## Annual Morningglory Control with S-3153.

00-10C-W110

OBJECTIVE: Evaluate the addition of S-3153 to 2,4-D, Accent, Aatrex, Beacon, and

Clarity for increased morningglory control in corn.

SUMMARY:

Corn injury with S-3153 plus Prime Oil was 21% at 3 days after treatment (DAT). Tank mixing Aatrex with S-3153 plus Prime Oil increased corn injury to 25%. Corn injury at 3 DAT was only 9% from S-3153 plus Impressive DB. By 28 DAT, corn injury was 5% or less from all treatments. Tank mixing S-3153 with Accent increased control of morningglory species, common cocklebur, velvetleaf, and common ragweed compared to Accent alone. Control of velvetleaf, common cocklebur and common ragweed was improved with the addition of S-3153 to Aatrex compared to Aatrex alone. Combining S-3153 with Beacon increased control of morningglory species compared to Beacon alone. Tank mixing Impressive DB with S-3153 in place of Prime Oil reduced control of morningglory species, common cocklebur, and common ragweed. S-3153 plus Prime Oil provided greater control of common ragweed than Aim plus Prime Oil.

Corn yield ranged from 103 bu/A in nontreated plots to 168 bu/A. An increase in corn yield was observed in plots treated with S-3153 plus Aatrex compared to plots treated with Aatrex alone

HERBICIDES WEEDS CROP

AATREX 90 WG
ACCENT 75 WG
AIM 40 WG
BEACON 75 WG
CLARITY 4 EC
DISTINCT 70 WG
S-3153 57.6 WG
WEEDONE 638 2.8 EC
IMPRESSIVE DB 100 DRY

COCKLEBUR, COMMON MORNINGGLORY, SPECIES RAGWEED, COMMON VELVETLEAF

CORN, FIELD

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PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT
SOUTHERN ILLINOIS UNIVERSITY

Annual Morningglory Control with S-3153.

Project Code: 00-10C-W110 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

Weed Code

Common Name MORNINGGLORY, SPECIES IPOSS ABUTH

2. 3. **VELVETLEAF** 

**XANST** COCKLEBUR, COMMON

AMBEL RAGWEED, COMMON

ZEAMX CORN, FIELD SEEDED Crop 1:

Planting Method: 28000 S/A Rate: 30 IN Row Spacing:

Plot Width, Unit:

Tillage Type: Previous Crop, Year: REDUCED-TILL GLXMA, 1999

WEIR Soil Name: SILT LOAM Texture:

APPLICATION DESCRIPTION

Jun-2-00 Application Date: Time of Day: 10:00 Application Method: Application Timing: SPRAY 8"MG **BROFOL** Applic. Placement: Air Temp., Unit: % Relative Humidity: 80 F 80

Wind Velocity, Unit: 5-7 MPH Soil Moisture: NORMAL

% Cloud Cover:

CROP STAGE AT EACH APPLICATION

A ZEAMX V5 Crop 1 Code, Stage: Height, Unit: 10-12 IN

WEED STAGE AT EACH APPLICATION

**IPOSS** Weed 1 Code: Stage(leaves): Height(inches): 7-9 5-6 Density: **MEDIUM** 

Weed 2 Code: **ABUTH** Stage(leaves): Height(inches): 4-6 4-8 MĚDIUM Density:

Weed 3 Code: **XANST** Stage(leaves): Height(inches): 4-6 4-6 MEDIUM Density:

APPLICATION EQUIPMENT

CO, SPRAY 40 PSI Appl. Equipment: Operating Pressure: Nozzle Type: Nozzle Size: FLAT FAN 8002 7.33 FT Boom Length, Unit: Spray Volume, Unit: 20 GPA

NOTES:

Harvested Oct-02-00 (2) 30 inch rows by 21 ft.

Scientific Name IPOMOEA SP.

ABUTILON THEOPHRASTI MEDIK. XANTHIUM STRUMARIUM L. SSP. STRUMARIUM

AMBROSIA ARTEMISIIFOLIA L.

Variety: P33G28 LL Planting Date: May-4-00 Depth:

Plot Length, Unit: 30 FT Reps: 3

Study Design: RCB Fertilizer applied: N 150 LB/A,

P<sub>2</sub>O<sub>5</sub> 0 LB/A, K<sub>2</sub>O 0 LB/A

% OM: 2.4 P<sub>1</sub>: 78 LB/A, pH: 6.1 K: 413 LB/A CEC: 11

## TABLE. ANNUAL MORNINGGLORY CONTROL WITH S-3153. PROJECT CODE:00-10C-W110

|  |                              |   |                                    |                            |       | ZEAMX<br>INJURY |    |    |       |      | CONTROL, DAYS AFTER 8"MG |    |       |      |    |    |       |      |    |    |       |    |    |    |      |
|--|------------------------------|---|------------------------------------|----------------------------|-------|-----------------|----|----|-------|------|--------------------------|----|-------|------|----|----|-------|------|----|----|-------|----|----|----|------|
|  |                              |   |                                    | APPL APPL                  |       | DA 8"MG         |    |    | IPOSS |      |                          |    | ABUTH |      |    |    | XANST |      |    |    | AMBEL |    |    |    |      |
| TREATMENT  | FORM.                        | RATE UNIT                                   | PROD RATE                          | TIME CODE                  | YIELD | 3               | 7  | 14 | 28    | 3    | 7                        | 14 | 28    | 3    | 7  | 14 | 28    | 3    | 7  | 14 | 28    | 3  | 7  | 14 | 28   |
|  |                              |   |                                    |                            | BU/A  | %               | %  | %  | %     | %    | %                        | %  | %     | %    | %  | %  | %     | %    | %  | %  | %     | %  | %  | %  | %    |
| 1 NONTREATED   |                              |   |                                    |                            | 103   | 0               | 0  | 0  | 0     | 0    | 0                        | 0  | 0     | 0    | 0  | 0  | 0     | 0    | 0  | 0  | 0     | 0  | 0  | 0  | 0    |
| <ul><li>2 WEEDONE 638</li><li>2 IMPRESSIVE DB</li></ul>                  | 2.8 EC<br>100 DRY            | 0.5 LB A/A<br>2.25 LB A/A                   | 1.43 PT/A<br>2.25 LB/A             | 8"MG A<br>8"MG A           | 142   | 0               | 0  | 0  | 0     | 63   | 75                       | 98 | 95    | 60   | 72 | 92 | 95    | 60   | 70 | 96 | 96    | 63 | 68 | 88 | 88   |
| <ul><li>3 WEEDONE 638</li><li>3 S-3153</li><li>3 IMPRESSIVE DB</li></ul> | 2.8 EC<br>57.6 WG<br>100 DRY | 0.5 LB A/A<br>0.018 LB A/A<br>2.25 LB A/A   | 1.43 PT/A<br>0.5 OZ/A<br>2.25 LB/A | 8"MG A<br>8"MG A<br>8"MG A | 152   | 8               | 5  | 3  | 0     | 78   | 89                       | 98 | 97    | 87   | 97 | 98 | 97    | 83   | 93 | 98 | 98    | 87 | 92 | 98 | 97   |
| 4 ACCENT<br>4 PRIME OIL COC  | 75 WG<br>100 LIQ             | 0.031 LB A/A<br>1.0 QT/A                    | 0.66 OZ/A<br>1.0 QT/A              |                            | 136   | 2               | 0  | 0  | 0     | 15   | 45                       | 50 | 12    | 13   | 40 | 48 | 13    | 20   | 43 | 43 | 18    | 10 | 25 | 10 | 3    |
| 5 ACCENT<br>5 S-3153<br>5 PRIME OIL COC                                  | 75 WG<br>57.6 WG<br>100 LIQ  | 0.031 LB A/A<br>0.018 LB A/A<br>1.0 QT/A    | 0.66 OZ/A<br>0.5 OZ/A<br>1.0 QT/A  | 8"MG A                     | 149   | 18              | 10 | 5  | 3     | 97   | 98                       | 96 | 90    | 98   | 98 | 98 | 94    | 96   | 98 | 96 | 93    | 96 | 98 | 92 | 88   |
| 6 AATREX<br>6 PRIME OIL COC  | 90 WG<br>100 LIQ             | 0.5 LB A/A<br>1.0 QT/A                      | 8.9 OZ/A<br>1.0 QT/A               |                            | 143   | 0               | 0  | 0  | 0     | 67   | 89                       | 88 | 86    | 68   | 72 | 75 | 67    | 63   | 72 | 82 | 80    | 62 | 73 | 83 | 80   |
| 7 AATREX<br>7 S-3153<br>7 PRIME OIL COC                                  | 90 WG<br>57.6 WG<br>100 LIQ  | 0.5 LB A/A<br>0.018 LB A/A<br>1.0 QT/A      | 8.9 OZ/A<br>0.5 OZ/A<br>1.0 QT/A   | 8"MG A                     | 168   | 25              | 15 | 10 | 5     | 94   | 98                       | 90 | 88    | 98   | 98 | 97 | 96    | 97   | 96 | 94 | 93    | 94 | 95 | 93 | 92   |
| 8 BEACON<br>8 PRIME OIL COC  | 75 WG<br>100 LIQ             | 0.036 LB A/A<br>1.0 QT/A                    | 0.77 OZ/A<br>1.0 QT/A              |                            | 156   | 6               | 0  | 0  | 0     | 17   | 50                       | 23 | 15    | 27   | 70 | 98 | 95    | 23   | 70 | 93 | 94    | 12 | 53 | 90 | 90   |
| <ul><li>9 BEACON</li><li>9 S-3153</li><li>9 PRIME OIL COC</li></ul>      | 75 WG<br>57.6 WG<br>100 LIQ  | 0.036 LB A/A<br>0.018 LB A/A<br>1.0 QT/A    | 0.77 OZ/A<br>0.5 OZ/A<br>1.0 QT/A  | 8"MG A                     | 142   | 18              | 9  | 6  | 2     | 96   | 98                       | 97 | 92    | 98   | 98 | 98 | 98    | 92   | 97 | 97 | 98    | 91 | 96 | 96 | 96   |
| 10 CLARITY<br>10 IMPRESSIVE DB   | 4 EC<br>100 DRY              | 0.5 LB A/A<br>2.25 LB A/A                   | 1.0 PT/A<br>2.25 LB/A              | 8"MG A<br>8"MG A           | 145   | 0               | 0  | 0  | 0     | 63   | 70                       | 97 | 93    | 62   | 70 | 89 | 92    | 58   | 70 | 93 | 92    | 65 | 65 | 92 | 92   |
| 11 CLARITY<br>11 S-3153<br>11 IMPRESSIVE DB                              | 4 EC<br>57.6 WG<br>100 DRY   | 0.5 LB A/A<br>0.018 LB A/A<br>2.25 LB A/A   | 1.0 PT/A<br>0.5 OZ/A<br>2.25 LB/A  | 8"MG A<br>8"MG A<br>8"MG A | 136   | 4               | 1  | 1  | 0     | 86   | 92                       | 98 | 96    | 93   | 98 | 98 | 97    | 90   | 96 | 98 | 97    | 89 | 93 | 98 | 97   |
| 12 CLARITY<br>12 ACTIVATOR 90  | 4 EC<br>100 LIQ              | 0.5 LB A/A<br>0.25 % V/V                    | 1.0 PT/A<br>0.25 %V/V              | 8"MG A<br>8"MG A           | 140   | 0               | 0  | 0  | 0     | 63   | 78                       | 97 | 93    | 58   | 70 | 88 | 88    | 62   | 72 | 98 | 91    | 63 | 70 | 96 | 94   |
| 13 DISTINCT<br>13 IMPRESSIVE DB  | 70 WG<br>100 DRY             | 0.175 LB A/A<br>2.25 LB A/A                 | 4.0 OZ/A<br>2.25 LB/A              | 8"MG A<br>8"MG A           | 154   | 0               | 0  | 0  | 0     | 55   | 68                       | 96 | 93    | 58   | 70 | 91 | 93    | 58   | 68 | 96 | 95    | 58 | 67 | 92 | 92   |
| 14 DISTINCT<br>14 S-3153<br>14 IMPRESSIVE DB                             | 70 WG<br>57.6 WG<br>100 DRY  | 0.175 LB A/A<br>0.018 LB A/A<br>2.25 LB A/A | 4.0 OZ/A<br>0.5 OZ/A<br>2.25 LB/A  |                            | 156   | 5               | 3  | 3  | 0     | 80   | 89                       | 98 | 94    | 95   | 98 | 98 | 96    | 88   | 93 | 98 | 97    | 87 | 90 | 98 | 97   |
| 15 S-3153<br>15 IMPRESSIVE DB  | 57.6 WG<br>100 DRY           | 0.018 LB A/A<br>2.25 LB A/A                 | 0.5 OZ/A<br>2.25 LB/A              | 8"MG A<br>8"MG A           | 144   | 9               | 4  | 2  | 0     | 89   | 96                       | 90 | 85    | 97   | 98 | 98 | 94    | 92   | 94 | 92 | 83    | 91 | 92 | 88 | 70   |
| 16 S-3153<br>16 PRIME OIL COC  | 57.6 WG<br>100 LIQ           | 0.018 LB A/A<br>1.0 QT/A                    | 0.5 OZ/A<br>1.0 QT/A               |                            | 154   | 21              | 12 | 10 | 5     | 98   | 98                       | 97 | 91    | 98   | 99 | 98 | 96    | 98   | 98 | 97 | 96    | 96 | 97 | 97 | 93   |
| 17 AIM<br>17 IMPRESSIVE DB   | 40 WG<br>100 DRY             | 0.008 LB A/A<br>2.25 LB A/A                 | 0.32 OZ/A<br>2.25 LB/A             |                            | 137   | 11              | 7  | 4  | 3     | 95   | 97                       | 97 | 87    | 98   | 98 | 97 | 91    | 91   | 94 | 92 | 87    | 84 | 83 | 87 | 67   |
| 18 AIM<br>18 PRIME OIL COC   | 40 WG<br>100 LIQ             | 0.008 LB A/A<br>1.0 QT/A                    | 0.32 OZ/A<br>1.0 QT/A              |                            | 149   | 25              | 15 | 10 | 5     | 94   | 98                       | 98 | 87    | 98   | 98 | 98 | 95    | 91   | 95 | 95 | 90    | 87 | 92 | 87 | 77   |
| LSD  |                              |   |                                    |                            | 25    | 3               | 3  | 1  | 0.7   | 5    | 4                        | 2  | 5     | 4    | 3  | 4  | 7     | 5    | 5  | 4  | 8     | 6  | 7  | 5  | 8    |
| <u>P</u>   |                              |   |                                    |                            | 0.01  | 0.01            |    |    |       | 0.01 |                          |    |       | 0.01 |    |    |       | 0.01 |    |    |       | -  |    |    | 0.01 |
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<sup>1.</sup> PROTOCOL: VALENT MDO0.02.

<sup>2.</sup> RATING DATES: 3 DA 8"MG, 7 DA 8"MG, 14 DA 8"MG, AND 28 DA 8"MG ON JUN-5-00, JUN-9-00, JUN-16-00, AND JUN-30-00, RESPECTIVELY.