

Evaluation of Laudis and Capreno in One-Pass Weed Control Systems in Field Corn in 2011.

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The objective of this trial was to evaluate the performance of Laudis and Capreno in one-pass weed control systems in field corn in southeastern Minnesota. The research site was a Lawler loam series with a pH of 6.4, O.M. of 2.3%, and soil test P and K levels of 38 ppm and 97 ppm, respectively. Fall fertilizer was broadcast applied on November 11, 2010 at a rate of 6-26-150 (N-P-K). Spring fertilizer was broadcast ahead of planting on April 5, 2011 at a rate of 120-0-0-24 (N-P-K-S). The area was side dressed with an additional 33 lb/A of N on June 13. The field was spring disked and field cultivated once prior to planting. The corn hybrid, Pioneer P9910AM1 (99 day), was planted on May 2, 2011 at a depth of 1.5 inches in 30 inch rows at 32,000 seeds per acre. A randomized complete block design was used with four replications. Postemergence (POST) treatments were applied with a tractor-mounted sprayer delivering 20 gpa at 32 psi using Turbo Tee 11002 nozzles. Evaluations of the plots were taken on June 4 (crop injury only), 7, 16, 24, and August 22. Application date, environmental conditions, and weed stages are listed below. The center two rows of each plot were machine harvested on October 13, 2011.

SUMMARY

The one-pass herbicide systems in this trial performed similarly for giant ragweed (92-97%), common lambsquarters (96–99%), and common waterhemp (97-99%) control. Control of grass species was more variable, 67 to 90% control. However, reduced grass control does not appear to explain the differences in corn yield. (University of Minnesota Extension Regional Office, Rochester)

Date	6/1
Treatment	POST
Temperature (F)	
Air	63
Soil	64.2
Relative Humidity (%)	44
Wind (mph)	16
Soil Moisture	Adequate
Corn	
Stage	3-Collar
Height (inch)	6.0
Giant Ragweed	
Weed density (ft ²)	5.0
Height (inch)	5.0
Common Lambsquarters	
Weed density (ft ²)	3.0
Height (inch)	2.0
Common Waterhemp	
Weed density (ft ²)	3.3
Height (inch)	1.0
Giant Foxtail	
Weed density (ft ²)	47.5
Height (inch)	2.0
Rainfall after each application (inch)	
Week 1	0.04
Week 2	2.26
Week 3	2.83

Table 1. Evaluation of Laudis and Capreno in one-pass systems for giant ragweed control in field corn on June 7, 16, 24, and August 22 at Rochester, MN, in 2011.

Treatment	Rate (rate/A)	Giant Ragweed Control				Yield (bu/A)
		6/7	6/16	6/24	8/22	
Untreated Check		0	0	0	0	34
POST (2-6 inch weeds)						
Laudis + Buctril + Destiny HC + AMS	3 fl oz/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	98	96	95	95	170
Laudis + Roundup PowerMax + Destiny HC + AMS	3 fl oz/a + 22 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	95	97	96	97	175
Laudis + Roundup PowerMax + Buctril + Destiny HC + AMS	3 fl oz/a + 22 fl ox/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	98	97	94	96	172
Dual II Magnum + Laudis + Roundup PowerMax +Destiny HC + AMS	1 pt/a + 3 fl oz/a + 22 fl oz/a +0.5% v/v + 8.5 lb/ 100 gal	95	96	94	96	165
Capreno + COC + AMS	3 fl oz/a + 1.0% v/v + 8.5 lb/ 100 gal	90	97	96	94	167
Capreno + Roundup PowerMax + Superb HC + AMS	3 fl oz/a + 22 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	96	96	92	93	178
Capreno + Buctril + Superb HC + AMS	3 fl oz/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	98	94	93	94	163
Capreno + Roundup Powermax + Buctril + Superb HC + AMS	3 fl oz/a + 22 fl oz/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	97	96	91	92	167
Dual II Magnum + Capreno + Roundup PowerMax + NIS + AMS	1 pt/a + 3 fl oz/a + 22 fl oz/a + 0.25% v/v + 8.5 lb/ 100 gal	96	96	93	95	167
Halex GT + NIS + AMS	3.6 pt/a + 0.25% v/v + 8.5 lb/ 100 gal	96	97	96	96	180
SureStart + Roundup PowerMax + AMS	2 pt/a + 22 fl oz/a + 8.5 lb/ 100 gal	96	98	95	97	170
	LSD (P=0.10)	2	2	5	4	12

Table 2. Evaluation of Laudis and Capreno in one-pass systems for common lambsquarters control in field corn on June 7, 16, 24, and August 22 at Rochester, MN, in 2011.

Treatment	Rate (rate/A)	Common Lambsquarters Control				Yield (bu/A)
		6/7	6/16	6/24	8/22	
Untreated Check		0	0	0	0	34
POST (2-6 inch weeds)						
Laudis + Buctril + Destiny HC + AMS	3 fl oz/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	98	97	94	98	170
Laudis + Roundup PowerMax + Destiny HC + AMS	3 fl oz/a + 22 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	99	98	99	98	175
Laudis + Roundup PowerMax + Buctril + Destiny HC + AMS	3 fl oz/a + 22 fl ox/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	98	97	97	96	172
Dual II Magnum + Laudis + Roundup PowerMax +Destiny HC + AMS	1 pt/a + 3 fl oz/a + 22 fl oz/a +0.5% v/v + 8.5 lb/ 100 gal	98	99	98	98	165
Capreno + COC + AMS	3 fl oz/a + 1.0% v/v + 8.5 lb/ 100 gal	90	99	99	99	167
Capreno + Roundup PowerMax + Superb HC + AMS	3 fl oz/a + 22 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	98	98	98	98	178
Capreno + Buctril + Superb HC + AMS	3 fl oz/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	99	94	97	98	163
Capreno + Roundup Powermax + Buctril + Superb HC + AMS	3 fl oz/a + 22 fl oz/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	99	99	99	98	167
Dual II Magnum + Capreno + Roundup PowerMax + NIS + AMS	1 pt/a + 3 fl oz/a + 22 fl oz/a + 0.25% v/v + 8.5 lb/ 100 gal	99	99	99	98	167
Halex GT + NIS + AMS	3.6 pt/a + 0.25% v/v + 8.5 lb/ 100 gal	99	99	99	99	180
SureStart + Roundup PowerMax + AMS	2 pt/a + 22 fl oz/a + 8.5 lb/ 100 gal	96	98	99	98	170
	LSD (P=0.10)	1	2	2	1	12

Table 3. Evaluation of Laudis and Capreno in one-pass systems for common waterhemp control in field corn on June 7, 16, 24, and August 22 at Rochester, MN, in 2011.

Treatment	Rate	Common Waterhemp Control				Yield
		6/7	6/16	6/24	8/22	
	(rate/A)	(%)				(bu/A)
Untreated Check		0	0	0	0	34
POST (2-6 inch weeds)						
Laudis + Buctril + Destiny HC + AMS	3 fl oz/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	99	99	98	99	170
Laudis + Roundup PowerMax + Destiny HC + AMS	3 fl oz/a + 22 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	99	99	98	98	175
Laudis + Roundup PowerMax + Buctril + Destiny HC + AMS	3 fl oz/a + 22 fl ox/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	99	98	97	98	172
Dual II Magnum + Laudis + Roundup PowerMax +Destiny HC + AMS	1 pt/a + 3 fl oz/a + 22 fl oz/a +0.5% v/v + 8.5 lb/ 100 gal	99	99	98	99	165
Capreno + COC + AMS	3 fl oz/a + 1.0% v/v + 8.5 lb/ 100 gal	90	92	98	98	167
Capreno + Roundup PowerMax + Superb HC + AMS	3 fl oz/a + 22 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	99	99	98	97	178
Capreno + Buctril + Superb HC + AMS	3 fl oz/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	99	99	99	99	163
Capreno + Roundup Powermax + Buctril + Superb HC + AMS	3 fl oz/a + 22 fl oz/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	99	99	99	99	167
Dual II Magnum + Capreno + Roundup PowerMax + NIS + AMS	1 pt/a + 3 fl oz/a + 22 fl oz/a + 0.25% v/v + 8.5 lb/ 100 gal	99	99	99	98	167
Halex GT + NIS + AMS	3.6 pt/a + 0.25% v/v + 8.5 lb/ 100 gal	99	99	99	98	180
SureStart + Roundup PowerMax + AMS	2 pt/a + 22 fl oz/a + 8.5 lb/ 100 gal	99	99	99	98	170
	LSD (P=0.10)	0.4	2	1	1	12

Table 4. Evaluation of Laudis and Capreno in one-pass systems for giant foxtail control in field corn on June 7, 16, 24, and August 22 at Rochester, MN, in 2011.

Treatment	Rate	Giant Foxtail Control				Yield
		6/7	6/16	6/24	8/22	
	(rate/A)	(%)				(bu/A)
Untreated Check		0	0	0	0	34
POST (2-6 inch weeds)						
Laudis + Buctril + Destiny HC + AMS	3 fl oz/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	94	79	70	69	170
Laudis + Roundup PowerMax + Destiny HC + AMS	3 fl oz/a + 22 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	97	96	85	77	175
Laudis + Roundup PowerMax + Buctril + Destiny HC + AMS	3 fl oz/a + 22 fl ox/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	98	96	83	78	172
Dual II Magnum + Laudis + Roundup PowerMax +Destiny HC + AMS	1 pt/a + 3 fl oz/a + 22 fl oz/a +0.5% v/v + 8.5 lb/ 100 gal	97	97	95	93	165
Capreno + COC + AMS	3 fl oz/a + 1.0% v/v + 8.5 lb/ 100 gal	90	73	61	66	167
Capreno + Roundup PowerMax + Superb HC + AMS	3 fl oz/a + 22 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	98	96	92	83	178
Capreno + Buctril + Superb HC + AMS	3 fl oz/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	91	70	61	67	163
Capreno + Roundup Powermax + Buctril + Superb HC + AMS	3 fl oz/a + 22 fl oz/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	95	97	91	86	167
Dual II Magnum + Capreno + Roundup PowerMax + NIS + AMS	1 pt/a + 3 fl oz/a + 22 fl oz/a + 0.25% v/v + 8.5 lb/ 100 gal	98	97	94	90	167
Halex GT + NIS + AMS	3.6 pt/a + 0.25% v/v + 8.5 lb/ 100 gal	99	96	93	88	180
SureStart + Roundup PowerMax + AMS	2 pt/a + 22 fl oz/a + 8.5 lb/ 100 gal	99	97	94	89	170
	LSD (P=0.10)	2	3	4	5	12

Table 4. Crop response to Laudis and Capreno one-pass systems in field corn on June 7 and 16 at Rochester, MN, in 2011.

Treatment	Rate (rate/A)	Crop Injury		Yield (bu/A)
		6/7 (%)	6/16	
Untreated Check		0	0	34
POST (2-6 inch weeds)				
Laudis + Buctril + Destiny HC + AMS	3 fl oz/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	5	0	170
Laudis + Roundup PowerMax + Destiny HC + AMS	3 fl oz/a + 22 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	2	0	175
Laudis + Roundup PowerMax + Buctril + Destiny HC + AMS	3 fl oz/a + 22 fl ox/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	6	0	172
Dual II Magnum + Laudis + Roundup PowerMax +Destiny HC + AMS	1 pt/a + 3 fl oz/a + 22 fl oz/a +0.5% v/v + 8.5 lb/ 100 gal	4	0	165
Capreno + COC + AMS	3 fl oz/a + 1.0% v/v + 8.5 lb/ 100 gal	6	0	167
Capreno + Roundup PowerMax + Superb HC + AMS	3 fl oz/a + 22 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	4	0	178
Capreno + Buctril + Superb HC + AMS	3 fl oz/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	9	0	163
Capreno + Roundup Powermax + Buctril + Superb HC + AMS	3 fl oz/a + 22 fl oz/a + 6 fl oz/a + 0.5% v/v + 8.5 lb/ 100 gal	10	0	167
Dual II Magnum + Capreno + Roundup PowerMax + NIS + AMS	1 pt/a + 3 fl oz/a + 22 fl oz/a + 0.25% v/v + 8.5 lb/ 100 gal	4	0	167
Halex GT + NIS + AMS	3.6 pt/a + 0.25% v/v + 8.5 lb/ 100 gal	4	0	180
SureStart + Roundup PowerMax + AMS	2 pt/a + 22 fl oz/a + 8.5 lb/ 100 gal	3	0	170
	LSD (P=0.10)	3	0	12