

Annual weed control with Halex GT in corn at Lamberton, MN in 2009.

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The objective of this study was to evaluate Halex GT alone and tank-mixed with Aatrex, Northstar, or Buctril for annual grass and annual broadleaf weed control in corn. This study was conducted on a Ves loam soil containing 4.3% organic matter, pH 6.7 and soil test P and K levels of 38 and 390 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 2008 and was fall chiseled. The area was fertilized with 150 lbs of nitrogen. On May 6, 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 7 | June 1 | June 19 |
|-----------------------------------|--------|--------|-----------|
| Treatment | PRE | POST I | POST II |
| Temperature (F) | | | |
| air | 52 | 66 | 70 |
| soil (4 inch) | 52 | 64 | 72 |
| Relative humidity (%) | 50 | 49 | 64 |
| Wind (mph) | W 8 | NE 8 | NW 7 |
| Sky | cloudy | clear | p. cloudy |
| Soil moisture | moist | dry | moist |
| Corn | | | |
| leaf no. | - | V3 | V7 |
| height (inch) | - | 5 | 18 |
| Green foxtail | | | |
| leaf no. | - | 2 to 4 | 3 to 4 |
| height (inch) | - | 3 to 5 | 3 to 4 |
| no./ft ² | - | 19 | 2 |
| Common lambsquarters | | | |
| leaf no. | - | 4 to 6 | 2 to 3 |
| height (inch) | - | 2 to 4 | 1 to 2 |
| no./ft ² | - | 7 | <1 |
| Tall waterhemp | | | |
| leaf no. | - | 1 to 3 | 2 to 4 |
| height (inch) | - | 2 to 4 | 1 to 3 |
| no./ft ² | - | 6 | <1 |
| Rainfall after application (inch) | | | |
| 1 week | 0.72 | 1.36 | 0.52 |
| 2 week | 0.00 | 0.13 | 0.23 |
| 3 week | 0.45 | 1.22 | 1.46 |

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

Table. Annual weed control with Halex GT in corn at Lamberton, MN in 2009 (Getting).

| Treatment ^a | Rate (oz/A, pt/A, qt/A, or %) | Injury | Green foxtail | | | Common lambsquarters | | | | Tall waterhemp | | | | Yield ^b (bu/A) | |
|---|----------------------------------|-----------------------|---------------|--------|--------|----------------------|-------|--------|--------|----------------|-------|--------|--------|------------------------------|--------|
| | | Jun 11 | Jun 2 | Jun 11 | Jun 24 | Aug 18 | Jun 2 | Jun 11 | Jun 24 | Aug 18 | Jun 2 | Jun 11 | Jun 24 | | Aug 18 |
| | | -----(% control)----- | | | | | | | | | | | | | |
| POST I (3 to 4-inch weeds) | | | | | | | | | | | | | | | |
| Halex GT + NIS + AMS | 3.6 pt + 0.25% + 2 qt | 0 b | 0 b | 97 bc | 98 a | 96 bc | 0 b | 93 b | 99 a | 98 a | 0 b | 99 a | 99 a | 99 a | 209 a |
| Halex GT + Aatrex + NIS + AMS | 3.6 pt + 1 pt + 0.25% + 2 qt | 0 b | 0 b | 97 c | 99 a | 95 c | 0 b | 99 a | 99 a | 99 a | 0 b | 99 a | 99 a | 99 a | 206 a |
| Halex GT + Northstar + NIS + AMS | 3.6 pt + 2.5 oz + 0.25% + 2 qt | 0 b | 0 b | 98 ab | 99 a | 98 a | 0 b | 93 b | 99 a | 99 a | 0 b | 99 b | 99 a | 99 a | 203 a |
| Halex GT + Buctril + COC +28%N | 3.6 pt + 6 oz + 1 pt + 1 qt | 6 a | 0 b | 99 a | 99 a | 97 ab | 0 b | 99 a | 99 a | 99 a | 0 b | 99 ab | 99 a | 99 a | 202 a |
| Surestart + Durango + AMS | 1.75 pt + 24 oz + 2 qt | 0 b | 0 b | 97 bc | 99 a | 98 a | 0 b | 93 b | 99 a | 99 a | 0 b | 99 ab | 99 a | 99 a | 212 a |
| Roundup Powermax + Status + AMS | 22 oz + 2.5 oz + 2 qt | 0 b | 0 b | 98 ab | 94 b | 89 d | 0 b | 93 b | 95 b | 89 b | 0 b | 99 a | 91 c | 88 b | 206 a |
| Roundup Powermax + AMS | 22 oz + 2 qt | 0 b | 0 b | 97 bc | 95 b | 90 d | 0 b | 93 b | 96 b | 88 b | 0 b | 99 a | 94 b | 88 b | 210 a |
| POST I (3 to 4-inch weeds)/POST III (regrowth) | | | | | | | | | | | | | | | |
| Roundup Powermax + AMS / | 22 oz + 2 qt / | 0 b | 0 b | 98 ab | 99 a | 97 a-c | 0 b | 92 b | 99 a | 99 a | 0 b | 99 a | 99 a | 99 a | 206 a |
| Roundup Powermax + AMS | 22 oz + 2 qt | | | | | | | | | | | | | | |
| Preemergence/POST I (3 to 4-inch weeds) | | | | | | | | | | | | | | | |
| Harness / Roundup Powermax + AMS | 1.25 pt / 22 oz + 2 qt | 0 b | 90 a | 97 bc | 99 a | 99 a | 78 a | 94 b | 99 a | 99 a | 97 a | 99 a | 99 a | 99 a | 210 a |
| Checks | | | | | | | | | | | | | | | |
| Weedy check | - | 0 b | 0 b | 0 d | 0 c | 0 e | 0 b | 0 c | 0 c | 0 c | 0 b | 0 c | 0 d | 0 c | 63 b |
| | LSD (0.10) | 1.0 | ns | 1.2 | 1.9 | 2.2 | 2.5 | 3.4 | 2.0 | 2.9 | 0.6 | 0.3 | 2.0 | 2.7 | 14.6 |

^a COC = crop oil concentrate; NIS = nonionic surfactant; 28%N = an aqueous solution of urea and ammonium nitrate; AMS = liquid spray grade ammonium sulfate.

^b Yield adjusted to 15.5% moisture.