Annual weed control with Dual II Magnum applied in the Fall and PRE in corn at Lamberton, MN in 2010.

Getting, Jodie K.

The objective of this study was to evaluate Dual II Magnum at two application timings: Fall and preemergence for annual grass and annual broadleaf weed control in corn. This study was conducted on a Normania loam soil containing 3.8% organic matter, pH 6.1 and soil test P and K levels of 64 and 296 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 2009 and was fall chiseled. The area was fertilized with 135 lbs nitrogen as anhydrous ammonia prior to fall herbicide application. On May 5, 2010, Dekalb 'DK 53-78' glufosinate resistant/glyphosate resistant field corn was planted in 30-inch rows at a seeding rate of 33,000 seeds/A. The entire trail was field cultivated prior to planting. 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:

DateNov 23May 6June 2TreatmentFallPREPOSTair464172soil (4 inch)424670Relative humidity (%)876631Wind (mph)S 8N 7N 10SkycloudycloudyclearSoil moisturedrydrydryCornV4leaf noV4height (inch)2 to 4height (inch)11Common lambsquarters-1 to 3leaf no1 to 3no./ft ² 1 to 3no./ft ² 1 to 3no./ft ² 2 to 4leaf no1 to 3no./ft ² 2 to 4no./ft ² 2 to 4leaf no2 to 4no./ft ² 1 to 3no./ft ² 2Rainfall after application (inch)1 to 3no./ft ² 2Rainfall after application (inch)21 week0.331.790.752 week0.090.002.553 week0.190.201.44									
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	1 week	0.33	1.79	0.75					
3 week 0.19 0.20 1.44	2 week	0.09	0.00	2.55					
	3 week	0.19	0.20	1.44					

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

Dual II Magnum/ 1.2 pt/ 84 a 88 b 99 a 97 bc 53 a 69 c 98 a 98 a - 76 c 99 a 98 a 229 a Halex GT + NIS + AMS 3.6 pt + 0.25% + 2.5% 85 a 91 ab 99 a 98 a 48 a 73 c 99 a 98 a - 76 c 99 a 98 a 229 a Dual II Magnum/ 2 pt/ 85 a 91 ab 99 a 98 a 48 a 73 c 99 a 98 a - 76 c 99 a 98 a 228 a Halex GT + NIS + AMS 3.6 pt + 0.25% + 2.5% 99 a 98 a 98 a 98 a 98 a - 86 b 99 a 98 a 228 a PRE / POST (2 to 4-inch weeds) 0 94 a 99 a 98 a 0 b 84 b 98 a 98 a 98 a 98 a 99 a 98 a 229 a Dual II Magnum/ 1.2 pt/ 0 b 94 a 99 a 98 a 0 b 98 a 99 a 98 a 229 a Dual II Magnum/ <th></th> <th></th> <th colspan="3">Yellow foxtail</th> <th colspan="3">Common lambsquarters</th> <th colspan="4">Redroot pigweed</th> <th></th>			Yellow foxtail			Common lambsquarters			Redroot pigweed						
Dual II Magnum/ 1.2 pt/ 84 a 88 b 99 a 97 bc 53 a 69 c 98 a 98 a - 76 c 99 a 98 a 229 a Halex GT + NIS + AMS 3.6 pt + 0.25% + 2.5% 85 a 91 ab 99 a 98 a 48 a 73 c 99 a 98 a - 76 c 99 a 98 a 229 a Dual II Magnum/ 2 pt/ 85 a 91 ab 99 a 98 a 48 a 73 c 99 a 98 a - 76 c 99 a 98 a 228 a Halex GT + NIS + AMS 3.6 pt + 0.25% + 2.5% 99 a 98 a 98 a 98 a 98 a - 86 b 99 a 98 a 228 a PRE / POST (2 to 4-inch weeds) 0 94 a 99 a 98 a 0 b 84 b 98 a 98 a 98 a 98 a 99 a 98 a 229 a Dual II Magnum/ 1.2 pt/ 0 b 94 a 99 a 98 a 0 b 98 a 99 a 98 a 229 a Dual II Magnum/ <td>Treatment^a</td> <td>Rate</td> <td>May 5</td> <td>Jun 2</td> <td>Jun 15</td> <td>Aug 17</td> <td>May 5</td> <td>5 Jun 2</td> <td>2 Jun 1</td> <td>5 Aug 17</td> <td>May 5</td> <td>Jun 2</td> <td>Jun 15</td> <td>Aug 17</td> <td>Yield</td>	Treatment ^a	Rate	May 5	Jun 2	Jun 15	Aug 17	May 5	5 Jun 2	2 Jun 1	5 Aug 17	May 5	Jun 2	Jun 15	Aug 17	Yield
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Checks	<u>Checks</u>														
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LSD (0.10) 3.4 4.7 0.8 1.5 10.4 7.3 2.0 ns - 7.3 ns ns 8.7	-	LSD (0.10)	3.4	4.7	0.8	1.5	10.4	7.3	2.0	ns	-	7.3	ns	ns	8.7

Table. Annual weed control with Dual II Magnum applied in the Fall and PRE in corn at Lamberton, MN in 2010 (Getting).

^a NIS = nonionic surfactant; AMS = liquid spray grade ammonium sulfate.
^b Yield adjusted to 15.5% moisture.