

Weed control with Steadfast, Stout, and Resolve tank-mixed with Impact, Roundup Original Max or Liberty in corn at Lamberton, MN in 2007. Getting, Jodie K. The objective of this study was to determine the level of annual grass and annual broadleaf weed control in corn with Steadfast, Stout, and Resolve tank-mixed with Impact, Roundup Original Max or Liberty. This study was conducted on a Normania loam soil containing 4.7% organic matter, pH 6.3 and soil test P and K levels of 34 and 380 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 oats in 2006 and was fall chiseled. The area was fertilized with 140-60-60 on April 20, 2007. On May 2, 2007, Pioneer '35F40' glufosinate resistant/glyphosate resistant field corn was planted in 30-inch rows at a seeding rate of 33,000 seeds/A. Tefluthrin (Force) was applied at 5.0 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	May 2	May 23
Treatment	PRE	POST
Temperature (F)		
air	64	73
soil (4 inch)	66	72
Relative humidity (%)	30	29
Wind (mph)	SE 5	W 5
Sky	clear	cloudy
Soil moisture	dry	moist
Corn		
leaf no.	-	V3
height (inch)	-	4.5
Yellow foxtail		
leaf no.	-	2 to 4
height (inch)	-	2 to 3
no./ft ²	-	31
Common lambsquarters		
leaf no.	-	2 to 4
height (inch)	-	1 to 2
no./ft ²	-	2
Tall waterhemp		
leaf no.	-	2 to 4
height (inch)	-	0.5 to 1.5
no./ft ²	-	4
Rainfall after application (inch)		
1 week	1.96	0.14
2 week	0.02	1.93
3 week	0.26	0.21

(Southwest Research and Outreach Center, University of Minnesota, Lamberton).

Table. Weed control with Steadfast, Stout, and Resolve tank-mixed with Impact, Roundup Original Max or Liberty in corn at Lamberton, MN in 2007. (Getting).

Treatment ^a	Rate (oz/A, pt/A, qt/A, lb/A or %)	Yellow foxtail					Common lambsquarters					Tall waterhemp					Yield ^b (bu/A)
		5/23	5/30	6/7	6/18	8/21	5/23	5/30	6/7	6/18	8/21	5/23	5/30	6/7	6/18	8/21	
<u>Preemergence/ POST (1 to 3-inch weeds)</u>		-----(% control)-----															
Dual II Magnum /	1 pt /	85	99	99	94	92	90	100	100	99	95	89	100	100	96	97	196
New Steadfast + Impact + Atrazine + MSO + AMS	1.75 oz + 0.5 oz + 0.56 lb + 1% + 2 lb	83	97	99	93	92	86	100	100	100	98	88	100	100	99	97	199
Dual II Magnum /	1 pt /	83	97	99	93	91	84	100	100	95	95	86	100	100	96	95	192
New Stout + Impact + Atrazine + MSO + AMS	1 oz + 0.5 oz + 0.56 lb + 1% + 2 lb	83	97	99	93	91	84	100	100	95	95	86	100	100	96	95	192
Dual II Magnum /	1 pt /	81	97	100	92	91	83	100	100	96	95	86	100	100	97	96	188
New Resolve + Roundup Original Max + NIS + AMS	1.03 oz + 22 oz + 0.25% + 2 lb	81	97	100	92	91	83	100	100	96	95	86	100	100	97	96	188
Dual II Magnum /	1 pt /	76	98	97	90	91	81	100	100	98	97	85	100	100	93	94	195
New Resolve + Roundup Original Max + NIS + AMS	1.25 oz + 22 oz + 0.25% + 2 lb	76	98	97	90	91	81	100	100	98	97	85	100	100	93	94	195
Dual II Magnum / Resolve + Dicamba – 013	1 pt / 1 oz + 2.76 oz	83	99	98	93	91	78	100	100	95	90	88	100	100	92	91	183
+ DPX-X4145 + Impact + Atrazine + MSO + AMS	+ 0.25 oz + 0.5 oz + 0.56 lb + 1% + 2 lb	83	99	98	93	91	78	100	100	95	90	88	100	100	92	91	183
Dual II Magnum / Roundup Original Max + AMS	1 pt / 22 oz + 2 lb	84	98	96	91	88	85	100	100	97	98	88	100	100	97	98	187
Dual II Magnum / Impact + Atrazine + MSO + 28%N	1 pt / 0.5 oz + 1 pt + 1% + 2.5%	84	98	96	91	88	85	100	100	97	98	88	100	100	97	98	187
Resolve + Atrazine / Roundup Original Max + AMS	1 oz + 0.56 lb / 22 oz + 2 lb	75	96	93	78	82	95	100	100	96	96	85	100	100	90	90	186
<u>POST (1 to 3-inch weeds)</u>																	
New Steadfast + Impact + Atrazine + MSO + AMS	1.75 oz + 0.5 oz + 0.56 lb + 1% + 2 lb	0	96	99	91	87	0	100	100	98	96	0	100	100	92	93	189
New Stout + Impact + Atrazine + MSO + AMS	1 oz + 0.5 oz + 0.56 lb + 1% + 2 lb	0	94	97	85	81	0	100	100	98	96	0	100	100	93	90	191
New Resolve + Roundup Original Max + NIS + AMS	1.03 oz + 22 oz + 0.25% + 2 lb	0	91	98	85	83	0	100	100	93	93	0	100	100	89	88	190
New Resolve + Roundup Original Max + NIS + AMS	1.25 oz + 22 oz + 0.25% + 2 lb	0	93	99	88	87	0	100	100	95	94	0	99	100	88	88	196
New Resolve + Liberty + Atrazine + NIS + AMS	1.03 oz + 32 oz + 0.83 lb + 0.25% + 2 lb	0	95	96	81	80	0	100	100	96	96	0	100	100	88	85	181
Resolve + Dicamba – 013 + DPX-X4145	1 oz + 2.76 oz + 0.25 oz	0	93	99	85	83	0	100	100	97	95	0	100	100	91	86	196
+ Impact + Atrazine + MSO + AMS	+ 0.5 oz + 0.56 lb + 1% + 2 lb	0	98	93	81	78	0	100	100	90	89	0	100	100	78	76	195
Roundup Original Max + AMS	22 oz + 2 lb	0	95	95	86	83	0	100	100	97	95	0	100	99	93	92	186
Liberty + Atrazine + AMS	32 oz + 0.83 lb + 2 lb	0	95	95	86	83	0	100	100	97	95	0	100	99	93	92	186
Steadfast + Impact + Atrazine + MSO + 28%N	0.75 oz + 0.5 oz + 1 pt + 1% + 2.5%	0	94	100	87	85	0	100	100	95	96	0	100	100	85	83	197
<u>Check</u>																	
Weedy check		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
	LSD (0.10)	4.1	2.5	2.8	5.1	5.5	3.9	ns	ns	2.7	2.7	3.1	0.5	0.8	4.9	4.9	14.1

^a MSO = methylated seed oil; NIS = nonionic surfactant; 28%N = an aqueous solution of urea and ammonium nitrate; AMS = spray grade ammonium sulfate.

^b Yield adjusted to 15.5% moisture.