

Plant Growth Regulator Adjuvant Trial - Winfield Solutions.

Trial ID: 12-ARC-4-E80

Location: Agronomy Res. Center

Investigator: Bryan Young

General Trial Information

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor

Trial Status: F - one-year/final
Initiation Date: 5-31-12

Trial Location

City: Carbondale
State/Prov.: IL
Postal Code: 62901
Country: USA

Objectives:

Determine the influence of herbicide formulation and tank-mix adjuvant on plant growth regulator herbicide efficacy.

Personnel

Study Director: Bryan Young
Investigator: Bryan Young **Title:** Professor
Affiliation: Southern Illinois University
Address: 1205 Lincoln Drive - AG 176 - MC 4415
Location: Carbondale IL
Postal Code: 62901 **E-mail:** bgyoung@siu.edu
Phone No.: 618-453-7679 **Mobile No.:** 618-713-6471

Crop Description

Crop 1: ZEAMD Zea mays indentata Dent corn
Variety: P1498HR **Description:** RR2/LL
BBCH Scale: BCOR **Planting Date:** 5-31-12
Planting Method: SEEDED Seeded **Rate, Unit:** 28000 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** IPOHE - Ipomoea hederacea (L.) Jacq.
Common Name: morningglory, ivyleaf

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 28 FT
Plot Area, Unit: 280 FT² **Tillage Type:** REDTIL reduced-till
Replications: 3 **Study Design:** RACOB L Randomized Complete Block (RCB)

| No. | Previous Crop | Year |
|-----|---------------|------|
| 1. | ZEAMD | 2011 |

Maintenance

| No. | Maintenance Treatment Name |
|-----|-------------------------------------|
| 1. | N 150 LB/A, P205 0 LB/A, K20 0 LB/A |

Soil Description

% OM: 2.2 **Texture:** SIL SILT LOAM
pH: 6.2 **Soil Name:** WEIR
CEC: 9.7

Additional Measured Elements

| Element | Quantity | Unit |
|---------|----------|------|
| P1 | 60 | LB/A |
| K | 259 | LB/A |

Moisture and Weather Conditions

Overall Moisture Conditions: BELNOR below normal
Closest Weather Station: ICN - Carbondale IL **Distance, Unit:** 0.5 MI

Plant Growth Regulator Adjuvant Trial - Winfield Solutions.

Trial ID: 12-ARC-4-E80

Location: Agronomy Res. Center

Investigator: Bryan Young

Application Description

| | A |
|-------------------------|---------|
| Application Date: | 7-13-12 |
| Time of Day: | 10:30 |
| Application Method: | Spray |
| Application Timing: | 4-6"W |
| Application Placement: | BROFOL |
| Applied By: | LAH |
| Air Temperature, Unit: | 86 F |
| % Relative Humidity: | 52 |
| Wind Velocity, Unit: | 4 MPH |
| Wind Direction: | N |
| Dew Presence (Y/N): | N no |
| Soil Temperature, Unit: | 82 F |
| Soil Moisture: | BELNOR |
| % Cloud Cover: | 30 |
| Next Rain Occurred On: | 7-14-12 |

Crop Stage At Each Application

| | A |
|--------------------------|------------|
| Crop 1 Code, BBCH Scale: | ZEAMD BCOR |
| Stage Scale Used: | DESC |
| Stage Majority, Percent: | NA |

Pest Stage At Each Application

| | A |
|---------------------------|--------------|
| Pest 1 Code, Type, Scale: | IPOHE W DESC |
| Stage Majority, Percent: | 10 |
| Stage Minimum, Percent: | 2 |
| Stage Maximum, Percent: | 16 |
| Height, Unit: | 4 IN |
| Height Minimum, Maximum: | 1 6 |
| Density, Unit: | 5 FT2 |

Application Equipment

| | A |
|---------------------------|-------------|
| Appl. Equipment: | CO2 sprayer |
| Equipment Type: | BACSPR |
| Operation Pressure, Unit: | 30 PSI |
| Nozzle Type: | TTI |
| Nozzle Size: | 11002 |
| Boom Length, Unit: | 6.67 FT |
| Spray Volume, Unit: | 15 GPA |

Southern Illinois University

Plant Growth Regulator Adjuvant Trial - Winfield Solutions.

Trial ID: 12-ARC-4-E80

Location: Agronomy Res. Center

Investigator: Bryan Young

| Pest Code | | | | | | | ZEAMD | ZEAMD | IPOHE | IPOHE |
|--------------------|--------------------------------|-----------|-----------|---------------|------------|------------|-------------|-----------|----------|----------|
| Crop Code | | | | | | | 7-27-12 | 8-10-12 | 7-27-12 | 8-10-12 |
| Rating Date | | | | | | | Injury | Injury | Control | Control |
| Rating Type | | | | | | | Percent | Percent | Percent | Percent |
| Rating Unit | | | | | | | | | | |
| Rating Timing | | | | | | | | | | |
| Trt-Eval Interval | | | | | | | 14 DA-A | 28 DA-A | 14 DA-A | 28 DA-A |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate Rate | Other Rate | Other Rate | Growth Unit | Appl Code | | |
| 1 | NONTREATED | | | | | | | | 0 a | 0 a |
| 2 | AGH 02007 | 6.01 | SL | 0.503 lb ae/a | 0.67 pt/a | | 4-6"W | A | 0 a | 0 a |
| 3 | 2,4-D LV 6 | 5.6 | SL | 0.47 lb ae/a | 0.67 pt/a | | 4-6"W | A | 0 a | 0 a |
| 4 | 2,4-D AMINE 4 | 3.8 | SL | 0.475 lb ae/a | 1 pt/a | | 4-6"W | A | 0 a | 0 a |
| 5 | AGH 09008 | 3.5 | SL | 0.437 lb ae/a | 1 pt/a | | 4-6"W | A | 0 a | 0 a |
| 6 | AGH 09008 PREFERENCE AG 02013 | 3.5 | SL | 0.437 lb ae/a | 1 pt/a | | 4-6"W | A | 2 a | 0 a |
| | | 100 | SL | 0.25 % v/v | 0.25 % v/v | | 4-6"W | A | | |
| | | 100 | SL | 4 fl oz/a | 4 fl oz/a | | 4-6"W | A | | |
| 7 | BRASH | 3.87 | SL | 0.726 lb ae/a | 1.5 pt/a | | 4-6"W | A | 0 a | 0 a |
| 8 | BRASH PREFERENCE INTERLOCK | 3.87 | SL | 0.726 lb ae/a | 1.5 pt/a | | 4-6"W | A | 0 a | 0 a |
| | | 100 | SL | 0.25 % v/v | 0.25 % v/v | | 4-6"W | A | | |
| | | 100 | SL | 4 fl oz/a | 4 fl oz/a | | 4-6"W | A | | |
| 9 | AGH 11021 | 100 | SL | 1.5 pt/a | 1.5 pt/a | | 4-6"W | A | 0 a | 0 a |
| 10 | AGH 11021 PREFERENCE INTERLOCK | 100 | SL | 1.5 pt/a | 1.5 pt/a | | 4-6"W | A | 0 a | 0 a |
| | | 100 | SL | 0.25 % v/v | 0.25 % v/v | | 4-6"W | A | | |
| | | 100 | SL | 4 fl oz/a | 4 fl oz/a | | 4-6"W | A | | |
| 11 | BRASH | 3.87 | SL | 0.97 lb ae/a | 2 pt/a | | 4-6"W | A | 0 a | 0 a |
| 12 | AGH 11021 | 100 | SL | 2 pt/a | 2 pt/a | | 4-6"W | A | 0 a | 0 a |
| 13 | AGH 11021 PREFERENCE INTERLOCK | 100 | SL | 2 pt/a | 2 pt/a | | 4-6"W | A | | |
| | | 100 | SL | 0.25 % v/v | 0.25 % v/v | | 4-6"W | A | | |
| | | 100 | SL | 4 fl oz/a | 4 fl oz/a | | 4-6"W | A | | |
| LSD (P=.05) | | | | | | | 1.4 | 0.0 | 1.6 | 1.7 |
| Standard Deviation | | | | | | | 0.8 | 0.0 | 0.9 | 1.0 |
| CV | | | | | | | 600.0 | 0.0 | 1.05 | 1.12 |
| Replicate F | | | | | | | 1.000 | 0.000 | 1.340 | 0.696 |
| Replicate Prob(F) | | | | | | | 0.3840 | 1.0000 | 0.2824 | 0.5091 |
| Treatment F | | | | | | | 1.000 | 0.000 | 2712.499 | 2365.213 |
| Treatment Prob(F) | | | | | | | 0.4767 | 1.0000 | 0.0001 | 0.0001 |

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Plant Growth Regulator Adjuvant Trial - Winfield Solutions.

Trial ID: 12-ARC-4-E80

Location: Agronomy Res. Center

Investigator: Bryan Young

Trial Comments

1. Protocol: Winfield Solutions.
2. CI/WC at 14 and 28 DAT.
3. NOTE: These herbicide products are not intended for use in corn and the experiment was conducted for evaluation purposes only.
4. Missing data for treatment 13 was due to a mixing error.
5. Not harvested.