUTH	HELAN	SETVI
April 21	63	56	39	6	2:30 pm	EPP	2	3	2	NA	NA	NA
June 17	86	79	54	8	1:00 pm	POST	NA	NA	8	10	10	6

Table 2. Rainfall received April 11 – May1 and June 7 – June 27.

Date	Amount (in)
April 12	0.13
April 13	0.09
April 18	0.34
April 26	0.61
June 12	0.47
June 15	0.24
June 16	0.11
June 19	0.71
June 20	0.27
June 21	0.23
June 22	0.73

Table 3. Valor in Corn.

Treatment	Rate	Unit	Application timing	Henbit	T Mustard	Marestail	Velvetf	Sunflwr	Gr foxtl	Marestail	Velvetf	Sunflwr	Gr foxtl	Marestail	Injury	YIELD		
				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	PHYNEC	
				%	%	%	%	%	%	%	%	%	%	%	%	%	%	bu/acre
				5/6/09	5/6/09	5/6/09	5/22/09	5/22/09	5/22/09	5/22/09	6/3/09	6/3/09	6/3/09	6/3/09	6/11/09			
ROUNDUP ORIGINAL MAX	22	fl oz/a	EPP	98	98	93.8	48.8	85	63.8	93.8	40	78.8	55	93.8	22.5	147.7		
VALOR SX	1.75	oz wt/a	EPP															
SENCOR + AMS	4	oz wt/a	EPP															
ROUNDUP ORIGINAL MAX + AMS	22	fl oz/a	POST															
ROUNDUP ORIGINAL MAX	22	fl oz/a	EPP	98	99	87.5	45	90	60	85	27.5	90	45	85	25	148.4		
VALOR SX + AMS	2	oz wt/a	EPP															
ROUNDUP ORIGINAL MAX	22	fl oz/a	POST															
HARNESS + AMS	2	pt/a	POST															
LSD (P=.05)				9.15	5.48	11.72	23.86	13.58	30.01	15.54	13.66	27.88	21.21	15.54	12.91	3.46		