

Weed control with Outlook, Prowl, Clarity, BAS 799, and Roundup Original in Roundup Ready corn at Lamberton, MN in 2006. Getting, Jodie K. The objective of this study was to evaluate Outlook, Prowl, Clarity, and BAS 799 tank-mixed with Roundup Original for annual grass and broadleaf control in corn. This study was conducted on a Ves loam soil containing 4.3% organic matter, pH 6.5 and soil test P and K levels of 22 and 320 lb/A, respectively. A randomized complete block design with four replications and a plot size of 10 by 30 ft was used. The site was planted to soybeans in 2005 and was fall chiseled. The area was fertilized with 150-100-100 on April 14, 2006. On April 25, 2006, Pioneer '38H69' field corn was planted in 30-inch rows at a seeding rate of 33,000 seeds/A. Tefluthrin (Force) was applied at 5 oz/1000 row feet in a T-band for the control of northern corn rootworm larvae. All treatments were applied with a tractor-mounted sprayer delivering 20 gpa at a pressure of 40 psi. The sprayer was equipped with 8002 flat-fan nozzles spaced 15 inches apart on the boom. Application dates, environmental conditions, plant sizes and rainfall data are listed below:

Date	April 25	May 30	June 5
Treatment	PRE	POST I	POST II
Temperature (F)			
air	54	65	70
soil (4 inch)	52	72	72
Relative humidity (%)	26	55	60
Wind (mph)	NE 7	NE 5	S 10
Sky	clear	cloudy	clear
Soil moisture	dry	dry	dry
Corn			
leaf no.	-	V3	V5
height (inch)	-	5	11
Giant foxtail			
leaf no.	-	2 to 4	5 to 7
height (inch)	-	3 to 5	6 to 8
no./ft <sup>2</sup>	-	36	34
Common lambsquarters			
leaf no.	-	3 to 5	6 to 8
height (inch)	-	2 to 4	4 to 6
no./ft <sup>2</sup>	-	6	5
Tall waterhemp			
leaf no.	-	3 to 5	5 to 7
height (inch)	-	2 to 4	3 to 5
no./ft <sup>2</sup>	-	11	9
Rainfall after application (inch)			
1 week	2.60	4.35	5.35
2 week	0.01	1.09	2.38
3 week	1.69	2.84	1.39

May precipitation totaled 2.44 inches compared to the long-term average of 3.34 inches. Above normal precipitation in June resulted in 9.39 inches compared to the long-term of 3.77 inches. The trial received 4.26 inches of rain and hail 1 day after POST II application. As a result, there was a heavy flush of new emerging weeds. The subsoil moisture helped carry the crop through a drier than normal July. The growing degree days were slightly below average for May and June but above average for July. The predominate weed species were giant foxtail, common lambsquarters, and tall waterhemp. None of the herbicide treatments caused visible crop injury. The trial area received 2.60 inches of rain with the first week of PRE application. As a result, Outlook applied at the reduced rate of 12 oz/A resulted in good weed control. On May 30, prior to POST herbicide application, Outlook gave 96 to 97, 78 to 83, and 94 to 95% control of giant foxtail, common lambsquarters, and tall waterhemp, respectively. On June 9, Roundup Original + Prowl H<sub>2</sub>O + AMS provided 86% common lambsquarters control. All other treatments had greater than 98% control. All of the treatments provided 99% or greater giant foxtail control and 100% tall waterhemp control. In August, PRE/POST I treatments resulted in 91% giant foxtail control. POST I stand alone treatments gave 78 to 89% control and Roundup Weathermax + AMS applied POST II gave 76% control. Roundup Original + Prowl H<sub>2</sub>O + AMS and Roundup Weathermax + AMS applied POST II gave 86 and 88% common lambsquarters control, respectively. All other treatments provided 95% or greater control. Roundup Weathermax + AMS applied POST II had 74% tall waterhemp control. Roundup Original + BAS 799 + AMS and Roundup Weathermax + AMS applied POST I had 86 and 88% control, respectively. All other treatments had 93% or greater tall waterhemp control. (Southwest Research and Outreach Center, University of Minnesota, Lamberton).

Table. Weed control with Outlook, Prowl, Clarity, BAS 799, and Roundup Original in Roundup Ready corn at Lamberton, MN in 2006. (Getting).

Treatment <sup>a</sup>	Rate (oz/A, pt/A, lb/A or %)	Giant foxtail				Common lambsquarters				Tall waterhemp				Yield (bu/A) <sup>b</sup>
		5/30	6/9	6/27	8/21	5/30	6/9	6/27	8/21	5/30	6/9	6/27	8/21	
		-----(% control)-----												
<u>Preemergence/POST I (5-inch corn)</u>														
Outlook / Roundup Original + AMS	12 oz / 24 oz + 3 lb	91	99	96	91	78	98	100	99	95	100	99	98	205
Outlook / Roundup Original + BAS 799 + AMS	12 oz / 24 oz + 2.5 oz + 3 lb	91	100	97	91	83	100	100	98	94	100	99	96	200
<u>POST I (5-inch corn)</u>														
Roundup Original + BAS 799 + AMS	24 oz + 2.5 oz + 3 lb	-	100	92	81	-	99	99	97	-	100	93	86	204
Roundup Original + Prowl H <sub>2</sub> O + AMS	24 oz + 2.5 pt + 3 lb	-	100	94	89	-	86	89	86	-	100	98	93	204
Roundup Original + Outlook + Clarity + AMS	24 oz + 12 oz + 8 oz + 3 lb	-	100	94	85	-	100	100	99	-	100	97	93	200
Roundup Weathermax + AMS	22 oz + 3 lb	-	100	91	78	-	100	96	95	-	100	88	88	203
<u>POST II (11-inch corn)</u>														
Roundup Weathermax + AMS	22 oz + 3 lb	-	100	90	76	-	100	88	88	-	100	83	74	185
<u>Check</u>														
Weedy		0	0	0	0	0	0	0	0	0	0	0	0	46
	LSD (0.10)	2.4	0.5	1.5	3.2	6.9	2.4	3.1	4.4	2.0	ns	2.4	5.0	15.7

<sup>a</sup> AMS = spray grade ammonium sulfate.

<sup>b</sup> Yield adjusted to 15.5% moisture.