

Annual weed control with Resolve, Resolve Q, and Steadfast Q tank-mixed with mesotrione in corn at Lamberton, MN in 2009.

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The objective of this study was to evaluate Resolve, Resolve Q, and Steadfast Q tank-mixed with a dry formulation of mesotrione for annual grass and annual broadleaf weed control in corn. This study was conducted on a Normania loam soil containing 4.2% organic matter, pH 6.1 and soil test P and K levels of 68 and 376 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 2008 and was fall chiseled. The area was fertilized with 170-60-60. On May 11, 2009, Pioneer '35F44' glufosinate resistant/glyphosate resistant field corn was planted in 30-inch rows at a seeding rate of 33,000 seeds/A. 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 11	June 1
Treatment	PRE	POST
Temperature (F)		
air	64	55
soil (4 inch)	62	66
Relative humidity (%)	32	72
Wind (mph)	S 10	N 5
Sky	clear	clear
Soil moisture	dry	dry
Corn		
leaf no.	-	V3
height (inch)	-	5
Yellow foxtail		
leaf no.	-	2 to 4
height (inch)	-	2 to 5
no./ft ²	-	28
Common lambsquarters		
leaf no.	-	4 to 6
height (inch)	-	2 to 4
no./ft ²	-	2
Tall waterhemp		
leaf no.	-	1 to 3
height (inch)	-	1 to 2
no./ft ²	-	6
Rainfall after application (inch)		
1 week	0.01	1.36
2 week	0.34	0.13
3 week	0.16	1.22

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

Table. Annual weed control with Resolve, Resolve Q, and Steadfast Q tank-mixed with mesotrione in corn at Lamberton, MN in 2009 (Getting).

Treatment ^a	Rate (oz/A, pt/A, lb/A or %)	Yellow foxtail				Common lambsquarters				Tall waterhemp				Yield ^d (bu/A)
		Jun 2	Jun 12	Jun 24	Aug 24	Jun 2	Jun 12	Jun 24	Aug 24	Jun 2	Jun 12	Jun 24	Aug 24	
Preemergence/POST (3-collar corn)														
Cinch ATZ /	1 qt /	30 a	91 bc	95 a	85 a	38 a	99 a	99 a	99 ab	40 a	99 a	99 a	97 ab	199 a
Resolve + safener + mesotrione + COC + AMS	1.2 oz + 0.3 oz + 2.5 oz + 1% + 2 lb													
POST (3-collar corn)														
Resolve + safener + mesotrione + COC + AMS	1.2 oz + 0.3 oz + 2.5 oz + 1% + 2 lb	0 b	91 b-d	90 bc	74 b	0 b	99 a	99 ab	99 ab	0 b	97 b	95 b	95 ab	196 a
Resolve + safener + mesotrione + Roundup Powermax + AMS	1.2 oz + 0.3 oz + 2.5 oz + 22 oz + 2 lb	0 b	98 a	91 b	73 bc	0 b	99 a	99 ab	99 a	0 b	99 a	96 ab	97 ab	197 a
Resolve + safener + mesotrione + Ignite 280 + AMS	1.2 oz + 0.3 oz + 2.5 oz + 22 oz + 2 lb	0 b	97 a	89 bc	73 bc	0 b	99 a	98 c	98 b	0 b	99 a	95 ab	95 b	190 a
Resolve + safener + mesotrione + Aatrex + COC + AMS	1.2 oz + 0.3 oz + 2.5 oz + 1 pt + 1 pt + 2 lb	0 b	93 b	89 bc	69 d	0 b	99 a	99 ab	99 a	0 b	99 a	99 a	99 a	190 a
Resolve Q + mesotrione + COC + AMS	1.25 oz + 2.5 oz + 1% + 2 lb	0 b	89 cc	85 d	63 e	0 b	99 a	98 a-c	99 a	0 b	99 a	97 ab	99 ab	189 a
Accent + mesotrione + COC + AMS	0.67 oz + 2.5 oz + 1% + 2 lb	0 b	89 d	87 cc	70 cc	0 b	99 a	99 a-c	99 ab	0 b	99 a	97 ab	97 ab	195 a
Steadfast Q + mesotrione + COC + AMS	1.5 oz + 2.5 oz + 1% + 2 lb	0 b	91 b-d	89 bc	71 b-d	0 b	99 a	98 bc	99 ab	0 b	99 a	95 b	97 ab	194 a
Checks														
Weedy check	-	0 b	0 e	0 e	0 f	0 b	0 b	0 d	0 c	0 b	0 c	0 c	0 c	91 b
	LSD (0.10)	3.3	2.5	2.5	3.6	2.0	ns	1.2	1.1	3.3	0.9	3.7	4.3	14.2

^a COC = crop oil concentrate; AMS = spray grade ammonium sulfate.

^d Yield adjusted to 15.5% moisture.