

### 2009 Bayer Herbicide Programs in corn (L0916).

A field study was initiated near Lincoln, Nebraska to evaluate Bayer herbicide programs in corn. The experimental design was a randomized complete block with four replications. Plots were 10 feet wide and 30 feet long and located on a Sharpesburg silty clay loam with an organic matter of 3.1 % and a pH of 6.6. Pioneer '33T57' was planted on May 4. Corn emerged on May 11. Preemergent herbicides were applied on May 5, early post herbicides on May 21, and mid post herbicides on June 1. 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 May 26 – June 11 is listed in Table 2.

Weed pressure in the trial was moderate to light. Sunflower (*Helianthus annuus*) had the greatest density, but there was also velvetleaf (*Abutilon theophrasti*), Palmer amaranth (*Amaranthus palmeri*), and green foxtail (*Setaria viridis*) species at average densities of 10, 5, 2, 1 plants/ft<sup>2</sup>. Weed densities were taken at the time of spraying in the center of the plot, two ft<sup>2</sup> samples were taken. Plots were evaluated using visual ratings. None of the herbicide treatments caused any damage that we observed.

The preemergence herbicides at both the full and reduced rates controlled 90% or greater of palmer amaranth, and 80% or greater of velvetleaf, common sunflower and green foxtail. The PRE only treatment of Balance Flexx +Atrazine was less effective than the PRE only treatment of Corvus+Atrazine on all 4 species by 60 days after emergence. The early postemergence applications of Corvus+Atrazine, Capreno+Atrazine, and Balance Flexx+Atrazine were equally effective as the sequential PRE-POST herbicide programs at controlling the four species in this trial. The PRE only of Corvus+Atrazine was also as effective as the PRE-POST treatments.

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)			
							ABUTH	AMAPA	HELAN	SETVI
May 5	65	63	62	5	8:30 am	PRE	Na	Na	Na	Na
May 21	69	74	45	5	9:00 am	EPOST	1.5	0.5	2	1
June 1	85	76	30	8	2:30 pm	MPOST	4	2	5	3

Table 2. Rainfall received May 26 – June 11.

Date	Amount (in)
April 26	0.61
May 6	0.11
May 12	0.14
May 13	0.39
May 26	0.12
May 27	0.56
June 1	0.27
June 2	0.21
June 6	1.14
June 7	0.89



Table 3. Bayer herbicide programs in corn.

Treatment	Rate	Unit	Application Timing	Velvetlf	Palmr amth	Sunflwr	Gr foxtl	Velvetlf	Palmr amth	Sunflwr	Gr foxtl	Velvetlf	Palmr amth	Sunflwr	Gr foxtl	YIELD		
				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
				%	%	%	%	%	%	%	%	%	%	%	%	%	%	bu/acre
Balance Flexx	3	oz/a	PRE	95.8	96.8	81.3	91.3	91.3	92.3	66.3	86.3	99	98	99	98	144.2		
Ignite	22	oz/a	MPOST															
Laudis + AMS	2	oz/a	MPOST															
Corvus	3	oz/a	PRE	87.5	94.5	83.5	87.5	78.8	86	68.8	70	99	99	99	99	145.8		
Capreno	3	oz/a	MPOST															
Atrazine + COC + AMS	1	lb ai/a	MPOST															
Balance Flexx	3	oz/a	PRE	93.5	95.8	88.5	87.3	87.5	91.3	80	63.8	99	99	99	99	147.7		
Capreno	3	oz/a	MPOST															
Atrazine + COC + AMS	1	lb ai/a	MPOST															
Harness Xtra	1.4	qt/a	PRE	85	95.8	81.3	86.3	57.5	90	62.5	73.8	99	99	99	98	144.8		
Roundup PowerMAX	22	oz/a	MPOST															
AMS			MPOST															
Untreated				0	0	0	0	0	0	0	0	0	0	0	0	112.6		
LSD (P=.05)				5.16	3.55	12.42	7.06	16.31	7.28	20.62	17.93	0.79	3.69	4.15	5.45	12.99		