

Preemergence Balance Pro Comparisons.

Project Code: 03-10B-MW110 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
 Trial Status: Final Updated: 9-2-03

Objective:

Compare Balance Pro with other competitive products in preemergence applications.

| Weed Code | Common Name | Scientific Name |
|-----------|-------------------------|------------------------------|
| 1. XANST | cocklebur, common | Xanthium strumarium L. |
| 2. AMBEL | ragweed, common | Ambrosia artemisiifolia L. |
| 3. POLPY | smartweed, Pennsylvania | Polygonum pensylvanicum L. |
| 4. IPOHE | morningglory, ivyleaf | Ipomoea hederacea (L.) Jacq. |

Crop 1: ZEAMX corn, field Variety: Pioneer 33P69LL
 Planting Method: Seeded Planting Date: 6-19-03
 Rate: 28000 S/A Depth: 1.5 IN
 Row Spacing: 30 IN

Plot Width, Unit: 10 FT Plot Length, Unit: 24 FT Reps: 3
 Tillage Type: Reduced-Till Study Design: Randomized complete block
 Previous Crop, Year: GLXMA, 2002

Field Prep./Maintenance: N 150 LB/A, P205 50 LB/A, K20 150 LB/A

Soil Name: Weir % OM: 1.6 pH: 6.3 CEC: 12
 Texture: Silt loam Fert. Level: P1: 82 LB/A, K: 274 LB/A

APPLICATION DESCRIPTION

A
 Application Date: 6-5-03
 Time of Day: 18:00
 Application Method: Spray
 Application Timing: PRE
 Applic. Placement: BROSOI
 Air Temp., Unit: 78 F
 % Relative Humidity: 34
 Wind Velocity, Unit: 0 MPH

CROP STAGE AT EACH APPLICATION

A
 Crop 1 Code, Stage: ZEAMX NA
 Height, Unit: NA NA

APPLICATION EQUIPMENT

A
 Appl. Equipment: CO2 sprayer
 Operating Pressure: 40 PSI
 Nozzle Type: Flat fan
 Nozzle Size: 8003
 Boom Length, Unit: 7.5 FT
 Spray Volume, Unit: 20 GPA

NOTES:

Not harvested.

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| Weed Code | | ZEAMX | | | XANST | XANST | XANST | AMBEL | AMBEL | POLPY | POLPY | IPOHE | IPOHE | | | | | | | | |
|-------------------|----------------|-----------|-----------|---------|---------|-----------|-----------|----------|-----------|---------|---------|---------|---------|----|----|----|----|----|----|----|----|
| Crop Code | | ZEAMX | ZEAMX | ZEAMX | XANST | XANST | XANST | AMBEL | AMBEL | POLPY | POLPY | IPOHE | IPOHE | | | | | | | | |
| Rating Data Type | | Injury | Injury | Injury | Control | Control | Control | Control | Control | Control | Control | Control | Control | | | | | | | | |
| Rating Unit | | Percent | Percent | Percent | Percent | Percent | Percent | Percent | Percent | Percent | Percent | Percent | Percent | | | | | | | | |
| Rating Date | | 7-3-03 | 7-10-03 | 7-17-03 | 6-19-03 | 7-3-03 | 7-24-03 | 7-3-03 | 7-24-03 | 7-3-03 | 7-24-03 | 7-3-03 | 7-24-03 | | | | | | | | |
| Trt-Eval Interval | | 14 DAP | 21 DAP | 28 DAP | 14 DA-A | 28 DA-A | 49 DA-A | 28 DA-A | 49 DA-A | 28 DA-A | 49 DA-A | 28 DA-A | 49 DA-A | | | | | | | | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Unit | Prod Rate | Prod Unit | Grow Stg | Appl Code | | | | | | | | | | | | |
| 1 | NONTREATED | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| 2 | BALANCE PRO | 4 SC | | 0.047 | LB A/A | 1.5 | FL OZ/A | PRE | A | 0 | 0 | 0 | 96 | 90 | 85 | 99 | 99 | 99 | 90 | 80 | |
| | AATREX | 90 WG | | 1.5 | LB A/A | 1.67 | LB/A | PRE | A | | | | | | | | | | | | |
| 3 | BALANCE PRO | 4 SC | | 0.07 | LB A/A | 2.25 | FL OZ/A | PRE | A | 0 | 0 | 0 | 92 | 89 | 81 | 99 | 99 | 99 | 89 | 70 | |
| | AATREX | 90 WG | | 1.5 | LB A/A | 1.67 | LB/A | PRE | A | | | | | | | | | | | | |
| 4 | BALANCE PRO | 4 SC | | 0.047 | LB A/A | 1.5 | FL OZ/A | PRE | A | 0 | 0 | 0 | 97 | 57 | 27 | 99 | 99 | 86 | 76 | 77 | 10 |
| | DEFINE | 4 SC | | 0.375 | LB A/A | 12 | FL OZ/A | PRE | A | | | | | | | | | | | | |
| 5 | CAMIX | 3.67 | EC | 2.3 | LB A/A | 2.5 | QT/A | PRE | A | 0 | 0 | 0 | 93 | 80 | 63 | 93 | 93 | 99 | 99 | 90 | 63 |
| 6 | BALANCE PRO | 4 SC | | 0.07 | LB A/A | 2.25 | FL OZ/A | PRE | A | 0 | 0 | 0 | 98 | 63 | 33 | 99 | 96 | 83 | 79 | 90 | 27 |
| | DEFINE | 4 SC | | 0.375 | LB A/A | 12 | FL OZ/A | PRE | A | | | | | | | | | | | | |
| 7 | CAMIX | 3.67 | EC | 2.75 | LB A/A | 3 | QT/A | PRE | A | 0 | 0 | 0 | 99 | 82 | 58 | 99 | 99 | 99 | 99 | 87 | 47 |
| 8 | BALANCE PRO | 4 SC | | 0.047 | LB A/A | 1.5 | FL OZ/A | PRE | A | 0 | 0 | 0 | 99 | 95 | 89 | 99 | 99 | 99 | 99 | 93 | 85 |
| | DEFINE | 4 SC | | 0.375 | LB A/A | 12 | FL OZ/A | PRE | A | | | | | | | | | | | | |
| | AATREX | 90 WG | | 1.5 | LB A/A | 1.67 | LB/A | PRE | A | | | | | | | | | | | | |
| 9 | LUMAX | 3.94 | L | 2.46 | LB A/A | 2.5 | QT/A | PRE | A | 0 | 0 | 0 | 97 | 88 | 72 | 99 | 99 | 99 | 99 | 92 | 67 |
| 10 | BALANCE PRO | 4 SC | | 0.07 | LB A/A | 2.25 | FL OZ/A | PRE | A | 0 | 0 | 0 | 98 | 88 | 78 | 99 | 99 | 99 | 99 | 92 | 93 |
| | DEFINE | 4 SC | | 0.375 | LB A/A | 12 | FL OZ/A | PRE | A | | | | | | | | | | | | |
| | AATREX | 90 WG | | 1.5 | LB A/A | 1.67 | LB/A | PRE | A | | | | | | | | | | | | |
| 11 | LUMAX | 3.94 | L | 2.96 | LB A/A | 3 | QT/A | PRE | A | 0 | 0 | 0 | 99 | 86 | 80 | 99 | 99 | 99 | 99 | 87 | 86 |
| 12 | V-10136 | 1 | EC | 0.188 | LB A/A | 24 | FL OZ/A | PRE | A | 0 | 0 | 0 | 93 | 63 | 27 | 53 | 17 | 37 | 17 | 94 | 63 |
| 13 | V-10136 | 1 | EC | 0.125 | LB A/A | 16 | FL OZ/A | PRE | A | 0 | 0 | 0 | 91 | 43 | 0 | 37 | 0 | 13 | 0 | 95 | 83 |
| 14 | V-10136 | 1 | EC | 0.188 | LB A/A | 24 | FL OZ/A | PRE | A | 0 | 0 | 0 | 95 | 53 | 17 | 55 | 0 | 30 | 0 | 93 | 76 |
| | DUAL II MAGNUM | 7.64 | EC | 1.1 | LB A/A | 1.15 | PT/A | PRE | A | | | | | | | | | | | | |
| 15 | V-10136 | 1 | EC | 0.125 | LB A/A | 16 | FL OZ/A | PRE | A | 0 | 0 | 0 | 94 | 37 | 0 | 47 | 0 | 30 | 0 | 93 | 80 |
| | DUAL II MAGNUM | 7.64 | EC | 1.1 | LB A/A | 1.15 | PT/A | PRE | A | | | | | | | | | | | | |
| 16 | V-10136 | 1 | EC | 0.125 | LB A/A | 16 | FL OZ/A | PRE | A | 0 | 0 | 0 | 98 | 73 | 53 | 99 | 99 | 99 | 99 | 93 | 87 |
| | AATREX | 90 WG | | 1 | LB A/A | 1.11 | LB/A | PRE | A | | | | | | | | | | | | |
| 17 | BALANCE PRO | 4 SC | | 0.094 | LB A/A | 3 | FL OZ/A | PRE | A | 0 | 0 | 0 | 95 | 55 | 47 | 99 | 99 | 99 | 99 | 90 | 0 |

| Weed Code | | | | XANST | XANST | XANST | AMBEL | AMBEL | POLPY | POLPY | IPOHE | IPOHE | |
|-------------------|----------------|-----------|-----------|-----------|-----------|-----------|----------|-----------|---------|---------|---------|---------|--------|
| Crop Code | ZEAMX | ZEAMX | ZEAMX | | | | | | | | | | |
| Rating Data Type | Injury | Injury | Injury | Control | Control | Control | Control | Control | Control | Control | Control | Control | |
| Rating Unit | Percent | Percent | Percent | Percent | Percent | Percent | Percent | Percent | Percent | Percent | Percent | Percent | |
| Rating Date | 7-3-03 | 7-10-03 | 7-17-03 | 6-19-03 | 7-3-03 | 7-24-03 | 7-3-03 | 7-24-03 | 7-3-03 | 7-24-03 | 7-3-03 | 7-24-03 | |
| Trt-Eval Interval | 14 DAP | 21 DAP | 28 DAP | 14 DA-A | 28 DA-A | 49 DA-A | 28 DA-A | 49 DA-A | 28 DA-A | 49 DA-A | 28 DA-A | 49 DA-A | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate Unit | Prod Rate | Prod Unit | Grow Stg | Appl Code | | | | | |
| LSD (P=.05) | | 0.0 | 0.0 | 0.0 | 5.6 | 21.6 | 22.1 | 8.0 | 6.6 | 24.0 | 20.9 | 11.1 | 28.9 |
| Replicate F | | 0.000 | 0.000 | 0.000 | 0.923 | 1.867 | 0.448 | 4.174 | 2.174 | 6.053 | 2.923 | 4.495 | 2.322 |
| Replicate Prob(F) | | 1.0000 | 1.0000 | 1.0000 | 0.4076 | 0.1711 | 0.6429 | 0.0248 | 0.1302 | 0.0060 | 0.0682 | 0.0190 | 0.1143 |
| Treatment F | | 0.000 | 0.000 | 0.000 | 147.903 | 11.097 | 17.111 | 121.229 | 380.188 | 18.865 | 36.820 | 33.482 | 9.890 |
| Treatment Prob(F) | | 1.0000 | 1.0000 | 1.0000 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |

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Trial Comments

1. Protocol: Bayer, Valent.
2. Ratings: CI 14, 21 and 28 DAP; WC 14, 28 and 49 DAP.
3. DAP = days after planting (after the 6-19-03 replant). DA-A = days after PRE application.