2009 FMC products in a LibertyLink soybean system (L0935).

A field study was initiated near Lincoln, Nebraska to evaluate FMC residual and postemergence products for soybean in a LibertyLink system. 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. 'S080135 LL' was planted on May 18. Soybeans emerged on May 29. Preemergent herbicides were applied on May 21, early post herbicides on June 23, midpost herbicides on June 24, and late post herbicides on July 6. 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 11 – May 31 and June 15 – July 16 is listed in Table 2.

Major weeds consisted of velvetleaf (Abuthilon theophrasti), sunflower (Helianthus annuus), palmer amaranth (Amaranthus palmeri), and yellow foxtail (Setaria glauca) species at average densities of 10, 2, 5, and 2 plants/ft^2. Weed densities were taken at the time of spraying in the center of the plot, two ft^2 samples were taken. Plots were evaluated using visual ratings. No crop injury was observed on any treatment.

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	HELAN	AMAPA	SETGL
May 21	73	74	43	8 SW	10:30 am	PRE	NA	NA	NA	NA
June 23	74	85	62	5 S	9:30 am	EPOST	3	4	2	1
June 24	78	84	65	4 SSE	9:00 am	MPOST	3	4	2	1
July 6	71	76	72	3 WSW	9:30 am	LPOST	3		2	2

Table 2. Rainfall received May 11 – May 31 and June 15 – July 16.

Date	Amount (in)
May 12	0.14
May13	0.39
May 26	0.12
May 27	0.56
June 15	0.24
June 16	0.11
June 19	0.71
June 20	0.27
June 21	0.23
June 22	0.73
July 3	0.88
July 6	0.13
July 14	0.11
July 16	0.3

Table 3. FMC products in a LibertyLink soybean system.

Treatment	Rate	Unit	Application Timing	Velvetlf CONTROL % 6/5/09	Sunflwr CONTROL % 6/5/09	Palmr amth CONTROL % 6/5/09	Yel foxtl CONTROL % 6/5/09	Velvetlf CONTROL % 6/18/09	Sunflwr CONTROL % 6/18/09	Palmr amth CONTROL % 6/18/09	Yel foxtl CONTROL % 6/18/09	Velvetlf CONTROL % 7/8/09	Sunflwr CONTROL % 7/8/09	Palmr amth CONTROL % 7/8/09	Yel foxtl CONTROL % 7/8/09	YIELD bu/acre
Authority Assist	5	oz/a	PRE	76.3	80	92.5	90	63.8	60	80	80	97	97	98	99	39.4
Ignite 280 + AMS	22	oz/a	MPOST													
Authority Assist	6	oz/a	PRE	80	81.3	93.8	91.3	68.8	61.3	80	82.5	97	96	98	99	36.9
Ignite 280 + AMS	22	oz/a	MPOST													
Authority First	3.2	oz/a	PRE	80	81.3	95	90	70	61.3	82.5	81.3	97	99	96.8	95.8	36.3
Ignite 280 + AMS	22	oz/a	MPOST													
Cadet	0.5	oz/a	EPOST	0	0	0	0	0	0	0	0	77.5	77.3	57.5	76.3	32.2
Ignite 280 + AMS	22	oz/a	EPOST													
Ignite 280 + AMS	22	oz/a	EPOST	0	0	0	0	0	0	0	0	86.3	93.3	82.5	86.3	34.8
Ignite 280 + AMS	22	oz/a	EPOST	0	0	0	0	0	0	0	0	92	98	85	97	33.2
Ignite 280 + AMS	22	oz/a	LPOST													
untreated				0	0	0	0	0	0	0	0	0	0	0	0	15.5
LSD (P=.05)				1.4	1.81	2.04	1.4	2.92	2.04	1.62	2.24	6.39	8.05	6.27	7.17	13.27