

## **Effect of adjuvants tank-mixed with Buccaneer Plus on common lambsquarters in corn at Lamberton, MN in 2008.**

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The objective of this study was to evaluate adjuvants tank-mixed with Buccaneer Plus for common lambsquarters control in corn. This study was conducted on a Canisteo loam soil containing 8.4% organic matter, pH 7.7 and soil test P and K levels of 100 and 600 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 2007 and was fall chiseled. The area was fertilized with 150 lbs of nitrogen applied as anhydrous ammonia. On May 20, 2008, Pioneer '37Y13' 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                              | June 18   |
| Treatment                         | POST      |
| Temperature (F)                   |           |
| air                               | 77        |
| soil (4 inch)                     | 80        |
| Relative humidity (%)             | 32        |
| Wind (mph)                        | calm      |
| Sky                               | p. cloudy |
| Soil moisture                     | dry       |
| Corn                              |           |
| leaf no.                          | V4        |
| height (inch)                     | 10        |
| Giant foxtail                     |           |
| leaf no.                          | 2 to 4    |
| height (inch)                     | 3 to 5    |
| no./ft <sup>2</sup>               | 2         |
| Common lambsquarters              |           |
| leaf no.                          | 6 to 8    |
| height (inch)                     | 3 to 5    |
| no./ft <sup>2</sup>               | 17        |
| Rainfall after application (inch) |           |
| 1 week                            | 0.00      |
| 2 week                            | 0.61      |
| 3 week                            | 0.00      |

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

**Table. Effect of adjuvants tank-mixed with Buccaneer Plus on common lambsquarters in corn at Lamberton, MN in 2008 (Getting).**

| Treatment                         | Rate                    | Giant foxtail         |        |        | Common lambsquarters |        |        | Yield <sup>b</sup> |
|-----------------------------------|-------------------------|-----------------------|--------|--------|----------------------|--------|--------|--------------------|
|                                   |                         | Jun 30                | Jul 10 | Sep 25 | Jun 30               | Jul 10 | Sep 25 |                    |
| <b>POST (3 to 5-inch weeds)</b>   | (oz/A, lb/A or %)       | -----(% control)----- |        |        |                      |        |        | (bu/A)             |
| Buccaneer Plus                    | 16 oz                   | 100 a                 | 98 a   | 100 a  | 58 h                 | 76 d   | 80 e   | 131 a              |
| Buccaneer Plus + Premium AMS      | 16 oz + 1 lb            | 100 a                 | 98 a   | 100 a  | 75 g                 | 86 bc  | 91 d   | 140 a              |
| Buccaneer Plus + N-Tense          | 16 oz + 0.5%            | 100 a                 | 98 a   | 100 a  | 86 de                | 91 ab  | 95 ab  | 146 a              |
| Buccaneer Plus + WC073            | 16 oz + 0.75%           | 100 a                 | 98 a   | 100 a  | 85 ef                | 85 c   | 91 cd  | 146 a              |
| Buccaneer Plus + WC060            | 16 oz + 0.5%            | 100 a                 | 98 a   | 100 a  | 81 f                 | 88 bc  | 92 cd  | 147 a              |
| Buccaneer Plus + Laudis + N-Tense | 16 oz + 2 oz + 0.5%     | 100 a                 | 98 a   | 100 a  | 96 ab                | 96 a   | 98 a   | 139 a              |
| Buccaneer Plus + Laudis + WC073   | 16 oz + 2 oz + 0.75%    | 100 a                 | 98 a   | 100 a  | 96 ab                | 96 a   | 97 ab  | 137 a              |
| Buccaneer Plus + Impact + N-Tense | 16 oz + 0.5 oz + 0.5%   | 100 a                 | 98 a   | 100 a  | 94 a-c               | 95 a   | 97 ab  | 148 a              |
| Buccaneer Plus + Impact + WC073   | 16 oz + 0.5 oz + 0.75%  | 100 a                 | 98 a   | 100 a  | 90 cd                | 91 ab  | 95 ab  | 136 a              |
| Buccaneer Plus + Impact + N-Tense | 16 oz + 0.33 oz + 0.5%  | 100 a                 | 98 a   | 100 a  | 97 a                 | 94 a   | 96 ab  | 148 a              |
| Buccaneer Plus + Impact + WC073   | 16 oz + 0.33 oz + 0.75% | 100 a                 | 98 a   | 100 a  | 93 bc                | 94 a   | 94 bc  | 143 a              |
| <b>Check</b>                      |                         |                       |        |        |                      |        |        |                    |
| Weedy check                       | -                       | 0 b                   | 0 b    | 0 b    | 0 i                  | 0 e    | 0 f    | 70 b               |
|                                   | LSD (0.10)              | ns                    | ns     | ns     | 4.2                  | 5.1    | 3.1    | 26.5               |

<sup>b</sup> Yield adjusted to 15.5% moisture.