

Encapsulated Acetochlor in Soybean.

Trial ID: 09-DeSoto-Aceto      Location: De Soto, IL

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu  
 City State Zip Country: De Soto IL 62924 USA  
 Trial Status: FINAL      Initiation Date: 05-23-09

Objectives: Evalaute soybean tolerance and weed control from postemergence applications  
 of encapsulated acetochlor formulations.

Crop 1: GLXMA Soybean      Variety: AG 4404      Description: RR/STS  
 Planting Method: SEEDDED      Planting Date: 05-23-09  
 Rate, Unit: 180000 S/A      Depth, Unit: 1.25 IN  
 Row Spacing, Unit: 30 IN  
 Soil Moisture: ABOVE NORMAL

Pest 1 Type: W      Code: AMATA      Amaranthus rudis Sauer      waterhemp, common  
 Pest Description: glyphosate-resistant waterhemp

Plot Width, Unit: 10 FT      Site Type: FIELD  
 Plot Length, Unit: 30 FT      Tillage Type: NO-TILL  
 Replications: 4      Study Design: Randomized Complete Block

Prior Crops, Year  
 1. GLXMA 2008

Field Prep./Maintenance: N 0 LB/A, P205 0 LB/A, K20 0 LB/A

% OM: 2.5      Texture: SILT LOAM  
 pH: 6.8      Soil Name: OKAW  
 CEC: 12      Fert. Level: P1 88 LB/A, K 207 LB/A

|                         | Application Description |          |          |
|-------------------------|-------------------------|----------|----------|
|                         | A                       | B        | C        |
| Application Date:       | 05-23-09                | 06-17-09 | 06-26-09 |
| Time of Day:            | 8:15                    | 10:00    | 10:30    |
| Application Method:     | Spray                   | Spray    | Spray    |
| Application Timing:     | PRE                     | V2-3     | V5-6     |
| Application Placement:  | BROFOL                  | BROFOL   | BROFOL   |
| Applied By:             | DKP                     | NVH      | DKT      |
| Air Temperature, Unit:  | 73 F                    | 82 F     | 92 F     |
| % Relative Humidity:    | 87                      | 85       | 34       |
| Wind Velocity, Unit:    | 1 MPH                   | 2 MPH    | 2 MPH    |
| Wind Direction:         | NW                      | SW       | N        |
| Dew Presence (Y/N):     | N                       | N        | N        |
| Soil Temperature, Unit: | 70 F                    | 78 F     | 88 F     |
| Soil Moisture:          | ABONOR                  | ABONOR   | NORMAL   |
| % Cloud Cover:          | 85                      | 30       | 75       |

|                            | 05-23-09 | 06-17-09 | 06-26-09 |
|----------------------------|----------|----------|----------|
| Crop stage at application: | NA       | V3       | V5       |
| Height Min, Max (inch):    | 7        | 9        | 9 12     |

|                          | Pest Stage At Each Application |          |          |
|--------------------------|--------------------------------|----------|----------|
|                          | 05-23-09                       | 06-17-09 | 06-26-09 |
| Application Date:        | 05-23-09                       | 06-17-09 | 06-26-09 |
| Weed Code:               | AMATA                          | AMATA    | AMATA    |
| Stage Majority (leaves): | 4                              | 4        | 4        |
| Stage Min, Max:          | 2 6                            | 2 8      | 2 8      |
| Height Majority:         | 2 IN                           | 4 IN     | 4 IN     |
| Height Min, Max:         | 1 3                            | 2 5      | 2 5      |
| Density, Unit:           | 0.1 FT2                        | 0.1 FT2  | 0.1 FT2  |

|                     | Application Equipment |             |             |
|---------------------|-----------------------|-------------|-------------|
| Appl. Equipment:    | CO2 sprayer           | CO2 sprayer | CO2 sprayer |
| Operating Pressure: | 30 PSI                | 30 PSI      | 30 PSI      |
| Nozzle Type:        | Flat fan              | Flat fan    | Flat fan    |
| Nozzle Size:        | XR 8002               | XR 8002     | XR 8002     |
| Boom Length, Unit:  | 6.67 FT               | 6.67 FT     | 6.67 FT     |
| Spray Volume, Unit: | 15 GPA                | 15 GPA      | 15 GPA      |

## Encapsulated Acetochlor in Soybean.

Trial ID: 09-DeSoto-Aceto Location: De Soto, IL

Pest Code  
Crop Code  
Rating Date  
Rating Data Type  
Rating Unit  
Rating Timing  
Trt-Eval Interval

GLXMA GLXMA GLXMA GLXMA GLXMA GLXMA GLXMA  
11-06-09 11-06-09 11-06-09 06-17-09 06-26-09 07-08-09 07-17-09  
Moisture Test wt. Yield Injury Injury Injury Injury  
Percent lb/bu bu/A Percent Percent Percent Percent  
0 DA-B 0 DA-C 21 DA-B 21 DA-C

| Trt No. | Treatment Name   | Form Conc | Form Type | Rate   | Rate Unit | Other Rate | Other Rate Unit | Growth Stage | Appl Code |        |        |       |     |     |       |     |
|---------|------------------|-----------|-----------|--------|-----------|------------|-----------------|--------------|-----------|--------|--------|-------|-----|-----|-------|-----|
| 1       | VALOR XLT        | 40.3      | WG        |        |           | 1.5        | oz/a            | PRE          | A         | 11.1 a | 53.5 a | 50 a  | 0 a | 0 a | 6 bcd | 0 b |
| 1       | VALOR SX         | 51        | WG        | 0.028  | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 1       | CLASSIC          | 25        | WG        | 0.0097 | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 1       | MON 63410        | 3         | CS        | 1.125  | lb ai/a   | 1.5        | qt/a            | V2-3         | B         |        |        |       |     |     |       |     |
| 1       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V2-3         | B         |        |        |       |     |     |       |     |
| 1       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V2-3         | B         |        |        |       |     |     |       |     |
| 2       | VALOR XLT        | 40.3      | WG        |        |           | 3          | oz/a            | PRE          | A         | 11.4 a | 54.3 a | 46 ab | 0 a | 0 a | 5 cd  | 0 b |
| 2       | VALOR SX         | 51        | WG        | 0.056  | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 2       | CLASSIC          | 25        | WG        | 0.0194 | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 2       | MON 63410        | 3         | CS        | 1.125  | lb ai/a   | 1.5        | qt/a            | V2-3         | B         |        |        |       |     |     |       |     |
| 2       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V2-3         | B         |        |        |       |     |     |       |     |
| 2       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V2-3         | B         |        |        |       |     |     |       |     |
| 3       | VALOR XLT        | 40.3      | WG        |        |           | 1.5        | oz/a            | PRE          | A         | 11.8 a | 52.8 a | 50 a  | 0 a | 0 a | 4 d   | 0 b |
| 3       | VALOR SX         | 51        | WG        | 0.028  | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 3       | CLASSIC          | 25        | WG        | 0.0097 | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 3       | MON 63410        | 3         | CS        | 1.125  | lb ai/a   | 1.5        | qt/a            | V5-6         | C         |        |        |       |     |     |       |     |
| 3       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V5-6         | C         |        |        |       |     |     |       |     |
| 3       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V5-6         | C         |        |        |       |     |     |       |     |
| 4       | VALOR XLT        | 40.3      | WG        |        |           | 3          | oz/a            | PRE          | A         | 11.5 a | 52.4 a | 47 a  | 0 a | 0 a | 5 cd  | 0 b |
| 4       | VALOR SX         | 51        | WG        | 0.056  | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 4       | CLASSIC          | 25        | WG        | 0.0194 | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 4       | MON 63410        | 3         | CS        | 1.125  | lb ai/a   | 1.5        | qt/a            | V5-6         | C         |        |        |       |     |     |       |     |
| 4       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V5-6         | C         |        |        |       |     |     |       |     |
| 4       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V5-6         | C         |        |        |       |     |     |       |     |
| 5       | VALOR XLT        | 40.3      | WG        |        |           | 1.5        | oz/a            | PRE          | A         | 11.8 a | 53.2 a | 48 a  | 0 a | 0 a | 9 b   | 0 b |
| 5       | VALOR SX         | 51        | WG        | 0.028  | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 5       | CLASSIC          | 25        | WG        | 0.0097 | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 5       | MON 63410        | 3         | CS        | 1.125  | lb ai/a   | 1.5        | qt/a            | V2-3         | B         |        |        |       |     |     |       |     |
| 5       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V2-3         | B         |        |        |       |     |     |       |     |
| 5       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V2-3         | B         |        |        |       |     |     |       |     |
| 5       | MON 63410        | 3         | CS        | 1.125  | lb ai/a   | 1.5        | qt/a            | V5-6         | C         |        |        |       |     |     |       |     |
| 5       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V5-6         | C         |        |        |       |     |     |       |     |
| 5       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V5-6         | C         |        |        |       |     |     |       |     |
| 6       | VALOR XLT        | 40.3      | WG        |        |           | 3          | oz/a            | PRE          | A         | 11.5 a | 53.9 a | 49 a  | 0 a | 0 a | 8 bc  | 0 b |
| 6       | VALOR SX         | 51        | WG        | 0.056  | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 6       | CLASSIC          | 25        | WG        | 0.0194 | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 6       | MON 63410        | 3         | CS        | 1.125  | lb ai/a   | 1.5        | qt/a            | V2-3         | B         |        |        |       |     |     |       |     |
| 6       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V2-3         | B         |        |        |       |     |     |       |     |
| 6       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V2-3         | B         |        |        |       |     |     |       |     |
| 6       | MON 63410        | 3         | CS        | 1.125  | lb ai/a   | 1.5        | qt/a            | V5-6         | C         |        |        |       |     |     |       |     |
| 6       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V5-6         | C         |        |        |       |     |     |       |     |
| 6       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V5-6         | C         |        |        |       |     |     |       |     |
| 7       | VALOR XLT        | 40.3      | WG        |        |           | 1.5        | oz/a            | PRE          | A         | 11.4 a | 52.9 a | 49 a  | 0 a | 0 a | 6 bcd | 0 b |
| 7       | VALOR SX         | 51        | WG        | 0.028  | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 7       | CLASSIC          | 25        | WG        | 0.0097 | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 7       | MON 63410        | 3         | CS        | 1.5    | lb ai/a   | 2          | qt/a            | V2-3         | B         |        |        |       |     |     |       |     |
| 7       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V2-3         | B         |        |        |       |     |     |       |     |
| 7       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V2-3         | B         |        |        |       |     |     |       |     |
| 8       | VALOR XLT        | 40.3      | WG        |        |           | 3          | oz/a            | PRE          | A         | 11.3 a | 53.4 a | 41 b  | 0 a | 0 a | 6 bcd | 0 b |
| 8       | VALOR SX         | 51        | WG        | 0.056  | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 8       | CLASSIC          | 25        | WG        | 0.0194 | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 8       | MON 63410        | 3         | CS        | 1.5    | lb ai/a   | 2          | qt/a            | V5-6         | C         |        |        |       |     |     |       |     |
| 8       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V5-6         | C         |        |        |       |     |     |       |     |
| 8       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V5-6         | C         |        |        |       |     |     |       |     |
| 9       | VALOR XLT        | 40.3      | WG        |        |           | 1.5        | oz/a            | PRE          | A         | 11.1 a | 53.4 a | 47 a  | 0 a | 0 a | 0 e   | 0 b |
| 9       | VALOR SX         | 51        | WG        | 0.028  | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 9       | CLASSIC          | 25        | WG        | 0.0097 | lb ai/a   |            |                 | PRE          | A         |        |        |       |     |     |       |     |
| 9       | DUAL II MAGNUM   | 7.64      | EC        | 1.25   | lb ai/a   | 1.31       | pt/a            | V2-3         | B         |        |        |       |     |     |       |     |
| 9       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V2-3         | B         |        |        |       |     |     |       |     |
| 9       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V2-3         | B         |        |        |       |     |     |       |     |

## Encapsulated Acetochlor in Soybean.

Trial ID: 09-DeSoto-Aceto      Location: De Soto, IL

Pest Code  
Crop Code  
Rating Date  
Rating Data Type  
Rating Unit  
Rating Timing  
Trt-Eval Interval

|                                          |                                        |                                    |                                                             |                                                            |                                                              |                                                   |
|------------------------------------------|----------------------------------------|------------------------------------|-------------------------------------------------------------|------------------------------------------------------------|--------------------------------------------------------------|---------------------------------------------------|
| GLXMA<br>11-06-09<br>Moisture<br>Percent | GLXMA<br>11-06-09<br>Test wt.<br>lb/bu | GLXMA<br>11-06-09<br>Yield<br>bu/A | GLXMA<br>06-17-09<br>Injury<br>Percent<br>25 DA-A<br>0 DA-B | GLXMA<br>06-26-09<br>Injury<br>Percent<br>9 DA-B<br>0 DA-C | GLXMA<br>07-08-09<br>Injury<br>Percent<br>12 DA-C<br>21 DA-B | GLXMA<br>07-17-09<br>Injury<br>Percent<br>21 DA-C |
|------------------------------------------|----------------------------------------|------------------------------------|-------------------------------------------------------------|------------------------------------------------------------|--------------------------------------------------------------|---------------------------------------------------|

| Trt No.           | Treatment Name   | Form Conc | Form Type | Rate Rate | Rate Unit | Other Rate | Other Rate Unit | Growth Stage | Appl Code |        |   |        |   |        |    |       |
|-------------------|------------------|-----------|-----------|-----------|-----------|------------|-----------------|--------------|-----------|--------|---|--------|---|--------|----|-------|
| 10                | VALOR XLT        | 40.3      | WG        |           |           | 3          | oz/a            | PRE          | A         | 11.2   | a | 53.5   | a | 46     | ab | 0 a   |
| 10                | VALOR SX         | 51        | WG        | 0.056     | lb ai/a   |            |                 | PRE          | A         |        |   |        |   |        |    | 0 a   |
| 10                | CLASSIC          | 25        | WG        | 0.0194    | lb ai/a   |            |                 | PRE          | A         |        |   |        |   |        |    | 0 e   |
| 10                | DUAL II MAGNUM   | 7.64      | EC        | 1.25      | lb ai/a   | 1.31       | pt/a            | V2-3         | B         |        |   |        |   |        |    | 0 b   |
| 10                | ROUNDUP POWERMAX | 4.5       | SL        | 0.75      | lb ae/a   | 21.3       | fl oz/a         | V2-3         | B         |        |   |        |   |        |    |       |
| 10                | N-PAK AMS        | 100       | SL        | 5         | % v/v     | 5          | % v/v           | V2-3         | B         |        |   |        |   |        |    |       |
| 11                | VALOR XLT        | 40.3      | WG        |           |           | 3          | oz/a            | PRE          | A         | 11.5   | a | 53.5   | a | 48     | a  | 0 a   |
| 11                | VALOR SX         | 51        | WG        | 0.056     | lb ai/a   |            |                 | PRE          | A         |        |   |        |   |        |    | 0 a   |
| 11                | CLASSIC          | 25        | WG        | 0.0194    | lb ai/a   |            |                 | PRE          | A         |        |   |        |   |        |    | 29 a  |
| 11                | COBRA            | 2         | EC        | 0.195     | lb ai/a   | 12.5       | fl oz/a         | V5-6         | C         |        |   |        |   |        |    | 4 a   |
| 11                | PRIME OIL COC    | 100       | SL        | 0.25      | % v/v     | 0.25       | % v/v           | V5-6         | C         |        |   |        |   |        |    |       |
| 12                | VALOR XLT        | 40.3      | WG        |           |           | 3          | oz/a            | PRE          | A         | 11.7   | a | 54.2   | a | 46     | ab | 0 a   |
| 12                | VALOR SX         | 51        | WG        | 0.056     | lb ai/a   |            |                 | PRE          | A         |        |   |        |   |        |    | 0 a   |
| 12                | CLASSIC          | 25        | WG        | 0.0194    | lb ai/a   |            |                 | PRE          | A         |        |   |        |   |        |    | 29 a  |
| 12                | COBRA            | 2         | EC        | 0.195     | lb ai/a   | 12.5       | fl oz/a         | V5-6         | C         |        |   |        |   |        |    | 5 a   |
| 12                | PRIME OIL COC    | 100       | SL        | 0.25      | % v/v     | 0.25       | % v/v           | V5-6         | C         |        |   |        |   |        |    |       |
| 12                | MON 63410        | 3         | CS        | 1.125     | lb ai/a   | 1.5        | qt/a            | V5-6         | C         |        |   |        |   |        |    |       |
| LSD (P=.05)       |                  |           |           |           |           |            |                 |              |           | 0.81   |   | 2.12   |   | 5.7    |    | 0.0   |
| Replicate F       |                  |           |           |           |           |            |                 |              |           | 0.678  |   | 2.204  |   | 1.107  |    | 0.000 |
| Replicate Prob(F) |                  |           |           |           |           |            |                 |              |           | 0.5721 |   | 0.1074 |   | 0.3610 |    | 0.000 |
| Treatment F       |                  |           |           |           |           |            |                 |              |           | 0.714  |   | 0.551  |   | 1.639  |    | 0.000 |
| Treatment Prob(F) |                  |           |           |           |           |            |                 |              |           | 0.7161 |   | 0.8525 |   | 0.1362 |    | 0.000 |

Means followed by same letter do not significantly differ (P=.05, LSD)

## Encapsulated Acetochlor in Soybean.

Trial ID: 09-DeSoto-Aceto Location: De Soto, IL

|                   |          |          |          |          |
|-------------------|----------|----------|----------|----------|
| Pest Code         | AMATA-HR | AMATA-HR | AMATA-HR | AMATA-HR |
| Crop Code         |          |          |          |          |
| Rating Date       | 06-17-09 | 06-26-09 | 07-08-09 | 07-17-09 |
| Rating Data Type  | Control  | Control  | Control  | Control  |
| Rating Unit       | Percent  | Percent  | Percent  | Percent  |
| Rating Timing     | 25 DA-A  | 9 DA-B   | 12 DA-C  |          |
| Trt-Eval Interval | 0 DA-B   | 0 DA-C   | 21 DA-B  | 21 DA-C  |

| Trt No. | Treatment Name   | Form Conc | Form Type | Rate   | Rate Unit | Other Rate | Other Rate Unit | Growth Stage | Appl Code |      |       |       |       |
|---------|------------------|-----------|-----------|--------|-----------|------------|-----------------|--------------|-----------|------|-------|-------|-------|
| 1       | VALOR XLT        | 40.3      | WG        |        |           | 1.5        | oz/a            | PRE          | A         | 99 a | 98 ab | 98 ab | 98 ab |
| 1       | VALOR SX         | 51        | WG        | 0.028  | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 1       | CLASSIC          | 25        | WG        | 0.0097 | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 1       | MON 63410        | 3         | CS        | 1.125  | lb ai/a   | 1.5        | qt/a            | V2-3         | B         |      |       |       |       |
| 1       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V2-3         | B         |      |       |       |       |
| 1       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V2-3         | B         |      |       |       |       |
| 2       | VALOR XLT        | 40.3      | WG        |        |           | 3          | oz/a            | PRE          | A         | 99 a | 99 a  | 99 a  | 99 a  |
| 2       | VALOR SX         | 51        | WG        | 0.056  | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 2       | CLASSIC          | 25        | WG        | 0.0194 | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 2       | MON 63410        | 3         | CS        | 1.125  | lb ai/a   | 1.5        | qt/a            | V2-3         | B         |      |       |       |       |
| 2       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V2-3         | B         |      |       |       |       |
| 2       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V2-3         | B         |      |       |       |       |
| 3       | VALOR XLT        | 40.3      | WG        |        |           | 1.5        | oz/a            | PRE          | A         | 99 a | 98 b  | 95 ab | 95 ab |
| 3       | VALOR SX         | 51        | WG        | 0.028  | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 3       | CLASSIC          | 25        | WG        | 0.0097 | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 3       | MON 63410        | 3         | CS        | 1.125  | lb ai/a   | 1.5        | qt/a            | V5-6         | C         |      |       |       |       |
| 3       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V5-6         | C         |      |       |       |       |
| 3       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V5-6         | C         |      |       |       |       |
| 4       | VALOR XLT        | 40.3      | WG        |        |           | 3          | oz/a            | PRE          | A         | 99 a | 98 ab | 96 ab | 96 ab |
| 4       | VALOR SX         | 51        | WG        | 0.056  | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 4       | CLASSIC          | 25        | WG        | 0.0194 | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 4       | MON 63410        | 3         | CS        | 1.125  | lb ai/a   | 1.5        | qt/a            | V5-6         | C         |      |       |       |       |
| 4       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V5-6         | C         |      |       |       |       |
| 4       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V5-6         | C         |      |       |       |       |
| 5       | VALOR XLT        | 40.3      | WG        |        |           | 1.5        | oz/a            | PRE          | A         | 99 a | 98 ab | 99 a  | 99 a  |
| 5       | VALOR SX         | 51        | WG        | 0.028  | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 5       | CLASSIC          | 25        | WG        | 0.0097 | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 5       | MON 63410        | 3         | CS        | 1.125  | lb ai/a   | 1.5        | qt/a            | V2-3         | B         |      |       |       |       |
| 5       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V2-3         | B         |      |       |       |       |
| 5       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V2-3         | B         |      |       |       |       |
| 5       | MON 63410        | 3         | CS        | 1.125  | lb ai/a   | 1.5        | qt/a            | V5-6         | C         |      |       |       |       |
| 5       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V5-6         | C         |      |       |       |       |
| 5       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V5-6         | C         |      |       |       |       |
| 6       | VALOR XLT        | 40.3      | WG        |        |           | 3          | oz/a            | PRE          | A         | 99 a | 99 a  | 99 a  | 99 a  |
| 6       | VALOR SX         | 51        | WG        | 0.056  | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 6       | CLASSIC          | 25        | WG        | 0.0194 | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 6       | MON 63410        | 3         | CS        | 1.125  | lb ai/a   | 1.5        | qt/a            | V2-3         | B         |      |       |       |       |
| 6       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V2-3         | B         |      |       |       |       |
| 6       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V2-3         | B         |      |       |       |       |
| 6       | MON 63410        | 3         | CS        | 1.125  | lb ai/a   | 1.5        | qt/a            | V5-6         | C         |      |       |       |       |
| 6       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V5-6         | C         |      |       |       |       |
| 6       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V5-6         | C         |      |       |       |       |
| 7       | VALOR XLT        | 40.3      | WG        |        |           | 1.5        | oz/a            | PRE          | A         | 99 a | 98 ab | 98 ab | 97 ab |
| 7       | VALOR SX         | 51        | WG        | 0.028  | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 7       | CLASSIC          | 25        | WG        | 0.0097 | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 7       | MON 63410        | 3         | CS        | 1.5    | lb ai/a   | 2          | qt/a            | V2-3         | B         |      |       |       |       |
| 7       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V2-3         | B         |      |       |       |       |
| 7       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V2-3         | B         |      |       |       |       |
| 8       | VALOR XLT        | 40.3      | WG        |        |           | 3          | oz/a            | PRE          | A         | 99 a | 99 a  | 96 ab | 96 ab |
| 8       | VALOR SX         | 51        | WG        | 0.056  | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 8       | CLASSIC          | 25        | WG        | 0.0194 | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 8       | MON 63410        | 3         | CS        | 1.5    | lb ai/a   | 2          | qt/a            | V5-6         | C         |      |       |       |       |
| 8       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V5-6         | C         |      |       |       |       |
| 8       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V5-6         | C         |      |       |       |       |
| 9       | VALOR XLT        | 40.3      | WG        |        |           | 1.5        | oz/a            | PRE          | A         | 99 a | 98 ab | 95 b  | 94 b  |
| 9       | VALOR SX         | 51        | WG        | 0.028  | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 9       | CLASSIC          | 25        | WG        | 0.0097 | lb ai/a   |            |                 | PRE          | A         |      |       |       |       |
| 9       | DUAL II MAGNUM   | 7.64      | EC        | 1.25   | lb ai/a   | 1.31       | pt/a            | V2-3         | B         |      |       |       |       |
| 9       | ROUNDUP POWERMAX | 4.5       | SL        | 0.75   | lb ae/a   | 21.3       | fl oz/a         | V2-3         | B         |      |       |       |       |
| 9       | N-PAK AMS        | 100       | SL        | 5      | % v/v     | 5          | % v/v           | V2-3         | B         |      |       |       |       |

## Encapsulated Acetochlor in Soybean.

Trial ID: 09-DeSoto-Aceto      Location: De Soto, IL

|                   |  |          |          |          |          |
|-------------------|--|----------|----------|----------|----------|
| Pest Code         |  | AMATA-HR | AMATA-HR | AMATA-HR | AMATA-HR |
| Crop Code         |  |          |          |          |          |
| Rating Date       |  | 06-17-09 | 06-26-09 | 07-08-09 | 07-17-09 |
| Rating Data Type  |  | Control  | Control  | Control  | Control  |
| Rating Unit       |  | Percent  | Percent  | Percent  | Percent  |
| Rating Timing     |  | 25 DA-A  | 9 DA-B   | 12 DA-C  |          |
| Trt-Eval Interval |  | 0 DA-B   | 0 DA-C   | 21 DA-B  | 21 DA-C  |

| Trt No.           | Treatment Name   | Form Conc | Form Type | Rate Rate | Rate Unit | Other Rate | Other Rate Unit | Growth Stage | Appl Code |        |        |        |        |
|-------------------|------------------|-----------|-----------|-----------|-----------|------------|-----------------|--------------|-----------|--------|--------|--------|--------|
| 10                | VALOR XLT        | 40.3      | WG        |           |           |            | 3 oz/a          | PRE          | A         | 99 a   | 99 a   | 99 ab  | 98 ab  |
| 10                | VALOR SX         | 51        | WG        | 0.056     | lb ai/a   |            |                 | PRE          | A         |        |        |        |        |
| 10                | CLASSIC          | 25        | WG        | 0.0194    | lb ai/a   |            |                 | PRE          | A         |        |        |        |        |
| 10                | DUAL II MAGNUM   | 7.64      | EC        | 1.25      | lb ai/a   | 1.31       | pt/a            | V2-3         | B         |        |        |        |        |
| 10                | ROUNDUP POWERMAX | 4.5       | SL        | 0.75      | lb ae/a   | 21.3       | fl oz/a         | V2-3         | B         |        |        |        |        |
| 10                | N-PAK AMS        | 100       | SL        | 5         | % v/v     | 5          | % v/v           | V2-3         | B         |        |        |        |        |
| 11                | VALOR XLT        | 40.3      | WG        |           |           |            | 3 oz/a          | PRE          | A         | 99 a   | 99 a   | 99 a   | 99 a   |
| 11                | VALOR SX         | 51        | WG        | 0.056     | lb ai/a   |            |                 | PRE          | A         |        |        |        |        |
| 11                | CLASSIC          | 25        | WG        | 0.0194    | lb ai/a   |            |                 | PRE          | A         |        |        |        |        |
| 11                | COBRA            | 2         | EC        | 0.195     | lb ai/a   | 12.5       | fl oz/a         | V5-6         | C         |        |        |        |        |
| 11                | PRIME OIL COC    | 100       | SL        | 0.25      | % v/v     | 0.25       | % v/v           | V5-6         | C         |        |        |        |        |
| 12                | VALOR XLT        | 40.3      | WG        |           |           |            | 3 oz/a          | PRE          | A         | 99 a   | 98 ab  | 98 ab  | 98 ab  |
| 12                | VALOR SX         | 51        | WG        | 0.056     | lb ai/a   |            |                 | PRE          | A         |        |        |        |        |
| 12                | CLASSIC          | 25        | WG        | 0.0194    | lb ai/a   |            |                 | PRE          | A         |        |        |        |        |
| 12                | COBRA            | 2         | EC        | 0.195     | lb ai/a   | 12.5       | fl oz/a         | V5-6         | C         |        |        |        |        |
| 12                | PRIME OIL COC    | 100       | SL        | 0.25      | % v/v     | 0.25       | % v/v           | V5-6         | C         |        |        |        |        |
| 12                | MON 63410        | 3         | CS        | 1.125     | lb ai/a   | 1.5        | qt/a            | V5-6         | C         |        |        |        |        |
| LSD (P=.05)       |                  |           |           |           |           |            |                 |              |           | 0.8    | 1.0    | 4.5    | 4.7    |
| Replicate F       |                  |           |           |           |           |            |                 |              |           | 1.833  | 0.268  | 0.600  | 1.032  |
| Replicate Prob(F) |                  |           |           |           |           |            |                 |              |           | 0.1603 | 0.8478 | 0.6193 | 0.3911 |
| Treatment F       |                  |           |           |           |           |            |                 |              |           | 0.722  | 1.712  | 1.123  | 1.220  |
| Treatment Prob(F) |                  |           |           |           |           |            |                 |              |           | 0.7094 | 0.1140 | 0.3756 | 0.3127 |

Means followed by same letter do not significantly differ (P=.05, LSD)

## Trial Comments

1. Protocol: Monsanto (04-08).
2. Ratings: CI/WC at 21 da B (or prior to C) and at 21 da C.
3. Yield, destroy grain.
4. Blanket burndown application of Roundup PowerMax (32 fl oz/A) + 2,4-D (1 pt/A) + AMS (1% w/w) was applied on 4-26-09.
5. AMATA-HR = Herbicide-resistant waterhemp (glyphosate).
6. Harvested 11-6-09, (2) 30 inch rows by 26.7 ft.