

ACKNOWLEDGEMENTS

PURPOSE OF THIS BOOKLET

This booklet is provided as a guide to the 2006 processing vegetable weed control research control plots. The experiments outlined in this booklet are located at University of Guelph, Ridgetown Campus. We appreciate the funding, cooperation and assistance provided by the Ontario Processing Vegetable Growers, vegetable growers, and processing companies. As well, we would like to thank the chemical companies and their representatives, ag-extension personnel, and other research scientists for their ideas, plant material and herbicide samples that were used in these trials. Funding for the 2006 research program was provided by:

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We trust that the information provided by this research will further the science of weed control by assisting with the registration of herbicides through the minor use system. We also hope this information will be of use in the extension of proper herbicide recommendations, thereby enabling growers to achieve consistent, broad spectrum weed control with a minimum of crop damage.

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**2006
RIDGETOWN
WEATHER DATA**

RAINFALL IN MM.

| DATE | APRIL | MAY | JUNE | JULY | AUGUST | SEPT. | OCT. |
|---------------------|-------|------|------|------|--------|-------|-------|
| 1 | 0.2 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.4 |
| 2 | 0.2 | 1.4 | 0.0 | 0.0 | 0.0 | 4.2 | 0.0 |
| 3 | 5.4 | 1.6 | 14.2 | 0.2 | 11.8 | 0.2 | 6.8 |
| 4 | 0.0 | 0.0 | 4.6 | 3.4 | 0.2 | 0.0 | 24.8 |
| 5 | 3.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6 | 3.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 |
| 7 | 10.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.2 | 0.0 |
| 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 16.4 | 0.2 |
| 10 | 0.0 | 2.0 | 0.0 | 5.4 | 0.0 | 0.0 | 0.0 |
| 11 | 0.0 | 19.6 | 0.0 | 12.0 | 0.0 | 0.0 | 16.0 |
| 12 | 9.4 | 5.2 | 0.0 | 25.8 | 0.0 | 27.0 | 0.2 |
| 13 | 0.6 | 0.6 | 0.0 | 0.0 | 0.0 | 8.0 | 0.0 |
| 14 | 9.4 | 0.6 | 0.0 | 1.2 | 0.0 | 0.2 | 0.0 |
| 15 | 0.0 | 2.6 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| 16 | 0.0 | 8.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 |
| 17 | 0.0 | 10.6 | 0.0 | 0.0 | 0.0 | 0.2 | 28.8 |
| 18 | 0.0 | 13.0 | 0.0 | 0.4 | 0.0 | 24.6 | 0.0 |
| 19 | 0.0 | 3.2 | 7.6 | 0.0 | 7.0 | 0.4 | 0.2 |
| 20 | 0.0 | 0.2 | 0.0 | 0.0 | 0.4 | 0.0 | 1.4 |
| 21 | 2.0 | 6.6 | 22.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| 22 | 0.4 | 0.0 | 2.0 | 0.0 | 0.0 | 1.4 | 16.8 |
| 23 | 17.2 | 0.0 | 0.0 | 0.2 | 0.0 | 5.4 | 0.0 |
| 24 | 0.0 | 0.0 | 0.0 | 0.0 | 25.2 | 2.2 | 0.0 |
| 25 | 0.0 | 0.0 | 0.0 | 3.2 | 0.8 | 0.2 | 0.0 |
| 26 | 0.2 | 5.0 | 0.0 | 19.0 | 0.0 | 0.0 | 0.0 |
| 27 | 0.0 | 0.0 | 2.2 | 2.8 | 18.4 | 12.2 | 14.2 |
| 28 | 0.0 | 0.0 | 0.0 | 9.0 | 10.0 | 0.8 | 8.2 |
| 29 | 0.0 | 0.0 | 1.0 | 0.0 | 1.8 | 0.0 | 0.0 |
| 30 | 0.0 | 0.0 | 0.0 | 15.4 | 0.0 | 6.2 | 0.0 |
| 31 | | 3.6 | | 0.0 | 0.0 | | 0.2 |
| TOTAL | 62.6 | 83.8 | 55.0 | 98.2 | 75.6 | 110.0 | 118.4 |
| 30 YEAR AVG. | 75.6 | 80.9 | 79.5 | 87.8 | 97.4 | 90.4 | 58.4 |

TEMPERATURE (C)

| | | | | | | | |
|-----------------|------|------|------|------|------|------|------|
| MEAN MAX | 13.8 | 19.1 | 22.4 | 25.0 | 23.4 | 19.6 | 13.2 |
| MEAN MIN | 2.9 | 9.4 | 14.2 | 18.8 | 16.2 | 10.9 | 4.3 |
| MEAN | 8.4 | 14.3 | 18.3 | 21.9 | 19.8 | 15.3 | 8.8 |

TEMPERATURE, 30 YEAR AVERAGE (C)

| | | | | | | | |
|-----------------|------|------|------|------|------|------|------|
| MEAN MAX | 12.2 | 19.0 | 24.2 | 27.0 | 25.8 | 22.0 | 14.9 |
| MEAN MIN | 2.0 | 8.0 | 13.2 | 15.8 | 15.2 | 11.6 | 5.9 |
| MEAN | 7.1 | 13.5 | 18.7 | 21.4 | 20.5 | 16.8 | 10.4 |

**2006
EXETER
WEATHER DATA**

| RAINFALL IN MM. | | | | | | | |
|------------------------|--------------|------------|-------------|-------------|---------------|--------------|-------------|
| DATE | APRIL | MAY | JUNE | JULY | AUGUST | SEPT. | OCT. |
| 1 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 |
| 2 | 0. | 0.0 | 0.0 | 0.0 | 44.4 | 9.4 | 6.4 |
| 3 | 9.8 | 0.0 | 18.0 | 0.0 | 22.8 | 0.0 | 15.6 |
| 4 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 13.8 |
| 5 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6 | 2.6 | 0.0 | 0.0 | 0.0 | 0.0 | 2.6 | 0.0 |
| 7 | 14.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.8 | 0.0 |
| 9 | 0.0 | 0.0 | 0.0 | 17.6 | 0.0 | 0.0 | 0.0 |
| 10 | 0.0 | 11.6 | 0.0 | 0.0 | 0.0 | 0.0 | 12.6 |
| 11 | 2.2 | 1.6 | 0.0 | 13.2 | 0.0 | 1.0 | 16.6 |
| 12 | 15.0 | 1.6 | 0.0 | 0.0 | 0.0 | 4.8 | 3.6 |
| 13 | 1.8 | 0.8 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 14 | 0.0 | 0.0 | 0.0 | 3.6 | 9.8 | 0.0 | 0.0 |
| 15 | 0.0 | 4.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| 16 | 0.0 | 3.2 | 0.0 | 0.0 | 0.0 | 0.0 | 13.4 |
| 17 | 0.0 | 12.0 | 0.0 | 1.6 | 0.0 | 0.0 | 12.2 |
| 18 | 0. | 5.0 | 1.4 | 0.0 | 0.0 | 14.2 | 3.8 |
| 19 | 0.0 | 2.8 | 3.6 | 0.0 | 7.2 | 2.8 | 2.0 |
| 20 | 0.0 | 5.8 | 0.0 | 0.0 | 0.0 | 3.8 | 0.0 |
| 21 | 3.6 | 0.6 | 3.0 | 0.0 | 0.0 | 0.0 | 4.2 |
| 22 | 10.0 | 0.6 | 0.0 | 0.0 | 0.0 | 11.0 | 14.0 |
| 23 | 1.0 | 0.0 | 0.0 | 0.8 | 0.0 | 7.4 | 8.0 |
| 24 | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 | 2.6 | 3.6 |
| 25 | 0.0 | 1.0 | 0.0 | 8.0 | 13.8 | 3.8 | 0.4 |
| 26 | 0.0 | 2.6 | 3.6 | 27.0 | 10.8 | 0.0 | 0.0 |
| 27 | 0.0 | 0.0 | 0.0 | 6.4 | 0.4 | 3.4 | 19.6 |
| 28 | 0.0 | 0.0 | 7.4 | 1.6 | 0.8 | 2.6 | 8.4 |
| 29 | 0.0 | 0.0 | 3.4 | 1.6 | 0.0 | 4.0 | 0.0 |
| 30 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 7.2 | 1.0 |
| 31 | | 1.2 | | 0.0 | 0.0 | | 0.6 |
| TOTAL | 68.4 | 54.4 | 40.6 | 83.8 | 110.0 | 83.4 | 159.8 |
| 30 YEAR AVG. | 77.6 | 80.4 | 76.6 | 82.8 | 79.8 | 111.4 | 86.8 |

TEMPERATURE (C)

| | | | | | | | |
|-----------------|------|------|------|------|------|------|------|
| MEAN MAX | 13.8 | 19.3 | 24.6 | 27.5 | 25.5 | 19.4 | 12.0 |
| MEAN MIN | 2.7 | 9.3 | 13.5 | 16.9 | 16.1 | 11.3 | 4.3 |
| MEAN | 8.2 | 14.3 | 19.0 | 22.2 | 20.8 | 15.4 | 8.2 |

TEMPERATURE, 30 YEAR AVERAGE (C)

| | | | | | | | |
|-----------------|------|------|------|------|------|------|------|
| MEAN MAX | 11.4 | 18.7 | 23.9 | 26.0 | 25.1 | 21.1 | 13.8 |
| MEAN MIN | 1.4 | 7.0 | 12.0 | 14.7 | 13.8 | 10.0 | 4.4 |
| MEAN | 6.4 | 12.9 | 18.0 | 20.4 | 19.4 | 15.5 | 9.1 |

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HERBICIDE EFFICACY AND TOLERANCE IN BLUEBERRY

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: BL06T1

CROP: VACMY, BLUEBERRY, HIGHBUSH (BLUE CROP). Planted: Apr-20-81, 2150 PLANTS/HA, 20 CM Deep, 3 M Row Width. Planting Method: TRANSPLANT. Emerged On: Apr-20-81.

FIELD Site. Expt.Design: RANDOMIZED COMPLETE BLOCK. Reps:4. Plot Size:2 M x 40 M. Expt.Location: PARKS BLUEBERRIES.

Site Description: Soil Texture: SANDY LOAM. %OM: 4.9 %Sand: 75 %silt: 15 %Clay: 10 pH: 6.4 CEC: 15.

| APPLICATION DESCRIPTION | | STAGE AT APPLICATION | |
|-------------------------|-------------|----------------------|----------------------|
| Application: | A | B | Application: A B |
| Date | : Apr-21-06 | May-05-06 | Crop 1 VACMY |
| Time of Day | : 7:15 AM | 7:30 AM | Height : 1.8 M 1.8 M |
| Method | : CO2 SPRAY | CO2 SPRAY | |
| Timing | : PRE | POST | Weed 1 STEME 14 LF |
| Placement | : SOIL | SOIL | Stg.Scale: 6 CM |
| Air Temp. | : 13.9 C | 12.9 C | Density : 0.5 SQ.M. |
| % Humidity | : 64 | 38 | Weed 2 AGRRE 3-8 LF |
| Wind Speed | : 2.3 KPH | 1.9 KPH | Stg.Scale: 8-16 CM |
| Dew Present | : Y | Y | Density : 7 SQ.M. |
| Soil Moist.: | MOIST | MOIST | |
| Cloud Cover: | 100% | 5% | |
| Equipment | : CO2 SPRAY | CO2 SPRAY | |
| Pressure | : 207 kPa | 207 kPa | |
| Nozzle Type: | AIR INDUC | AIR INDUC | |
| Nozzle Size: | ULD120-02 | ULD120-02 | |
| Noz.Spacing: | 50 CM | 50 CM | |
| Boom Length: | 1.0 M | 1.0 M | |
| Boom Height: | 50 CM | 50 CM | |
| Carrier | : WATER | WATER | |
| Appl.Volume: | 200 L/HA | 200 L/HA | |
| Propellant | : CO2 | CO2 | |

| | VACMY | VACMY | VACMY | VACMY | VACMY | VACMY |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | VACMY | VACMY | VACMY | VACMY | VACMY | VACMY |
| Part Rated | 1-7 | 1-7 | 1-7 | 8-11 | 8-11 | 8-11 |
| Rating Data Type | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY |
| Rating Unit | % | % | % | % | % | % |
| Rating Date | Apr-28-06 | May-05-06 | May-18-06 | May-12-06 | May-18-06 | Jun-02-06 |
| Crop Stage | BUDBURST | EPINK BD | 85%BLOOM | 50%BLOOM | 85%BLOOM | BERRY |
| Crop Stage Scale | 1.3-1.5M | 1.3-1.5M | 1.3-1.5M | 1.3-1.5M | 1.3-1.5M | 1.3-1.5M |
| Trt-Eval Interval | 7 DAT-A | 14 DAT-A | 28 DAT-A | 7 DAT-B | 14 DAT-B | 28 DAT-B |

| Trt No. | Treatment Name | Rate | Unit | | | | | | |
|--------------------|--|------|--------|-----|-----|-----|-----|-----|-----|
| 1 | untreated check | 0 | | a 0 | a 0 | a 0 | a 0 | a 0 | a |
| 2 | flumioxazin | 70 | G A/HA | 0 | a 0 | a | | | |
| 3 | flumioxazin | 140 | G A/HA | 0 | a 0 | a | | | |
| 4 | sulfentrazone | 210 | G A/HA | 0 | a 0 | a | | | |
| 5 | sulfentrazone | 420 | G A/HA | 0 | a 0 | a | | | |
| 6 | mesotrione | 140 | G A/HA | 0 | a 0 | a | | | |
| 7 | mesotrione | 280 | G A/HA | 0 | a 0 | a | | | |
| 8 | thifensulfuron-methyl/tribenuron-methyl Agral 90 | 15 | G A/HA | | | 0 | a 0 | a 0 | a |
| | | 0.2 | % V/V | | | | | | |
| 9 | thifensulfuron-methyl/tribenuron-methyl Agral 90 | 30 | G A/HA | | | 0 | a 0 | a 0 | a |
| | | 0.4 | % V/V | | | | | | |
| 10 | bromoxynil | 280 | G A/HA | | | 0 | a 0 | a 0 | a |
| 11 | bromoxynil | 560 | G A/HA | | | 0 | a 0 | a 0 | a |
| LSD (P=.05) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Standard Deviation | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| CV | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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

HERBICIDE EFFICACY AND TOLERANCE IN BLUEBERRY

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: BL06T1

| Trt No. | Treatment Name | Rate | Unit | Yield | Yield | Yield | Yield | Yield | Yield | Yield | Yield | Yield | | | |
|--------------------|---|------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|-------|----|
| 1 | untreated check | | | 3.3 | bc | 4.0 | b | 7.3 | b | 1.5 | bc | 1.8 | b | 3.3 | b |
| 2 | flumioxazin | 70 | G A/HA | 4.4 | ab | 5.5 | ab | 9.8 | ab | 1.9 | ab | 2.4 | ab | 4.4 | ab |
| 3 | flumioxazin | 140 | G A/HA | 2.9 | c | 4.1 | b | 7.0 | b | 1.3 | c | 1.8 | b | 3.1 | b |
| 4 | sulfentrazone | 210 | G A/HA | 4.6 | a | 4.5 | b | 9.1 | ab | 2.0 | a | 2.0 | b | 4.1 | ab |
| 5 | sulfentrazone | 420 | G A/HA | 3.9 | abc | 5.2 | ab | 9.1 | ab | 1.8 | abc | 2.3 | ab | 4.1 | ab |
| 6 | mesotrione | 140 | G A/HA | 3.8 | abc | 4.9 | ab | 8.8 | ab | 1.7 | abc | 2.2 | ab | 3.9 | ab |
| 7 | mesotrione | 280 | G A/HA | 3.7 | abc | 5.8 | ab | 9.5 | ab | 1.7 | abc | 2.6 | ab | 4.3 | ab |
| 8 | thifensulfuron-methyl/tribenuron-methyl Agral 90 | 15 | G A/HA | 3.8 | abc | 4.7 | ab | 8.4 | ab | 1.7 | abc | 2.1 | ab | 3.8 | ab |
| | | 0.2 | % V/V | | | | | | | | | | | | |
| 9 | thifensulfuron-methyl/tribenuron-methyl Agral 90 | 30 | G A/HA | 3.7 | abc | 4.8 | ab | 8.5 | ab | 1.6 | abc | 2.2 | ab | 3.8 | ab |
| | | 0.4 | % V/V | | | | | | | | | | | | |
| 10 | bromoxynil | 280 | G A/HA | 4.5 | ab | 6.8 | a | 11.3 | a | 2.0 | ab | 3.0 | a | 5.1 | a |
| 11 | bromoxynil | 560 | G A/HA | 3.4 | abc | 4.8 | ab | 8.3 | b | 1.5 | abc | 2.2 | ab | 3.7 | b |
| LSD (P=.05) | | | | 1.23 | | 2.13 | | 3.03 | | 0.55 | | 0.95 | | 1.35 | |
| Standard Deviation | | | | 0.85 | | 1.48 | | 2.10 | | 0.38 | | 0.66 | | 0.94 | |
| CV | | | | 22.34 | | 29.48 | | 23.79 | | 22.34 | | 29.48 | | 23.79 | |

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

Trial Comments

CONCLUSIONS: Sulfentrazone and mesotrione have demonstrated excellent tolerance in blueberry in two years of field work. Mesotrione is a useful broadleaf herbicide that has some activity on crabgrass. Additional studies should be conducted to determine if other blueberry varieties are equally as tolerant as Blue Crop, and whether mesotrione can be used at later timings. We should continue to work toward registration of mesotrione as a preemergence herbicide in blueberries. Sulfentrazone may have potential for use in blueberry, but it is not currently registered in Canada.

Though we did not observe visual injury in the thifensulfuron-methyl/tribenuron-methyl or bromoxynil applications, additional work should be done to determine the tolerance of blueberry to later postemergence timing of bromoxynil. In 2005, thifensulfuron-methyl/tribenuron-methyl caused significant visual injury and delayed maturity when it was sprayed over top of plants early in their development (ie. At bud swell), and in the late timing trial conducted on June 5th, 2006, it caused severe mortality of young shoots growing from the base of the plants.

TOLERANCE OF NEW BLUEBERRY SHOOTS TO QUIZALOFOP, FENOXAPROP, AND THIFENSULFURON/TRIBENURON

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: BL06T2

CROP: VACMY, BLUEBERRY (BLUE CROP). Planted: Apr-20-81, 2150 PLANTS/HA, 20 CM Deep, 3 M Row Width.
 Planting Method: TRANSPLANT. Emerged On: Apr-20-81.
 FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 1. Plot Size: 2 M x 40 M.
 Expt. Location: PARKS BLUEBERRIES.

Site Description: Soil Texture: SANDY LOAM. %OM: 4.9 %Sand: 75 %silt: 15 %Clay: 10 pH: 6.4 CEC: 15.

APPLICATION DESCRIPTION

| Application: | A | B |
|--------------|-----------|-----------|
| Date | Jun-05-06 | Jun-13-06 |
| Time of Day | 9:00 AM | 8:10 AM |
| Method | CO2 SPRAY | CO2 SPRAY |
| Timing | BERRY | BERRY |
| Placement | SOIL | SOIL |
| Air Temp. | 23.0 C | 15.2 C |
| % Humidity | 32 | 72 |
| Wind Speed | 4.4 KPH | 1.8 KPH |
| Dew Present | N | Y |
| Soil Moist.: | MOIST | DRY |
| Cloud Cover | 5% | 5% |
| Equipment | CO2 SPRAY | CO2 SPRAY |
| Pressure | 207 kPa | 207 kPa |
| Nozzle Type | AIR INDUC | AIR INDUC |
| Nozzle Size | ULD120-02 | ULD120-02 |
| Noz.Spacing | 50 CM | 50 CM |
| Boom Length | 1.5 M | 1.5 M |
| Boom Height | 50 CM | 50 CM |
| Carrier | WATER | WATER |
| Appl.Volume | 200 L/HA | 200 L/HA |
| Propellant | CO2 | CO2 |

| Crop Code | VACMY | VACMY | VACMY | VACMY |
|-------------------|-----------|-----------|-----------|-----------|
| Rating Data Type | INJURY | INJURY | INJURY | INJURY |
| Rating Unit | % | % | % | % |
| Rating Date | Jun-12-06 | Jun-19-06 | Jun-26-06 | Jul-03-06 |
| Crop Stage | BERRY | BERRY | BERRY | BERRY |
| Crop Stage Scale | 1.2-1.5M | 1.2-1.5M | 1.2-1.5M | 1.2-1.5M |
| Trt-Eval Interval | 7 DAT | 14 DAT | 21 DAT | 28 DAT |

| Trt No. | Treatment Name | Rate | Unit | | | | |
|---------|------------------------------------|------|--------|---|----|----|----|
| 1 | Untreated Control | 0 | | 0 | 0 | 0 | 0 |
| 2 | quizalofop-p-ethyl Sure-mix | 144 | G A/HA | 0 | 0 | 5 | 0 |
| | | 1.0 | % V/V | | | | |
| 3 | fenoxaprop-p-ethyl | 108 | G A/HA | 0 | 0 | 3 | 0 |
| 4 | thifensulfuron/tribenuron Agral 90 | 30 | G A/HA | 5 | 10 | 15 | 15 |
| | | 0.4 | % V/V | | | | |
| 5 | mesotrione | 140 | G A/HA | 8 | 0 | 0 | . |
| | LSD (P=.05) | . | | . | . | . | . |
| | Standard Deviation | . | | . | . | . | . |
| | CV | . | | . | . | . | . |

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

Trial Comments

CONCLUSIONS: Mesotrione shows excellent tolerance when applied as a preemergence herbicide (prior to bud break) in blueberry in two years of field work. Mesotrione is a useful broadleaf herbicide that has some activity on crabgrass, and can also control weeds postemergence. Due to the temporary visual injury observed in this study, additional research should be conducted to determine if other blueberry varieties are equally as tolerant as Blue Crop, and whether mesotrione can be used at later timings.

In 2005, thifensulfuron-methyl/tribenuron-methyl caused significant visual injury and delayed maturity when it was sprayed over top of plants early in their development (ie. At bud swell), and also in this study at the late timing application on June 5th, 2006. Since thifensulfuron-methyl/tribenuron-methyl is not a preemergence herbicide and caused severe mortality of young shoots growing from the base of the plants when applied as a true postemergence spray (i.e. after weed emergence and after bud break), its use in blueberry is limited.

Quizalofop-p-ethyl is a cheap alternative to fluzafop-p-butyl for quackgrass control, and fenoxaprop-p-ethyl has good to excellent activity on crabgrass. We should begin work to register quizalofop-p-ethyl if growers feel quackgrass is a significant issue in blueberries.

EFFECT OF TIMING OF CARROTS TO S-METOLACHLOR

DAVE BILYEA, DARREN ROBINSON

Experiment ID: CA06T1

CROP: DAUCS, CARROT (FONTANA). Planted: Apr-19-06, 999999 S/H, 1 CM Deep, 38 CM Row Width.
 Planting Method: MONOSEM VACUUM PLANTER. Emerged On: May-08-06. FIELD Site.
 Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RC-M2.

Site Description: Soil Texture: LOAMY FINE SAND. %OM: 4.9 %Sand: 80.6 %Silt: 12.3 %Clay: 7.2 pH: 6.7 CEC: 7.0

APPLICATION DESCRIPTION

| Application: | A | B | C |
|--------------|-----------|-----------|-----------|
| Date | Apr-28-06 | May-17-06 | Jun-05-06 |
| Time of Day | 15:00 | 11:00 | 10:00 |
| Method | SPRAY | SPRAY | SPRAY |
| Timing | PRE | POST 1 | POST 2 |
| Placement | SOIL | FOLIAR | FOLIAR |
| Air Temp. | 14 C | 21 C | 22 C |
| % Humidity | 26 | 26 | 35 |
| Wind Speed | 8 KPH | 0 KPH | 1.2 KPH |
| Cloud Cover | 0% | 10% | 0% |
| Equipment | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY |
| Pressure | 207 | 207 | 207 |
| Nozzle Type | AIR INDUC | AIR INDUC | AIR INDUC |
| Nozzle Size | UDL120-02 | UDL120-02 | UDL120-02 |
| Noz.Spacing | 50 CM | 50 CM | 50 CM |
| Boom Length | 1.5 M | 1.5 M | 1.5 M |
| Boom Height | 50 CM | 50 CM | 50 CM |
| Carrier | WATER | WATER | WATER |
| Appl.Volume | 200 L/HA | 200 L/HA | 200 L/HA |

| Crop Code | DAUCA | DAUCA | DAUCA | DAUCA | DAUCA | DAUCA | DAUCA |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Part Rated | 1-4 | 1-4 | 1-4 | 5-7 | 5-7 | 5-7 | 8-10 |
| Rating Data Type | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY |
| Rating Unit | % | % | % | % | % | % | % |
| Rating Date | May-17-06 | May-24-06 | Jun-07-06 | May-24-06 | May-31-06 | Jun-14-06 | Jun-12-06 |
| Crop Stage | COT-2 LF | 3 LF | 4 LF | 3 LF | 3-4 LF | 7-8 LF | 7 LF |
| Trt-Eval Interval | 7 DAE | 14 DAE | 28 DAE | 7 DAA-2 | 14 DAA-2 | 28 DAA-2 | 7 DAA-3 |

| Trt No. | Treatment Name | Rate | Unit | | | | | | |
|--------------------|----------------------|------|--------|-----|-----|-----|-----|-----|-----|
| 1 | UNTREATED | | | 0 | a | 0 | a | | |
| 2 | S-METOLACHLOR/BENOXA | 1200 | G A/HA | 0 | a | 0 | a | | |
| 3 | S-METOLACHLOR/BENOXA | 1600 | G A/HA | 0 | a | 0 | a | | |
| 4 | S-METOLACHLOR/BENOXA | 3200 | G A/HA | 0 | a | 0 | a | | |
| 5 | S-METOLACHLOR/BENOXA | 1200 | G A/HA | | | 0 | a | 0 | a |
| 6 | S-METOLACHLOR/BENOXA | 1600 | G A/HA | | | 0 | a | 0 | a |
| 7 | S-METOLACHLOR/BENOXA | 3200 | G A/HA | | | 0 | a | 0 | a |
| 8 | S-METOLACHLOR/BENOXA | 1200 | G A/HA | | | | | | 0 a |
| 9 | S-METOLACHLOR/BENOXA | 1600 | G A/HA | | | | | | 0 a |
| 10 | S-METOLACHLOR/BENOXA | 3200 | G A/HA | | | | | | 0 a |
| LSD (P=.05) | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Standard Deviation | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| CV | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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

EFFECT OF TIMING OF CARROTS TO S-METOLACHLOR

DAVE BILYEYEA, DARREN ROBINSON

Experiment ID: CA06T1

| Crop Code | | DAUCA | DAUCA | DAUCA | DAUCA | DAUCA | |
|--------------------|----------------------|-----------|-----------|-----------|-------------|------------|--------|
| Part Rated | | 8-10 | 8-10 | | | | |
| Rating Data Type | | INJURY | INJURY | DRY WT | AVG LENGTH | YIELD | |
| Rating Unit | | % | % | G/M2 | CM | T/HA | |
| Rating Date | | Jun-19-06 | Jul-03-06 | Jul-10-06 | Jul-23-06 | Jul-23-06 | |
| Crop Stage | | 7-8 LF | 10-11 LF | 10-12 LF | | | |
| Trt-Eval Interval | | 14 DAA-3 | 28 DAA-3 | | 76 DAE | 76 DAE | |
| Trt No. | Treatment Name | Rate | Unit | | | | |
| 1 | UNTREATED | | | 74.40 a-d | 13.725 bc | 43.4 c | |
| 2 | S-METOLACHLOR/BENOXA | 1200 | G A/HA | 73.05 a-d | 16.525 a | 50.7 bc | |
| 3 | S-METOLACHLOR/BENOXA | 1600 | G A/HA | 82.13 a-d | 15.762 abc | 51.3 abc | |
| 4 | S-METOLACHLOR/BENOXA | 3200 | G A/HA | 89.32 a | 16.150 ab | 51.9 abc | |
| 5 | S-METOLACHLOR/BENOXA | 1200 | G A/HA | 83.20 abc | 15.075 abc | 61.1 a | |
| 6 | S-METOLACHLOR/BENOXA | 1600 | G A/HA | 85.57 ab | 15.525 abc | 57.9 ab | |
| 7 | S-METOLACHLOR/BENOXA | 3200 | G A/HA | 80.40 a-d | 13.450 c | 51.7 abc | |
| 8 | S-METOLACHLOR/BENOXA | 1200 | G A/HA 0 | a 0 | a 62.95 cd | 14.225 abc | 41.9 c |
| 9 | S-METOLACHLOR/BENOXA | 1600 | G A/HA 0 | a 0 | a 66.00 bcd | 14.400 abc | 45.1 c |
| 10 | S-METOLACHLOR/BENOXA | 3200 | G A/HA 0 | a 0 | a 60.60 d | 14.250 abc | 42.7 c |
| LSD (P=.05) | | 0.0 | 0.0 | 22.463 | 2.4745 | 10.29 | |
| Standard Deviation | | 0.0 | 0.0 | 15.481 | 1.7054 | 7.10 | |
| CV | | 0.0 | 0.0 | 20.43 | 11.44 | 14.26 | |

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

Trial Comments

CONCLUSIONS: this trial was kept weed-free to test for the effect of preemergence and postemergence applications of s-metolachlor on carrot visual injury, dry weight, carrot length and yield of 'Fontana' carrot.

Visual injury was not observed in any of the treatments. Though there was no injury observed in the trial, and no reduction in carrot length. Carrots weighed less in the three late postemergence (5-8 lf stage of carrot) s-metolachlor applications, which resulted in a reduction in yield.

S-metolachlor has been submitted as an URMULE (2003-3426) to the PMRA. Data from this and previous years' trials were submitted to support the minor use for preemergence applications of s-metolachlor in carrot.

HERBICIDE TOLERANCE IN CARROTS

DAVE BILYEA, DARREN ROBINSON

Experiment ID: CA06T2

CROP: DAUCS, CARROT (FONTANA). Planted: Apr-19-06, 999999 SEEDS/HA, 1.0 CM Deep, 38 CM Row Width.

Planting Method: BEDDED. Emerged On: May-08-06.

Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RC-M2.

Site Description: Soil Texture: LOAMY FINE SAND. %OM: 4.9 %Sand: 80.6 %Silt: 12.3 %Clay: 7.2 pH: 6.7 CEC: 7.0

APPLICATION DESCRIPTION

Application: A
 Date : Apr-28-06
 Time of Day: 15:00
 Method : SPRAY
 Timing : PRE
 Placement : SOIL
 Air Temp. : 14 C
 % Humidity : 26
 Wind Speed : 8 KPH
 Cloud Cover: 0%
 Equipment : CO2 SPRAY
 Pressure : 207
 Nozzle Type: AIR INDUC
 Nozzle Size: UDL120-02
 Noz.Spacing: 50 CM
 Boom Length: 1.5 M
 Boom Height: 50 CM
 Carrier : WATER
 Appl.Volume: 200 L/HA

| Crop Code | DAUCS | DAUCS | DAUCS | DAUCS | DAUCS | DAUCS | DAUCS | DAUCS | DAUCS |
|-----------------------|-----------|-----------|-----------|-----------|-------------|-----------|-----------|-----------|-------|
| Part Rating Data Type | INJURY | INJURY | INJURY | INJURY | STAND COUNT | DRY WT | LENGTH | YIELD | |
| Rating Unit | % | % | % | % | #/2M ROW | | CM | T/HA | |
| Rating Date | May-17-06 | May-25-06 | Jun-09-06 | Jun-21-06 | May-17-06 | Jun-09-06 | Jul-23-06 | Jul-23-06 | |
| Crop Stage | COT-2 LF | 3 LF | 4 LF | 8-10 LF | | | | | |
| Trt-Eval Interval | 7 DAE | 14 DAE | 28 DAE | 42 DAE | 7 DAE | 28 DAE | 76 DAE | 76 DAE | |

| Trt No. | Treatment Name | Rate | Unit | DAUCS | DAUCS | DAUCS | DAUCS | DAUCS | DAUCS | DAUCS | DAUCS | |
|---------|----------------|-------|--------|-------|-------|-------|-------|--------|---------|---------|--------|---|
| 1 | UNTREATED | 0 | | b 0 | b 0 | c 0 | c 22 | a 55.6 | a 15.63 | a 53.0 | a | |
| 2 | BAS 670 | 18.75 | G A/HA | 0 | b 0 | b 0 | c 0 | c 21 | a 66.8 | a 15.32 | a 56.0 | a |
| 3 | BAS 670 | 37.5 | G A/HA | 0 | b 0 | b 0 | c 0 | c 25 | a 81.2 | a 13.45 | a 52.1 | a |
| 4 | KIH 485 | 209 | G A/HA | 3 | b 19 | a 38 | b 60 | b 24 | a 26.2 | b 13.35 | a 24.8 | b |
| 5 | KIH 485 | 418 | G A/HA | 8 | a 21 | a 68 | a 93 | a 16 | a 7.8 | b 14.20 | a 6.9 | c |

| | | | | | | | | |
|--------------------|--------|--------|-------|-------|-------|-------|-------|-------|
| LSD (P=.05) | 3.7 | 15.6 | 21.9 | 13.6 | 8.9 | 25.55 | 3.121 | 8.71 |
| Standard Deviation | 2.4 | 10.1 | 14.2 | 8.9 | 5.7 | 16.58 | 2.026 | 5.65 |
| CV | 120.76 | 126.42 | 67.76 | 29.02 | 26.78 | 34.9 | 14.08 | 14.66 |

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

Trial Comments

CONCLUSIONS: This trial was kept weed-free to test for the effect of preemergence and applications of topramezone (BAS 670) and KIH-485 on carrot visual injury, dry weight, carrot length and yield of 'Fontana' carrot.

Preemergence applications of topramezone did not injure carrot, however, there was significant visual injury, reduced stand counts, plant weights and yields in the KIH-485 treatments. Future research should focus on determining tolerance of carrots to postemergence applications of topramezone, however, KIH-485 does not have potential for use in carrot.

TOLERANCE OF BROCCOLI TO PRE- AND POST-TRANSPLANT APPLICATIONS OF KIH-485 AND BAS-670

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: CO06T1

CROP: BRSOK, BROCCOLI (IRON MAN). Planted: May-10-06, 14850 PLANTS/HA, 5 CM Deep, 1.5 M Row Width.

Planting Method: TRANSPLANT. Emerged On: May-10-06.

FIELD Site. Expt.Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RCAT-C3&4.

Site Description: Soil Texture: LOAM. %OM: 5.1 %Sand: 51.0 %Silt: 28.5 %Clay: 20.5 pH: 7.1 CEC: 12.0.

| APPLICATION DESCRIPTION | | STAGE AT APPLICATION | | | |
|-------------------------|-------------|----------------------|--------------|---|-----------|
| Application: | A | B | Application: | A | B |
| Date | : May-09-06 | May-17-06 | Crop 1 BRSOK | | |
| Time of Day: | 8:15 PM | 10:00 AM | Height | : | 6.9 CM |
| Method | : CO2 SPRAY | CO2 SPRAY | Weed 1 ABUTH | | COTYLEDON |
| Timing | : PRE-TRANS | 7 DATRANS | Stg.Scale: | | 0.5 CM |
| Placement | : SOIL | FOLIAR | Density | : | 1.5 SQ.M. |
| Air Temp. | : 12.4 C | 18.2 C | | | |
| % Humidity | : 74 | 65 | | | |
| Wind Speed | : 6.9 KPH | 5.2 KPH | | | |
| Dew Present: | N | N | | | |
| Soil Moist.: | DRY | WET | | | |
| Cloud Cover: | 90% | 5% | | | |
| Equipment | : CO2 SPRAY | CO2 SPRAY | | | |
| Pressure | : 207 kPa | 207 kPa | | | |
| Nozzle Type: | AIR INDUC | AIR INDUC | | | |
| Nozzle Size: | ULD120-02 | ULD120-02 | | | |
| Noz.Spacing: | 50 CM | 50 CM | | | |
| Boom Length: | 1.5 M | 1.5 M | | | |
| Boom Height: | 50 CM | 50 CM | | | |
| Carrier | : WATER | WATER | | | |
| Appl.Volume: | 200 L/HA | 200 L/HA | | | |
| Propellant | : CO2 | CO2 | | | |

| Crop Code | BRSOK | BRSOK | BRSOK | BRSOK | BRSOK | BRSOK | BRSOK | BRSOK | BRSOK |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|--------|---------------|---------------|
| Part Rated | 1-5 | 1-5 | 1-5 | 6-9 | 6-9 | 6-9 | 6-9 | TOTAL | TOTAL |
| Rating Data Type | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | AVG. HEAD | YIELD |
| Rating Unit | % | % | % | % | % | % | % | G | T/HA |
| Rating Date | May-17-06 | May-25-06 | Jun-07-06 | May-25-06 | May-31-06 | Jun-14-06 | | | |
| Crop Stage | 3 LEAF | 3-4 LEAF | 6-7 LEAF | 3-4 LEAF | 4-6 LEAF | 7-9 LEAF | | | |
| Crop Stage Scale | 5-10 CM | 5-10 CM | 10-15 CM | 5-10 CM | 6-11 CM | 16-25 CM | | | |
| Assessed By | | | | | | | | COMBINED PICK | COMBINED PICK |
| Trt-Eval Interval | 7 DAE | 14 DAE | 28 DAE | 7 DAT | 14 DAT | 28 DAT | | | |

| Trt No. | Treatment Name | Rate | Rate Unit | | | | | | | | |
|--------------------|----------------|-------|-----------|-----|--------|--------|-------|-------|---------|--------|-------|
| 1 | untreated | | 0 | a 0 | a 0 | a 0 | c 0 | c 0 | b 582.7 | b 8.4 | a |
| 2 | KIH-485 | 209 | G A/HA | 0 | a 1 | a 1 | a | | 541.6 | bc 7.6 | ab |
| 3 | KIH-485 | 418 | G A/HA | 0 | a 0 | a 1 | a | | 568.3 | b 7.7 | ab |
| 4 | BAS-670 | 18.75 | G A/HA | 0 | a 0 | a 0 | a | | 580.5 | b 8.5 | a |
| 5 | BAS-670 | 37.5 | G A/HA | 0 | a 1 | a 0 | a | | 586.5 | ab 8.4 | a |
| 6 | KIH-485 | 209 | G A/HA | | | | 3 | bc 4 | b 473.8 | c 6.6 | b |
| 7 | KIH-485 | 418 | G A/HA | | | | 5 | b 11 | a 553.8 | bc 4.7 | c |
| 8 | BAS-670 | 18.75 | G A/HA | | | | 8 | a 5 | b 600.7 | ab 8.6 | a |
| 9 | BAS-670 | 37.5 | G A/HA | | | | 8 | a 7 | b 674.6 | a 9.3 | a |
| LSD (P=.05) | | | | 0.0 | 1.0 | 1.4 | 2.9 | 2.6 | 6.5 | 90.61 | 1.72 |
| Standard Deviation | | | | 0.0 | 0.7 | 0.9 | 1.9 | 1.7 | 4.2 | 62.08 | 1.18 |
| CV | | | | 0.0 | 329.14 | 227.07 | 42.64 | 31.58 | 49.23 | 10.82 | 15.17 |

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

TOLERANCE OF BROCCOLI TO PRE- AND POST-TRANSPLANT APPLICATIONS OF KIH-485 AND BAS-670

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: CO06T1

Crop Code BRSOK
 Part Rated TOTAL
 Rating Data Type YIELD
 Rating Unit T/AC
 Assessed By COMBINED PICK

| Trt No. | Treatment Name | Rate | Rate Unit | Yield | Significance |
|---------|----------------|-------|-----------|-------|--------------|
| 1 | untreated | | | 3.8 | a |
| 2 | KIH-485 | 209 | G A/HA | 3.4 | ab |
| 3 | KIH-485 | 418 | G A/HA | 3.4 | ab |
| 4 | BAS-670 | 18.75 | G A/HA | 3.8 | a |
| 5 | BAS-670 | 37.5 | G A/HA | 3.8 | a |
| 6 | KIH-485 | 209 | G A/HA | 3.0 | b |
| 7 | KIH-485 | 418 | G A/HA | 2.1 | c |
| 8 | BAS-670 | 18.75 | G A/HA | 3.8 | a |
| 9 | BAS-670 | 37.5 | G A/HA | 4.2 | a |

LSD (P=.05) 0.77
 Standard Deviation 0.53
 CV 15.17

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

Trial Comments

CONCLUSIONS: This trial was kept weed-free to determine the tolerance of broccoli to pre-transplant and post-transplant (7 days after transplanting) applications of topramezone (BAS 670) and KIH-485. PRE-T applications of KIH-485 and topramezone did not cause visual injury to broccoli, nor did they reduce head size or yield of broccoli. None of the treatments affected plant stand.

POST-T applications of topramezone did cause some bleaching of broccoli leaves 7 days after treatment, but by 28 DAT the plants had outgrown the injury. POST-T applications of topramezone did not reduce plant stands, head size or yield.

POST-T applications of KIH-485 caused significant visual injury to broccoli, including stunting, leaf distortion and necrosis. Though stand counts were unaffected, many plants did not produce heads - both average head size and yield were reduced by POST-T applications of KIH-485.

Future research should focus on the potential for topramezone in transplanted broccoli, especially after transplanting, as this is an effective postemergence broadleaf herbicide.

TOLERANCE OF CABBAGE TO PRE- AND POST-TRANSPLANT APPLICATIONS OF KIH-485 AND BAS 670

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: CO06T2

CROP: BRSOL, CABBAGE (BLUE DYNASTY). Planted: May-10-06, 14850 PLANTS/HA, 5 CM Deep, 1.5 M Row Width.

Planting Method: TRANSPLANT. Emerged On: May-10-06.

FIELD Site. Expt.Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RCAT-C3&4.

Site Description: Soil Texture: LOAM. %OM: 5.1 %Sand: 51.0 %Silt: 28.5 %Clay: 20.5 pH: 7.1 CEC: 12.0.

| APPLICATION DESCRIPTION | | STAGE AT APPLICATION | | | |
|-------------------------|-----------|----------------------|--------------|---|-----------|
| Application: | A | B | Application: | A | B |
| Date | May-09-06 | May-17-06 | Crop 1 BRSOL | | |
| Time of Day | 8:30 PM | 9:45 AM | Height | | 7.5 CM |
| Method | CO2 SPRAY | CO2 SPRAY | Weed 1 ABUTH | | COTYLEDON |
| Timing | PRE-TRANS | 7 DATRANS | Stg.Scale: | | 0.4 CM |
| Placement | SOIL | FOILAR | Density | | 1.0 SQ.M. |
| Air Temp. | 12.2 C | 18.2 C | Weed 2 AMARE | | COTYLEDON |
| % Humidity | 74 | 65 | Stg.Scale: | | 0.5 CM |
| Wind Speed | 6.6 KPH | 5.2 KPH | Density | | 0.5 SQ.M. |
| Dew Present | N | N | | | |
| Soil Moist.: | DRY | WET | | | |
| Cloud Cover | 90% | 5% | | | |
| Equipment | CO2 SPRAY | CO2 SPRAY | | | |
| Pressure | 207 kPa | 207 kPa | | | |
| Nozzle Type | AIR INDUC | AIR INDUC | | | |
| Nozzle Size | ULD120-02 | ULD120-02 | | | |
| Noz.Spacing | 50 CM | 50 CM | | | |
| Boom Length | 1.5 M | 1.5 M | | | |
| Boom Height | 50 CM | 50 CM | | | |
| Carrier | WATER | WATER | | | |
| Appl.Volume | 200 L/HA | 200 L/HA | | | |
| Propellant | CO2 | CO2 | | | |

| Crop Code | BRSOL | BRSOL | BRSOL | BRSOL | BRSOL | BRSOL | BRSOL | BRSOL | BRSOL | BRSOL |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Part Rated | 1-5 | | | | | | | TOTAL | TOTAL | TOTAL |
| Rating Data Type | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | AVG. HEAD | YIELD | YIELD |
| Rating Unit | % | % | % | % | % | % | % | KG | T/HA | T/AC |
| Rating Date | May-17-06 | May-25-06 | Jun-07-06 | May-25-06 | May-31-06 | Jun-14-06 | Aug-14-06 | Aug-14-06 | Aug-14-06 | Aug-14-06 |
| Crop Stage | 3-4 LF | 4-5 LEAF | 7-9 LEAF | 4-5 LEAF | 4-7 LEAF | 9-12 LF | 10-12 LF | 10-12 LF | 10-12 LF | 10-12 LF |
| Crop Stage Scale | 8-10 CM | 8-11 CM | 10-14 CM | 8-11 CM | 8-11 CM | 13-16 CM | 15-19 CM | 15-19 CM | 15-19 CM | 15-19 CM |
| Trt-Eval Interval | 7 DAE | 14 DAE | 28 DAE | 7 DAT | 14 DAT | 28 DAT | 96 DAE | 96 DAE | 96 DAE | 96 DAE |

| Trt No. | Treatment Name | Rate | Unit | | | | | | | | | | |
|--------------------|----------------|-------|--------|-----|--------|--------|-------|-------|--------|----------|-------------|-------------|--|
| 1 | untreated | 0 | | a 0 | a 0 | c 0 | e 0 | d 0 | b 2.52 | ab 40.9 | a 18.2a | | |
| 2 | KIH-485 | 209 | G A/HA | 0 | a 1 | a 5 | b | | 1.92 | de 31.2 | c 13.9c | | |
| 3 | KIH-485 | 418 | G A/HA | 0 | a 1 | a 10 | a | | 1.95 | cde 30.1 | cd 13.4cd | | |
| 4 | BAS-670 | 18.75 | G A/HA | 0 | a 0 | a 0 | c | | 2.63 | ab 40.3 | ab 18.0ab | | |
| 5 | BAS-670 | 37.5 | G A/HA | 0 | a 0 | a 0 | c | | 2.43 | abc 35.6 | abc 15.9abc | | |
| 6 | KIH-485 | 209 | G A/HA | | | | 2 | d 4 | c 9 | b 2.16 | bcd 34.3 | bc 15.3bc | |
| 7 | KIH-485 | 418 | G A/HA | | | | 4 | c 9 | b 46 | a 1.58 | e 24.6 | d 11.0d | |
| 8 | BAS-670 | 18.75 | G A/HA | | | | 6 | b 10 | b 4 | b 2.68 | a 40.5 | ab 18.1ab | |
| 9 | BAS-670 | 37.5 | G A/HA | | | | 10 | a 14 | a 11 | b 2.37 | a-d 36.0 | abc 16.1abc | |
| LSD (P=.05) | | | | 0.0 | 1.3 | 4.8 | 1.3 | 2.9 | 16.3 | 0.494 | 6.44 | 2.87 | |
| Standard Deviation | | | | 0.0 | 0.9 | 3.1 | 0.9 | 1.9 | 10.6 | 0.339 | 4.42 | 1.97 | |
| CV | | | | 0.0 | 212.87 | 100.16 | 19.35 | 25.66 | 76.58 | 15.06 | 12.67 | 12.67 | |

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

Trial Comments

CONCLUSIONS: This trial was kept weed-free to determine the tolerance of cabbage to pre-transplant and post-transplant (7 days after transplanting) applications of topramezone (BAS 670) and KIH-485.

Topramezone applied PRE-T did not injure cabbage, nor did it cause a significant reduction in cabbage head size or marketable yield. The POST-T application of topramezone did cause some bleaching of the cabbage, though it did not cause a reduction in head size or size.

Cabbage was injured by PRE-T and POST-T applications of KIH-485. The injury, which included stunting, leaf malformation and in actually prevented head formation in some plants, reduced head size and marketable yield. Future research should focus on the potential for topramezone in transplanted cole crops, though additional data will be required to ensure cabbage has an acceptable level of tolerance to POST-T applications.

TOLERANCE OF CAULIFLOWER TO PRE- AND POST-TRANSPLANT APPLICATIONS OF KIH-485 AND BAS 670

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: CO06T3

CROP: BR SOB, CAULIFLOWER (APEX). Planted: May-10-06, 14850 PLANTS/HA, 5 CM Deep, 1.5 M Row Width.

Planting Method: TRANSPLANT. Emerged On: May-10-06.

FIELD Site. Expt.Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RCAT-B1&2.

Site Description: Soil Texture: LOAM. %OM: 5.8 %Sand: 49.3 %Silt: 29.5 %Clay: 21.2 pH: 5.8 CEC: 14.0.

| APPLICATION DESCRIPTION | | STAGE AT APPLICATION | |
|-------------------------|-----------|----------------------|------------------------|
| Application: | A | B | Application: A B |
| Date | May-09-06 | May-17-06 | Crop 1 BR SOB |
| Time of Day | 8:00 PM | 9:30 AM | Height : 7.7 CM |
| Method | CO2 SPRAY | CO2 SPRAY | |
| Timing | PRE-TRANS | 7 DATRANS | Weed 1 CHEAL COTYLEDON |
| Placement | SOIL | FOLIAR | Stg.Scale: 0.25 CM |
| Air Temp. | 12.6 C | 18.2 C | Density : 1.5 SQ.M. |
| % Humidity | 74 | 65 | Weed 2 SOLPT COTYLEDON |
| Wind Speed | 6.8 KPH | 5.2 KPH | Stg.Scale: 0.25 CM |
| Dew Present | N | N | Density : 1.0 SQ.M. |
| Soil Moist.: | DRY | WET | |
| Cloud Cover | 90% | 5% | |
| Equipment | CO2 SPRAY | CO2 SPRAY | |
| Pressure | 207 kPa | 207 kPa | |
| Nozzle Type | AIR INDUC | AIR INDUC | |
| Nozzle Size | ULD120-02 | ULD120-02 | |
| Noz.Spacing | 50 CM | 50 CM | |
| Boom Length | 1.5 M | 1.5 M | |
| Boom Height | 50 CM | 50 CM | |
| Carrier | WATER | WATER | |
| Appl.Volume | 200 L/HA | 200 L/HA | |
| Propellant | CO2 | CO2 | |

| Crop Code | BR SOB | BR SOB | BR SOB | BR SOB | BR SOB | BR SOB | BR SOB | BR SOB | BR SOB |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|--------|
| Part Rated | 1-5 | 1-5 | 1-5 | 6-9 | 6-9 | 6-9 | TOTAL | TOTAL | TOTAL |
| Rating Data Type | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | AVG. HEAD | YIELD | YIELD |
| Rating Unit | % | % | % | % | % | % | G | T/HA | T/AC |
| Rating Date | May-17-06 | May-25-06 | Jun-07-06 | May-25-06 | May-31-06 | Jun-14-06 | | | |
| Crop Stage | 2-4 LF | 3-4 LEAF | 7-8 LEAF | 3-4 LEAF | 5-6 LEAF | 8-9 LEAF | | | |
| Crop Stage Scale | 6-9 CM | 8-10 CM | 11-17 CM | 8-10 CM | 8-10 CM | 11-18 CM | | | |
| Trt-Eval Interval | 7 DAE | 14 DAE | 28 DAE | 7 DAT | 14 DAT | 28 DAT | | | |

| Trt No. | Treatment Name | Rate | Unit | | | | | | | | | | | | |
|--------------------|----------------|-------|--------|-----|--------|--------|-------|-------|--------|---------|--------|-------|---------|--------|-------|
| 1 | untreated | 0 | | a 0 | a 0 | c 0 | d 0 | d 0 | b | 1014.5a | 12.0ab | 5.3ab | | | |
| 2 | KIH-485 | 209 | G A/HA | 0 | a 1 | a 4 | ab | | | 1065.1a | 11.9ab | 5.3ab | | | |
| 3 | KIH-485 | 418 | G A/HA | 0 | a 1 | a 5 | a | | | 997.9a | 9.8ab | 4.4ab | | | |
| 4 | BAS-670 | 18.75 | G A/HA | 0 | a 1 | a 1 | bc | | | 1099.1a | 14.2a | 6.3a | | | |
| 5 | BAS-670 | 37.5 | G A/HA | 0 | a 1 | a 1 | bc | | | 973.8a | 11.2ab | 5.0ab | | | |
| 6 | KIH-485 | 209 | G A/HA | | | | 2 | cd | 5 | c | 8 | ab | 1141.7a | 13.4ab | 6.0ab |
| 7 | KIH-485 | 418 | G A/HA | | | | 4 | bc | 10 | a | 24 | a | 1093.9a | 9.0b | 4.0b |
| 8 | BAS-670 | 18.75 | G A/HA | | | | 6 | b | 6 | bc | 6 | b | 1039.2a | 11.7ab | 5.2ab |
| 9 | BAS-670 | 37.5 | G A/HA | | | | 10 | a | 9 | ab | 7 | ab | 1113.5a | 13.0ab | 5.8ab |
| LSD (P=.05) | | | | 0.0 | 1.7 | 3.6 | 2.3 | 3.1 | 17.1 | 261.63 | 4.72 | 2.10 | | | |
| Standard Deviation | | | | 0.0 | 1.1 | 2.3 | 1.5 | 2.0 | 11.1 | 179.26 | 3.23 | 1.44 | | | |
| CV | | | | 0.0 | 194.98 | 106.76 | 34.03 | 35.56 | 125.53 | 16.91 | 27.39 | 27.39 | | | |

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

Trial Comments

CONCLUSIONS: This trial was kept weed-free to determine the tolerance of cauliflower to pre-transplant and post-transplant (7 days after transplanting) applications of topramezone (BAS 670) and KIH-485.

Topramezone applied PRE-T did not injure cauliflower, nor did it cause a significant reduction in head size or marketable yield. The POST-T application of topramezone did cause some bleaching of the cauliflower, though it did not cause a reduction in head size or size.

PRE-T and POST-T applications of KIH-485 did injure cauliflower. Injury included stunting, leaf malformation and unformed heads in some plants. Though average head size was not reduced, marketable yield decreased at the high rate of KIH-485 at both application timings. Future research should focus on the potential for topramezone in transplanted cauliflower, though additional data will be required to ensure this crop has an acceptable level of tolerance to POST-T applications.

TOLERANCE OF LIMA BEAN TO KIH-485 AND BAS-670

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: LB06T1

CROP: PHSLU, BEAN, LIMA (IMPROVED KINGSTON). Planted: May-29-06, 87719 SEEDS/HA, 4 CM Deep, 75 CM Row Width.
 Planting Method: MONOSEM. Emerged On: Jun-05-06.
 FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RCAT-L6.
 Site Description: Soil Texture: SANDY CLAY LOAM. %OM: 5.2 %Sand: 54.0 %Silt: 25.1 %Clay: 20.9 pH: 6.7 CEC: 11.0.

APPLICATION DESCRIPTION

Application: A
 Date : May-31-06
 Time of Day: 9:40 AM
 Method : CO2 SPRAY
 Timing : PRE
 Placement : SOIL
 Air Temp. : 28.7 C
 % Humidity : 70
 Wind Speed : 3.2 KPH
 Dew Present: N
 Soil Moist.: DRY
 Cloud Cover: 5%
 Equipment : CO2 SPRAY
 Pressure : 207 kPa
 Nozzle Type: AIR INDUC
 Nozzle Size: ULD120-02
 Noz.Spacing: 50 CM
 Boom Length: 1.5 M
 Boom Height: 50 CM
 Carrier : WATER
 Appl.Volume: 200 L/HA
 Propellant : CO2

| Crop Code | PHSLU | PHSLU | PHSLU | PHSLU | PHSLU | PHSLU | PHSLU |
|-------------------|-----------|-----------|-----------|-------------|-----------|-----------|-----------|
| Rating Data Type | INJURY | INJURY | INJURY | DRY WEIGHTS | HEIGHT | YIELD | YIELD |
| Rating Unit | % | % | % | G | CM | T/HA | T/AC |
| Rating Date | Jun-12-06 | Jun-19-06 | Jul-03-06 | Jul-03-06 | Jul-19-06 | Sep-05-06 | Sep-05-06 |
| Crop Stage | UNIFOL. | UNI-1TRI | 3-4 TRI | 3-4 TRI | FLOWER | | |
| Crop Stage Scale | 3-5 CM | 5-10 CM | 16-20 CM | 16-20 CM | 26-39 CM | | |
| Trt-Eval Interval | 7 DAE | 14 DAE | 28 DAE | 28 DAE | 42 DAE | 92 DAE | 92 DAE |

| Trt No. | Treatment Name | Rate | Unit | | | | | | | | |
|--------------------|-----------------|-------|-----------|-------|--------|--------|---------|--------|--------|-------|--|
| 1 | untreated check | 0 | | b 0 | b 0 | b 24.5 | b 35.7 | ab 2.2 | bc 0.9 | bc | |
| 2 | BAS-670 | 18.75 | G A/HA 2 | b 0 | b 0 | b 35.0 | a 36.8 | a 2.7 | ab 1.1 | ab | |
| 3 | KIH-485 | 209 | G A/HA 4 | b 4 | b 2 | b 28.6 | ab 37.6 | a 3.1 | a 1.2 | a | |
| 4 | BAS-670 | 37.5 | G A/HA 4 | b 8 | b 8 | b 22.6 | b 34.0 | b 2.4 | ab 1.0 | ab | |
| 5 | KIH-485 | 418 | G A/HA 14 | a 30 | a 43 | a 11.4 | c 28.3 | c 1.5 | c 0.6 | c | |
| LSD (P=.05) | | | | 4.8 | 13.8 | 23.0 | 10.33 | 2.63 | 0.79 | 0.32 | |
| Standard Deviation | | | | 3.1 | 9.0 | 15.0 | 6.70 | 1.71 | 0.52 | 0.20 | |
| CV | | | | 67.47 | 106.68 | 139.76 | 27.43 | 4.94 | 21.64 | 21.64 | |

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

Trial Comments

CONCLUSIONS: This trial was kept weed-free to test for the effect of preemergence applications of topramezone (BAS 670) and KIH-485 on visual injury, height, dry weight and yields of lima bean. Topramezone is a new broadleaf corn herbicide with activity on pigweed, lambsquarters and other broadleaf weeds, while KIH-485 is a residual grass corn herbicide.

Some visual injury was noted at both rates of topramezone, however the crop outgrew this injury and did not result in any reduction in height or yield of lima beans. Additional work should be conducted with Impact applied postemergence to determine its tolerance in lima beans.

Significant visual injury and reductions in height and yield were observed in both KIH-485 treatments.

EFFECT OF VARIETY ON TOLERANCE OF SNAP BEAN TO KIH-485 AND BAS-670

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SN06T1

CROP: PHSVN, SNAP BEANS (HYSTYLE). Planted: May-29-06, 185185 SEEDS/HA, 4 CM Deep, 75 CM Row Width.

Planting Method: MONOSEM. Emerged On: Jun-05-06.

PHSVN, SNAP BEANS (IMPACT). Planted: May-29-06, 185185 SEEDS/HA, 4 CM Deep, 75 CM Row Width.

Planting Method: MONOSEM. Emerged On: Jun-05-06.

PHSVN, SNAP BEANS (MATADOR). Planted: May-29-06, 185185 SEEDS/HA, 4 CM Deep, 75 CM Row Width.

Planting Method: MONOSEM. Emerged On: Jun-05-06.

PHSVN, SNAP BEANS (SLENDERPACK). Planted: May-29-06, 185185 SEEDS/HA, 4 CM Deep, 75 CM Row Width.

Planting Method: MONOSEM. Emerged On: Jun-05-06.

FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RCAT-L6.

Site Description: Soil Texture: SANDY CLAY LOAM. %OM: 5.2 %Sand: 54.0 %Silt: 25.1 %Clay: 20.9 pH: 6.7 CEC: 11.0.

APPLICATION DESCRIPTION

Application: A
 Date : May-31-06
 Time of Day: 9:20 AM
 Method : CO2 SPRAY
 Timing : PRE
 Placement : SOIL
 Air Temp. : 28.7 C
 % Humidity : 70
 Wind Speed : 3.2 KPH
 Dew Present: N
 Soil Moist.: DRY
 Cloud Cover: 5%
 Equipment : CO2 SPRAY
 Pressure : 207 kPa
 Nozzle Type: AIR INDUC
 Nozzle Size: ULD120-02
 Noz.Spacing: 50 CM
 Boom Length: 1.5 M
 Boom Height: 50 CM
 Carrier : WATER
 Appl.Volume: 200 L/HA
 Propellant : CO2

| Weed Code | HYSTYLE | IMPACT | MATADOR | SLENDRPK | HYSTYLE | IMPACT | MATADOR | SLENDRPK |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | PHSVN | PHSVN | PHSVN | PHSVN | PHSVN | PHSVN | PHSVN | PHSVN |
| Rating Data Type | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY |
| Rating Unit | % | % | % | % | % | % | % | % |
| Rating Date | Jun-12-06 | Jun-12-06 | Jun-12-06 | Jun-12-06 | Jun-19-06 | Jun-19-06 | Jun-19-06 | Jun-19-06 |
| Crop Stage | UNIFOL. | UNIFOL. | UNIFOL. | UNIFOL. | 1 TRI. | 1-2 TRI. | 1-2 TRI. | 1-2 TRI. |
| Crop Stage Scale | 7-8 CM | 5-6 CM | 5-8 CM | 5-8 CM | 8-11 CM | 8-10 CM | 10-15 CM | 10-13 CM |
| Trt-Eval Interval | 7 DAE | 7 DAE | 7 DAE | 7 DAE | 14 DAE | 14 DAE | 14 DAE | 14 DAE |

| Trt No. | Treatment Name | Rate | Unit | 0 | c | 0 | c | 0 | d | 0 | c | 0 | b | 0 | b | 0 | c | 0 | d |
|--------------------|-----------------|-------|--------|-------|----|-------|----|-------|----|-------|----|-------|---|-------|---|-------|----|-------|----|
| 1 | untreated check | | | 0 | c | 0 | c | 0 | d | 0 | c | 0 | b | 0 | b | 0 | c | 0 | d |
| 2 | BAS-670 | 18.75 | G A/HA | 9 | bc | 6 | bc | 12 | cd | 7 | bc | 10 | b | 5 | b | 11 | bc | 3 | cd |
| 3 | KIH-485 | 209 | G A/HA | 23 | ab | 12 | b | 33 | b | 20 | b | 13 | b | 7 | b | 25 | ab | 13 | bc |
| 4 | BAS-670 | 37.5 | G A/HA | 16 | bc | 14 | b | 23 | bc | 14 | bc | 38 | a | 17 | a | 48 | a | 15 | b |
| 5 | KIH-485 | 418 | G A/HA | 37 | a | 36 | a | 54 | a | 43 | a | 41 | a | 16 | a | 42 | a | 25 | a |
| LSD (P=.05) | | | | 16.6 | | 11.7 | | 15.6 | | 18.2 | | 21.2 | | 8.4 | | 23.6 | | 9.7 | |
| Standard Deviation | | | | 10.8 | | 7.6 | | 10.1 | | 11.8 | | 13.7 | | 5.4 | | 15.3 | | 6.3 | |
| CV | | | | 63.37 | | 56.28 | | 41.72 | | 70.57 | | 68.03 | | 60.56 | | 61.48 | | 57.54 | |

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

EFFECT OF VARIETY ON TOLERANCE OF SNAP BEAN TO KIH-485 AND BAS-670

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SN06T1

| Weed Code | | | HYSTYLE | IMPACT | MATADOR | SLENDRPK | HYSTYLE | IMPACT | MATADOR | |
|--------------------|-----------------|-------|-----------|-----------|-----------|-----------|-------------|-------------|-------------|------|
| Crop Code | | | PHSVN | PHSVN | PHSVN | PHSVN | PHSVN | PHSVN | PHSVN | |
| Rating Data Type | | | INJURY | INJURY | INJURY | INJURY | DRY WEIGHTS | DRY WEIGHTS | DRY WEIGHTS | |
| Rating Unit | | | % | % | % | % | G | G | G | |
| Rating Date | | | Jul-03-06 | Jul-03-06 | Jul-03-06 | Jul-03-06 | Jul-03-06 | Jul-03-06 | Jul-03-06 | |
| Crop Stage | | | 5-6 TRI. | 5-6 TRI. | 5-6 TRI. | 4-6 TRI. | 5-6 TRI. | 5-6 TRI. | 5-6 TRI. | |
| Crop Stage Scale | | | 23-28 CM | 18-25 CM | 25-33 CM | 20-28 CM | 23-28 CM | 18-25 CM | 25-33 CM | |
| Trt-Eval Interval | | | 28 DAE | 28 DAE | 28 DAE | 28 DAE | 28 DAE | 28 DAE | 28 DAE | |
| Trt No. | Treatment Name | Rate | Rate | | Rate | | Rate | | Rate | |
| | | | Rate | Unit | Rate | Unit | Rate | Unit | Rate | Unit |
| 1 | untreated check | | 0 | c 0 | c 0 | c 0 | c 65.3 | a 51.7 | a 63.4 | a |
| 2 | BAS-670 | 18.75 | G A/HA 16 | bc 7 | c 17 | bc 10 | c 35.6 | ab 41.6 | ab 30.4 | b |
| 3 | KIH-485 | 209 | G A/HA 17 | bc 8 | c 30 | bc 19 | bc 34.8 | ab 32.7 | ab 16.8 | b |
| 4 | BAS-670 | 37.5 | G A/HA 69 | a 76 | a 80 | a 55 | a 7.1 | b 11.7 | c 9.8 | b |
| 5 | KIH-485 | 418 | G A/HA 37 | b 33 | b 41 | b 41 | ab 27.0 | b 28.6 | bc 20.9 | b |
| LSD (P=.05) | | | 22.6 | 22.9 | 32.8 | 30.1 | 31.34 | 20.38 | 26.23 | |
| Standard Deviation | | | 14.7 | 14.9 | 21.3 | 19.6 | 20.34 | 13.23 | 17.02 | |
| CV | | | 52.9 | 60.4 | 61.33 | 78.11 | 59.94 | 39.78 | 60.2 | |

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

| Weed Code | | | SLENDRPK | HYSTYLE | IMPACT | MATADOR | SLENDRPK | HYSTYLE | IMPACT | MATADOR | |
|--------------------|-----------------|-------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---|
| Crop Code | | | PHSVN | PHSVN | PHSVN | PHSVN | PHSVN | PHSVN | PHSVN | PHSVN | |
| Rating Data Type | | | DRY WEIGHTS | HEIGHT | HEIGHT | HEIGHT | HEIGHT | YIELD | YIELD | YIELD | |
| Rating Unit | | | G | CM | CM | CM | CM | T/HA | T/HA | T/HA | |
| Rating Date | | | Jul-03-06 | Jul-21-06 | Jul-21-06 | Jul-21-06 | Jul-21-06 | Jul-31-06 | Jul-27-06 | Jul-28-06 | |
| Crop Stage | | | 4-6 TRI. | BEANS | BEANS | BEANS | BEANS | BEANS | BEANS | BEANS | |
| Crop Stage Scale | | | 20-28 CM | 11-55 CM | 10-57 CM | 0-57 CM | 21-59 CM | 11-55 CM | 10-57 CM | 0-57 CM | |
| Trt-Eval Interval | | | 28 DAE | 42 DAE | 42 DAE | 42 DAE | 42 DAE | 56 DAE | 52 DAE | 53 DAE | |
| Trt No. | Treatment Name | Rate | Rate | | Rate | | Rate | | Rate | | |
| | | | Rate | Unit | Rate | Unit | Rate | Unit | Rate | Unit | |
| 1 | untreated check | | 74.1 | a 52.0 | a 52.7 | a 55.0 | a 57.4 | a 23.8 | a 16.5 | ab 15.9 | a |
| 2 | BAS-670 | 18.75 | G A/HA 41.6 | b 42.6 | ab 48.9 | ab 45.0 | ab 48.7 | a 16.1 | ab 16.7 | a 10.0 | b |
| 3 | KIH-485 | 209 | G A/HA 26.1 | bc 45.1 | a 47.0 | ab 36.2 | b 47.0 | a 15.9 | b 13.7 | ab 2.7 | c |
| 4 | BAS-670 | 37.5 | G A/HA 21.4 | bc 28.9 | b 19.7 | c 15.0 | c 33.6 | b 3.4 | c 3.3 | c 1.9 | c |
| 5 | KIH-485 | 418 | G A/HA 17.8 | c 40.3 | ab 38.4 | b 34.0 | b 35.8 | b 12.5 | b 10.5 | b 4.1 | c |
| LSD (P=.05) | | | 23.52 | 15.18 | 10.98 | 13.24 | 10.61 | 7.82 | 6.07 | 5.34 | |
| Standard Deviation | | | 15.26 | 9.85 | 7.13 | 8.59 | 6.88 | 5.08 | 3.94 | 3.47 | |
| CV | | | 42.16 | 23.56 | 17.24 | 23.22 | 15.48 | 35.4 | 32.45 | 49.92 | |

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

| Weed Code | | | SLENDRPK | HYSTYLE | IMPACT | MATADOR | SLENDRPK | |
|--------------------|-----------------|-------|-------------|-----------|-----------|-----------|-----------|------|
| Crop Code | | | PHSVN | PHSVN | PHSVN | PHSVN | PHSVN | |
| Rating Data Type | | | YIELD | YIELD | YIELD | YIELD | YIELD | |
| Rating Unit | | | T/HA | T/AC | T/AC | T/AC | T/AC | |
| Rating Date | | | Jul-31-06 | Jul-31-06 | Jul-27-06 | Jul-28-06 | Jul-31-06 | |
| Crop Stage | | | BEANS | BEANS | BEANS | BEANS | BEANS | |
| Crop Stage Scale | | | 21-59 CM | 11-55 CM | 10-57 CM | 0-57 CM | 21-59 CM | |
| Trt-Eval Interval | | | 56 DAE | 56 DAE | 52 DAE | 53 DAE | 56 DAE | |
| Trt No. | Treatment Name | Rate | Rate | | Rate | | Rate | |
| | | | Rate | Unit | Rate | Unit | Rate | Unit |
| 1 | untreated check | | 23.7 | a 10.6 | a 7.4 | ab 7.1 | a 10.6 | a |
| 2 | BAS-670 | 18.75 | G A/HA 21.9 | a 7.2 | ab 7.4 | a 4.5 | b 9.8 | a |
| 3 | KIH-485 | 209 | G A/HA 14.7 | b 7.1 | b 6.1 | ab 1.2 | c 6.5 | b |
| 4 | BAS-670 | 37.5 | G A/HA 11.3 | b 1.5 | c 1.5 | c 0.8 | c 5.1 | b |
| 5 | KIH-485 | 418 | G A/HA 10.2 | b 5.6 | b 4.7 | b 1.9 | c 4.6 | b |
| LSD (P=.05) | | | 6.25 | 3.49 | 2.71 | 2.38 | 2.79 | |
| Standard Deviation | | | 4.06 | 2.27 | 1.76 | 1.55 | 1.81 | |
| CV | | | 24.79 | 35.4 | 32.45 | 49.92 | 24.79 | |

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

Trial Comments

CONCLUSIONS: We observed significant visual injury (stunting, burning, leaf crinkling) at both rates of KIH-485 and the high rate of topramezone (BAS 670). The crops did not outgrow the injury and there was a significant reduction in height and yield of all four varieties tested. Since topramezone will be registered for field corn, subsequent studies will be conducted to determine the potential for carryover injury onto snap beans.

TOLERANCE OF PROCESSING PEAS TO KIH-485 AND BAS-670

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: PE06T1

CROP: PIBSS, PEA, PISUM SP. (SPRING). Planted: Apr-11-06, 300 KG/HA, 6 CM Deep, 18 CM Row Width.

Planting Method: IH DRILL. Emerged On: Apr-24-06.

FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 2 M x 40 M. Expt. Location: RCAT-L6.
Site Description: Soil Texture: SANDY CLAY LOAM. %OM: 5.2 %Sand: 54.0 %Silt: 25.1 %Clay: 20.9 pH: 6.7 CEC: 11.0.

APPLICATION DESCRIPTION

Application: A
Date : Apr-20-05
Time of Day: 7:00 AM
Method : CO2 SPRAY
Timing : PRE
Placement : SOIL
Air Temp. : 6.3 C
% Humidity : 85
Wind Speed : 0 KPH
Dew Present: Y
Soil Moist.: MOIST
Cloud Cover: 5%
Equipment : CO2 SPRAY
Pressure : 207 kPa
Nozzle Type: AIR INDUC
Nozzle Size: ULD120-02
Noz.Spacing: 50 CM
Boom Length: 2.0 M
Boom Height: 50 CM
Carrier : WATER
Appl.Volume: 200 L/HA
Propellant : CO2

| Weed Code | PIBSS | PIBSS | PIBSS | AMBEL | CHEAL | POLCO | POLPE | STEME |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | PIBSS | PIBSS | PIBSS | PIBSS | PIBSS | PIBSS | PIBSS | PIBSS |
| Rating Data Type | INJURY | INJURY | INJURY | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL |
| Rating Unit | % | % | % | % | % | % | % | % |
| Rating Date | May-01-06 | May-08-06 | May-23-06 | May-23-06 | May-23-06 | May-23-06 | May-23-06 | May-23-06 |
| Crop Stage | 2-3 LEAF | 2-4 LEAF | 7-8 LEAF | 7-8 LEAF | 7-8 LEAF | 7-8 LEAF | 7-8 LEAF | 7-8 LEAF |
| Crop Stage Scale | 5-6 CM | 13-15 CM | 30-34 CM | 30-34 CM | 30-34 CM | 30-34 CM | 30-34 CM | 30-34 CM |
| Weed Stage | | | | 2-4 LEAF | COT-6 LF | 2-4 LEAF | 1-6 LEAF | 2-6 LEAF |
| Weed Density, Unit | | | | 5.5 SQ.M. | 32.0SQ.M. | 4.0 SQ.M. | 10.5SQ.M. | 4.5 SQ.M. |
| Trt-Eval Interval | 7 DAE | 14 DAE | 28 DAE | 28 DAE | 28 DAE | 28 DAE | 28 DAE | 28 DAE |

| Trt No. | Treatment Name | Rate | Unit | Rate | Unit | Rate | Unit | Rate | Unit | Rate | Unit | Rate | Unit | | | | | |
|--------------------|-----------------|-------|--------|--------|------|--------|------|------|-------|-------|-------|-------|------|-------|--|-------|--|------|
| 1 | untreated check | | | 0 | b 0 | a 0 | a 0 | b 0 | c 0 | b 0 | c 0 | d | | | | | | |
| 2 | BAS-670 | 18.75 | G A/HA | 0 | b 0 | a 0 | a 80 | a 68 | b 46 | ab 65 | b 69 | c | | | | | | |
| 3 | BAS-670 | 37.5 | G A/HA | 1 | ab 1 | a 0 | a 69 | a 73 | ab 50 | a 73 | ab 81 | b | | | | | | |
| 4 | KIH-485 | 209 | G A/HA | 1 | ab 1 | a 0 | a 58 | a 76 | ab 29 | ab 76 | ab 88 | ab | | | | | | |
| 5 | KIH-485 | 418 | G A/HA | 2 | a 2 | a 0 | a 74 | a 84 | a 58 | a 82 | a 94 | a | | | | | | |
| LSD (P=.05) | | | | 1.7 | | 1.5 | | 0.0 | | 31.0 | | 13.5 | | 46.3 | | 12.2 | | 9.1 |
| Standard Deviation | | | | 1.1 | | 1.0 | | 0.0 | | 20.1 | | 8.8 | | 30.1 | | 7.9 | | 5.9 |
| CV | | | | 140.22 | | 139.85 | | 0.0 | | 35.95 | | 14.67 | | 82.41 | | 13.37 | | 8.92 |

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

| Weed Code | AMBEL | CHEAL | POLCO | POLPE | STEME | PIBSS | PIBSS | PIBSS |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | PIBSS | PIBSS | PIBSS | PIBSS | PIBSS | PIBSS | PIBSS | PIBSS |
| Rating Data Type | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | TENDER | YIELD | YIELD |
| Rating Unit | % | % | % | % | % | PSI | T/HA | T/AC |
| Rating Date | Jun-05-06 | Jun-05-06 | Jun-05-06 | Jun-05-06 | Jun-05-06 | Jun-22-06 | Jun-22-06 | Jun-22-06 |
| Crop Stage | PODS | PODS | PODS | PODS | PODS | | | |
| Crop Stage Scale | 50-60 CM | 50-60 CM | 50-60 CM | 50-60 CM | 50-60 CM | | | |
| Weed Stage | 2-6 LEAF | 2-8 LEAF | 4-12LEAF | 3-7 LEAF | 2-8 LEAF | | | |
| Weed Density, Unit | 20.0SQ.M. | 17.0SQ.M. | 9.0 SQ.M. | 3.0 SQ.M. | 12.0SQ.M. | | | |
| Trt-Eval Interval | 42 DAE | 42 DAE | 42 DAE | 42 DAE | 42 DAE | 59 DAE | 59 DAE | 59 DAE |

| Trt No. | Treatment Name | Rate | Unit | Rate | Unit | Rate | Unit | Rate | Unit | Rate | Unit | Rate | Unit | | | | | |
|--------------------|-----------------|-------|--------|-------|-------|-------|------|-------|--------|--------|--------|-------|------|------|--|-------|--|-------|
| 1 | untreated check | | | 0 | c 0 | c 0 | b 0 | b 0 | c 107 | a 5.21 | a 2.33 | a | | | | | | |
| 2 | BAS-670 | 18.75 | G A/HA | 90 | a 71 | ab 61 | a 66 | a 81 | b 105 | a 6.39 | a 2.85 | a | | | | | | |
| 3 | BAS-670 | 37.5 | G A/HA | 71 | ab 70 | b 60 | a 68 | a 88 | ab 111 | a 6.72 | a 3.00 | a | | | | | | |
| 4 | KIH-485 | 209 | G A/HA | 58 | b 76 | ab 48 | a 65 | a 90 | ab 114 | a 5.19 | a 2.32 | a | | | | | | |
| 5 | KIH-485 | 418 | G A/HA | 72 | ab 81 | a 60 | a 70 | a 96 | a 115 | a 7.42 | a 3.31 | a | | | | | | |
| LSD (P=.05) | | | | 32.3 | | 10.8 | | 38.9 | | 13.0 | | 13.7 | | 13.5 | | 2.245 | | 1.002 |
| Standard Deviation | | | | 21.0 | | 7.0 | | 25.2 | | 8.5 | | 8.9 | | 8.7 | | 1.457 | | 0.650 |
| CV | | | | 36.06 | | 11.76 | | 55.19 | | 15.75 | | 12.48 | | 7.94 | | 23.55 | | 23.55 |

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

TOLERANCE OF PROCESSING PEAS TO KIH-485 AND BAS-670

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: PE06T1

| | | |
|-------------------|------------|------------|
| Crop Code | PIBSS | PIBSS |
| Rating Data Type | ADJ. YIELD | ADJ. YIELD |
| Rating Unit | T/HA | T/AC |
| Rating Date | Jun-22-06 | Jun-22-06 |
| Trt-Eval Interval | 59 DAE | 59 DAE |

| Trt No. | Treatment Name | Rate | Unit | ADJ. YIELD | ADJ. YIELD | | |
|--------------------|-----------------|-------|--------|------------|------------|---|--|
| 1 | untreated check | | | 5.63 | a 2.51 | a | |
| 2 | BAS-670 | 18.75 | G A/HA | 6.83 | a 3.05 | a | |
| 3 | BAS-670 | 37.5 | G A/HA | 6.74 | a 3.01 | a | |
| 4 | KIH-485 | 209 | G A/HA | 5.03 | a 2.24 | a | |
| 5 | KIH-485 | 418 | G A/HA | 7.23 | a 3.23 | a | |
| LSD (P=.05) | | | | 2.644 | 1.179 | | |
| Standard Deviation | | | | 1.716 | 0.765 | | |
| CV | | | | 27.27 | 27.27 | | |

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

Trial Comments

CONCLUSIONS: This trial was established to determine the influence of topramezone (BAS 670) and KIH-485 applied preemergence on pea visual injury, tenderness, yield, and weed control. None of the treatments caused injury to pea - emergence counts, tenderness and yield were all similar to the untreated check.

Topramezone gave excellent control of ragweed, good control of chickweed and fair control of lambsquarters, wild buckwheat and lady's thumb.

KIH-485 gave excellent control of chickweed, fair control of lambsquarters and poor control of ragweed, wild buckwheat and lady's thumb. Future work will focus on postemergence applications of topramezone, as this is an excellent postemergence broadleaf herbicide.

TOLERANCE OF TRANSPLANTED PEPPERS TO VARIOUS HERBICIDES

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: PP06T1

CROP: CPSAN, PEPPER (SOCRATES). Planted: May-30-06, 29167 PLANTS/HA, 5 CM Deep, 1.5 M Row Width.

Planting Method: TRANSPLANT. Emerged On: May-30-06.

FIELD Site. Expt.Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RCAT-B3&4.

Site Description: Soil Texture: SANDY CLAY LOAM. %OM: 5.9 %Sand: 52.2 %Silt: 27.5 %Clay: 20.4 pH: 7.2 CEC: 14.0.

APPLICATION DESCRIPTION

Application: A
 Date : May-30-06
 Time of Day: 9:40 AM
 Method : CO2 SPRAY
 Timing : PRE-TRANS
 Placement : SOIL
 Air Temp. : 29.1 C
 % Humidity : 49
 Wind Speed : 3.7 KPH
 Dew Present: N
 Soil Moist.: DRY
 Cloud Cover: 10%
 Equipment : CO2 SPRAY
 Pressure : 207 kPa
 Nozzle Type: AIR INDUC
 Nozzle Size: ULD120-02
 Noz.Spacing: 50 CM
 Boom Length: 1.5 M
 Boom Height: 50 CM
 Carrier : WATER
 Appl.Volume: 200 L/HA
 Propellant : CO2

| Crop Code | CPSAN | CPSAN | CPSAN | CPSAN | CPSAN | CPSAN | CPSAN |
|-------------------|-----------|-----------|-----------|-----------|-------------|-------------|-------------|
| Part Rated | | | | | TOTAL | TOTAL | TOTAL |
| Rating Data Type | INJURY | INJURY | INJURY | HEIGHT | AVG. FRUIT | YIELD | YIELD |
| Rating Unit | % | % | % | CM | G | T/HA | T/AC |
| Rating Date | Jun-06-06 | Jun-13-06 | Jun-26-06 | Jun-20-06 | | | |
| Crop Stage | 6-7 LEAF | 6-8 LEAF | 9-14 LF | 6-9 LEAF | FRUIT | FRUIT | FRUIT |
| Crop Stage Scale | 8-12 CM | 10-14 CM | 20-25 CM | 13-18 CM | 20-25 CM | 20-25 CM | 20-25 CM |
| Assessed By | | | | | COMBND PICK | COMBND PICK | COMBND PICK |
| Trt-Eval Interval | 7 DAE | 14 DAE | 28 DAE | 21 DAE | | | |

| Trt No. | Treatment Name | Rate | Rate Unit | | | | | | | | |
|--------------------|----------------|-------|-----------|-----|-------|-------|--------|----------|---------|---------|----|
| 1 | untreated | | | 0 | a 0 | b 0 | b 16.3 | a 160.9 | ab 22.5 | ab 10.0 | ab |
| 2 | KIH-485 | 209 | G A/HA | 0 | a 2 | b 2 | b 15.3 | ab 161.6 | ab 22.2 | ab 9.9 | ab |
| 3 | BAS-670 | 18.75 | G A/HA | 0 | a 0 | b 1 | b 15.6 | a 155.6 | b 20.4 | b 9.1 | b |
| 4 | sulfentrazone | 125 | G A/HA | 0 | a 0 | b 1 | b 16.2 | a 163.7 | ab 22.8 | ab 10.2 | ab |
| 5 | KIH-485 | 418 | G A/HA | 0 | a 9 | a 16 | a 13.8 | b 160.7 | ab 20.2 | b 9.0 | b |
| 6 | BAS-670 | 37.5 | G A/HA | 0 | a 1 | b 1 | b 16.7 | a 168.6 | a 24.1 | a 10.8 | a |
| 7 | sulfentrazone | 250 | G A/HA | 0 | a 0 | b 2 | b 15.2 | ab 165.6 | ab 24.3 | a 10.8 | a |
| LSD (P=.05) | | | | 0.0 | 2.2 | 3.2 | 1.54 | 10.03 | 3.65 | 1.63 | |
| Standard Deviation | | | | 0.0 | 1.5 | 2.2 | 1.03 | 6.75 | 2.45 | 1.10 | |
| CV | | | | 0.0 | 87.77 | 70.11 | 6.64 | 4.16 | 10.98 | 10.98 | |

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

Trial Comments

CONCLUSIONS: This trial examined tolerance of transplanted pepper to preemergence applications of topramezone (BAS 670), KIH-485 and sulfentrazone. Topramezone and sulfentrazone did not injure pepper, while KIH-485 caused significant stunting and some leaf deformation and burning at twice the proposed use rate. There were no differences in fruit size among any of the treatments, however total yield was significantly less than the untreated check at the 2X rate of KIH-485. Sulfentrazone did not reduce fruit size or yield of transplanted pepper, a result we have observed consistently over three years of study.

TOLERANCE OF TRANSPLANTED PEPPERS TO BENTAZON

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: PP06T2

CROP: CPSAN, PEPPER (SOCRATES). Planted: May-30-06, 29167 PLANTS/HA, 5 CM Deep, 1.5 M Row Width.

Planting Method: TRANSPLANT. Emerged On: May-30-06.

FIELD Site. Expt.Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RCAT-B3&4.

Site Description: Soil Texture: SANDY CLAY LOAM. %OM: 5.9 %Sand: 52.2 %Silt: 27.5 %Clay: 20.4 pH: 7.2 CEC: 14.0.

| APPLICATION DESCRIPTION | | | STAGE AT APPLICATION | | | | |
|-------------------------|-----------|-----------|----------------------|--------------|------------|------------|-----------|
| Application: | A | B | C | Application: | A | B | C |
| Date | Jun-08-06 | Jun-14-06 | Jun-22-06 | Crop 1 CPSAN | | | |
| Time of Day | 6:45 AM | 6:05 AM | 7:45 PM | Height | 11.8 CM | 12.0 CM | 14.9 CM |
| Method | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY | Weed 1 ABUTH | 0.9 CM | 3.7 CM | 4.8 CM |
| Timing | 10 DAE | 7 DAT-A | 7 DAT-B | Stg.Scale: | COT.-1 LF | 1-4 LEAF | 2-5 LEAF |
| Placement | FOLIAR | FOLIAR | FOLIAR | Density | 6.0 SQ.M. | 8.5 SQ.M. | 8.0 SQ.M. |
| Air Temp. | 18.4 C | 12.2 C | 20.5 C | Weed 2 AMARE | 0.7 CM | 1.6 cm | 4.0 CM |
| % Humidity | 85 | 85 | 92 | Stg.Scale: | 1-2 LF | COT.-4 LF | 2-6 LEAF |
| Wind Speed | 3.1 KPH | 0.0 KPH | 3.4 KPH | Density | 2.0 SQ.M. | 16.5 SQ.M. | 17 SQ.M. |
| Dew Present | Y | Y | N | Weed 3 AMBEL | 3.1 CM | 6.5 CM | 3.4 CM |
| Soil Moist.: | MOIST | DRY | WET | Stg.Scale: | COT.-4 LF | 6-8 LEAF | COT.-8 LF |
| Cloud Cover: | 10% | 0% | 95% | Density | 2.0 SQ.M. | 4.5 SQ.M. | 9.0 SQ.M. |
| Equipment | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY | Weed 4 CHEAL | 1.5 CM | 1.8 CM | 3.4 CM |
| Pressure | 207 kPa | 207 kPa | 207 kPa | Stg.Scale: | COT.-6 LF | COT.-6 LF | 2-6 LEAF |
| Nozzle Type | AIR INDUC | AIR INDUC | AIR INDUC | Density | 2.0 SQ.M. | 7.0 SQ.M. | 12 SQ.M. |
| Nozzle Size | ULD120-02 | ULD120-02 | ULD120-02 | Weed 5 POROL | | 1.9 CM | |
| Noz.Spacing | 50 CM | 50 CM | 50 CM | Stg.Scale: | | COT.-4 LF | |
| Boom Length | 1.5 M | 1.5 M | 1.5 M | Density | | 13 SQ.M. | |
| Boom Height | 50 CM | 50 CM | 50 CM | Weed 6 SETVI | 1.3 CM | 3.6 CM | 9.9 CM |
| Carrier | WATER | WATER | WATER | Stg.Scale: | COT.-2 LF | 1-3 LEAF | COT.-6 LF |
| Appl.Volume | 200 L/HA | 200 L/HA | 200 L/HA | Density | 54.5 SQ.M. | 159 SQ.M. | 129 SQ.M. |
| Propellant | CO2 | CO2 | CO2 | | | | |

| Crop Code | CPSAN | CPSAN | CPSAN | CPSAN | CPSAN | CPSAN | CPSAN | CPSAN | CPSAN |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Rating Data Type | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY |
| Rating Unit | % | % | % | % | % | % | % | % | % |
| Rating Date | Jun-15-06 | Jun-22-06 | Jul-05-06 | Jun-22-06 | Jun-28-06 | Jul-12-05 | Jun-28-06 | Jul-05-06 | Jul-21-06 |
| Crop Stage | 7-9 LEAF | 10-12 LF | FLOWER | 10-12 LF | 12-16 LF | FLWR-FRT | 12-16 LF | FLOWER | FRUIT |
| Crop Stage Scale | 10-15 CM | 12-16 CM | 20-25 CM | 12-16 CM | 16-24 CM | 25-30 CM | 16-24 CM | 20-25 CM | 25-30 CM |
| Trt-Eval Interval | 7 DAT-A | 14 DAT-A | 28 DAT-A | 7 DAT-B | 14 DAT-B | 28 DAT-B | 7 DAT-C | 14 DAT-C | 28 DAT-C |

| Trt No. | Treatment Name | Rate | Unit | | | | | | | | | |
|--------------------|----------------|------|--------|-------|-------|-------|-------|-------|------|-------|-------|--------|
| 1 | untreated | | | 0 | b 0 | c 0 | c 0 | c 0 | c 0 | b 0 | c 0 | c 0 |
| 2 | bentazon | 280 | G A/HA | 1 | b 3 | b 3 | b 3 | b 9 | b 1 | b 9 | b 3 | b 0 |
| | bentazon | 280 | G A/HA | | | | | | | | | |
| | bentazon | 280 | G A/HA | | | | | | | | | |
| 3 | bentazon | 560 | G A/HA | 8 | a 7 | a 10 | a 7 | a 16 | a 9 | a 16 | a 10 | a 3 |
| | bentazon | 560 | G A/HA | | | | | | | | | |
| | bentazon | 560 | G A/HA | | | | | | | | | |
| LSD (P=.05) | | | | 1.7 | 1.3 | 1.9 | 1.3 | 1.9 | 1.5 | 1.9 | 1.9 | 2.4 |
| Standard Deviation | | | | 1.0 | 0.8 | 1.1 | 0.8 | 1.1 | 0.9 | 1.1 | 1.1 | 1.4 |
| CV | | | | 35.29 | 22.91 | 26.53 | 22.91 | 13.83 | 29.4 | 13.83 | 26.53 | 141.42 |

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

TOLERANCE OF TRANSPLANTED PEPPERS TO BENTAZON

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: PP06T2

| | | | | | | | | | |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Weed Code | | ABUTH | AMAPO | AMBEL | CHEAL | ABUTH | AMAPO | AMBEL | CHEAL |
| Crop Code | CPSAN | CPSAN | CPSAN | CPSAN | CPSAN | CPSAN | CPSAN | CPSAN | CPSAN |
| Rating Data Type | HEIGHT | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL |
| Rating Unit | CM | % | % | % | % | % | % | % | % |
| Rating Date | Jun-28-06 | Jul-21-06 | Jul-21-06 | Jul-21-06 | Jul-21-06 | Aug-15-06 | Aug-15-06 | Aug-15-06 | Aug-15-06 |
| Crop Stage | 12-16 LF | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT |
| Crop Stage Scale | 16-24 CM | 25-30 CM | 25-30 CM | 25-30 CM | 25-30 CM | 25-30 CM | 25-30 CM | 25-30 CM | 25-30 CM |
| Weed Stage | | 4-12 LF | 2-20 LF | 6-20 LF | 4-20 LF | 6-20+ LF | 18-20+LF | 8-20+ LF | 6-20+LF |
| Weed Density, Unit | | 7.0 SQ.M. | 16.0SQ.M. | 11.0SQ.M. | 25.0SQ.M. | 6.0 SQ.M. | 10.0SQ.M. | 4.0 SQ.M. | 25.0SQ.M. |
| Trt-Eval Interval | 28 DAT-A | 28 DAT-C | 28 DAT-C | 28 DAT-C | 28 DAT-C | 56 DAT-C | 56 DAT-C | 56 DAT-C | 56 DAT-C |

| Trt No. | Treatment Name | Rate | Unit | | | | | | | | | | |
|--------------------|----------------|------|--------|------|------|-------|-------|--------|------|------|-------|--------|---|
| 1 | untreated | | | 22.5 | a 0 | c 0 | c 0 | c 0 | b 0 | c 0 | b 0 | c 0 | b |
| 2 | bentazon | 280 | G A/HA | 18.9 | b 81 | b 63 | b 50 | b 0 | b 83 | b 70 | a 38 | b 1 | b |
| | bentazon | 280 | G A/HA | | | | | | | | | | |
| | bentazon | 280 | G A/HA | | | | | | | | | | |
| 3 | bentazon | 560 | G A/HA | 17.5 | b 98 | a 85 | a 81 | a 35 | a 93 | a 79 | a 71 | a 16 | a |
| | bentazon | 560 | G A/HA | | | | | | | | | | |
| | bentazon | 560 | G A/HA | | | | | | | | | | |
| LSD (P=.05) | | | | 1.97 | 8.3 | 11.3 | 14.3 | 23.4 | 4.1 | 17.2 | 12.7 | 13.4 | |
| Standard Deviation | | | | 1.14 | 4.8 | 6.5 | 8.3 | 13.5 | 2.4 | 10.0 | 7.3 | 7.8 | |
| CV | | | | 5.79 | 8.03 | 13.31 | 18.95 | 116.06 | 4.04 | 20.1 | 20.17 | 133.25 | |

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

| | | | | | | |
|------------------|------------|----------|----------|------------|----------|----------|
| Crop Code | CPSAN | CPSAN | CPSAN | CPSAN | CPSAN | CPSAN |
| Part Rated | TOTAL | TOTAL | TOTAL | TOTAL | TOTAL | TOTAL |
| Rating Data Type | AVG. FRUIT | YIELD | YIELD | AVG. FRUIT | YIELD | YIELD |
| Rating Unit | G | T/HA | T/AC | G | T/HA | T/AC |
| Crop Stage | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT |
| Crop Stage Scale | 25-30 CM | 25-30 CM | 25-30 CM | 25-30 CM | 25-30 CM | 25-30 CM |
| Weed Stage | COMBINED | COMBINED | COMBINED | COMBINED | COMBINED | COMBINED |
| Assessed By | WEEDY | WEEDY | WEEDY | WEEDFREE | WEEDFREE | WEEDFREE |

| Trt No. | Treatment Name | Rate | Unit | | | | | | | | | | |
|---------|----------------|------|--------|-------|-------|--------|----------|--------|-------|---|--|--|--|
| 1 | untreated | | | 86.7 | a 1.5 | b 0.7 | b 156.0 | a 9.9 | a 4.4 | a | | | |
| 2 | bentazon | 280 | G A/HA | 102.7 | a 2.4 | ab 1.1 | ab 152.8 | a 11.8 | a 5.3 | a | | | |
| | bentazon | 280 | G A/HA | | | | | | | | | | |
| | bentazon | 280 | G A/HA | | | | | | | | | | |
| 3 | bentazon | 560 | G A/HA | 108.9 | a 3.2 | a 1.4 | a 138.9 | b 11.3 | a 5.0 | a | | | |
| | bentazon | 560 | G A/HA | | | | | | | | | | |
| | bentazon | 560 | G A/HA | | | | | | | | | | |

| | | | | | | | | | |
|--------------------|--|--|--|-------|-------|-------|-------|-------|-------|
| LSD (P=.05) | | | | 27.49 | 0.92 | 0.41 | 13.80 | 3.95 | 1.76 |
| Standard Deviation | | | | 15.88 | 0.53 | 0.24 | 7.98 | 2.28 | 1.02 |
| CV | | | | 15.98 | 22.47 | 22.47 | 5.34 | 20.75 | 20.75 |

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

Trial Comments

CONCLUSIONS: Bentazon was applied in three banded micro-rate sprays at 280 or 560 g ai ha⁻¹ over pepper rows at weekly intervals, starting 10 days after transplanting. We attempted to minimize drift using air induction nozzles and spraying when wind speed was 3 km/hr or less.

Injury to pepper was still observed after each micro-rate application. Injury consisted of contact burning of the leaves, and stunting at both rates. At the 280 g ai ha⁻¹ rate, the plants did outgrow the injury, so that mean pepper size and yield were not less than the untreated check. At the 560 g ai ha⁻¹, fruit size was reduced, but because more fruit were produced, total yield was unaffected.

The 280 g ai ha⁻¹ micro-rates gave good control of velvetleaf, and fair control of redroot pigweed, but did not adequately control ragweed or lambsquarters due to multiple flushes of these weeds emerging after the last micro-rate application.

Future research will focus on applying the herbicide between rows, as pepper did not have acceptable tolerance to the in-row micro-rate applications. Application timing will also have to be adjusted to the stage of the weeds, as weeds were too large to be controlled at the rates of bentazon used in this study.

TOLERANCE AND WEED CONTROL WITH MICRO-RATES IN RED BEETS

DAVE BILYEY, DARREN ROBINSON

Experiment ID: RB06M1

CROP: BEAVA, BEET, RED (DETROIT DARK RED). Planted: May-26-06, 38 CM Row Width.

Planting Method: MONOSEM VACUUM PLANTER. Emerged On: Jun-07-06.

FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RIDGETOWN

Site Description: Soil Texture: LOAM. %OM: 5.8 %Sand: 49.3 %Silt: 29.5 %Clay: 21.2 pH: 5.8 CEC: 14.

APPLICATION DESCRIPTION

| Application: | A | B | C | D |
|--------------|-----------|-----------|-----------|-----------|
| Date | Jun-07-06 | Jun 15-06 | Jun-26-06 | Jul-13-06 |
| Time of Day | 14:00 | 8:00 | 8:00 | 9:20 |
| Method | SPRAY | SPRAY | SPRAY | SPRAY |
| Timing | POST A | POST B | POST C | POST D |
| Placement | FOLIAR | FOLIAR | FOLIAR | FOLIAR |
| Air Temp. | 29 C | 21 C | 23 C | 25 C |
| % Humidity | 28 | 34 | 90 | 78 |
| Wind Speed | 2 KPH | 2 KPH | 2 KPH | 3 KPH |
| Cloud Cover | 60% | 90% | 100% | 30% |
| Equipment | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY |
| Pressure | 207 | 207 | 207 | 207 |
| Nozzle Type | AIR INDUC | AIR INDUC | AIR INDUC | AIR INDUC |
| Nozzle Size | UDL120-02 | UDL120-02 | UDL120-02 | UDL120-02 |
| Noz.Spacing | 50 CM | 50 CM | 50 CM | 50 CM |
| Boom Length | 1.5 M | 1.5 M | 1.5 M | 1.5 M |
| Boom Height | 50 CM | 50 CM | 50 CM | 50 CM |
| Carrier | WATER | WATER | WATER | WATER |
| Appl.Volume | 200 L/HA | 200 L/HA | 200 L/HA | 200 L/HA |

STAGE AT APPLICATION

| Application: | A | B | C | D |
|--------------|-----------|-----------|----------|----------|
| Crop 1 BEAVA | COT-26-06 | COT-2L-06 | 4-6 LF | 4-12 LF |
| Weed 1 ABUTH | COT-2 LF | COT-2 LF | COT-2LF | COT-2LF |
| Density | 12 SQ M | 9 SQ M | 6 SQ M | 6 SQ M |
| Weed 2 AMARE | COT-2 LF | COT- 2LF | COT-2 LF | COT-2 LF |
| Density | 21 SQ M | 29 SQ M | 43 SQ M | 24 SQ M |
| Weed 3 CHEAL | COT-2 LF | COT-2 LF | COT-2 LF | COT-2LF |
| Density | 4 SQ MRAY | 6 SQ MRAY | 14 SQ M | 7 SQ M |
| Weed 4 SETVI | 1-3 LF | 1-2 LF | 1-3 LF | 1-2 LF |
| Density | 27 SQ M02 | 61 SQ M02 | 99 SQ M | 71 SQ M |

| Weed Code | | | | ABUTH | AMARE | CHEAL | SETVI |
|-----------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | | BEAVD | BEAVD | BEAVD | BEAVD | BEAVD | BEAVD |
| Rating Data Type | | INJURY | INJURY | INJURY | CONTROL | CONTROL | CONTROL |
| Rating Unit | | % | % | % | % | % | % |
| Rating Date | | Jun-12-06 | Jun-21-06 | Jul-03-06 | Jul-03-06 | Jul-03-06 | Jul-03-06 |
| Crop Stage | | COT-2 LF | 2-4 LF | 4-5 LF | 4-5 LF | 4-5 LF | 4-5 LF |
| Weed Stage | | | | 3-9 LF | COT-20+ | COT-20+ | 1-20+ LF |
| Weed Density, Unit | | | | 6 SQ M | 43 SQ M | 13.5SQ M | 99 SQ M |
| Trt-Eval Interval | | 7 DAT | 14 DAT | 28 DAT | 28 DAT | 28 DAT | 28 DAT |
| Trt Treatment | Rate | | | | | | |
| No. Name | Rate Unit | | | | | | |
| 1 UNTREATED CHECK | | 0 | b 0 | b 0 | b 0 | b 0 | b 0 |
| 2 PYRAZON | 540 G A/HA | 0 | b 3 | ab 3 | b 98 | a 98 | a 99 |
| TRIFLUSULFURON-METHYL | 4.5 G A/HA | | | | | | |
| CLOPYRALID | 45 G A/HA | | | | | | |
| SUPER SPREADER | 0.75 % V/V | | | | | | |
| 3 PYRAZON | 1080 G A/HA | 1 | b 9 | a 10 | a 99 | a 99 | a 99 |
| TRIFLUSULFURON-METHYL | 9 G A/HA | | | | | | |
| CLOPYRALID | 90 G A/HA | | | | | | |
| SUPER SPREADER | 1.5 % V/V | | | | | | |
| 4 PYRAZON | 2160 G A/HA | 10 | a 6 | ab 0 | b 96 | a 96 | a 96 |
| S-METOLACHLOR | 1200 G A/HA | | | | | | |
| LSD (P=.05) | | 7.3 | 7.7 | 4.0 | 4.0 | 4.0 | 3.4 |
| Standard Deviation | | 4.6 | 4.8 | 2.5 | 2.5 | 2.5 | 2.1 |
| CV | | 162.96 | 109.42 | 80.0 | 3.43 | 3.43 | 2.91 |

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

TOLERANCE AND WEED CONTROL WITH MICRO-RATES IN RED BEETS

DAVE BILYEY, DARREN ROBINSON

Experiment ID: RB06M1

| Weed Code | | | GRADE #1 | GRADE #2 | GRADE #3 | GRADE #4 | GRADE #5 | | | | | | | | | | | |
|-------------------|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----|-------|---|-------|---|-------|----|--------|---|--------|
| Crop Code | BEAVD | BEAVD | BEAVD | BEAVD | BEAVD | BEAVD | BEAVD | BEAVD | | | | | | | | | | |
| Part Rated | | | | | | | | TOTAL | | | | | | | | | | |
| Rating Data Type | DRY WT. | SUGAR | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | | | | | | | | | | |
| Rating Unit | G | % | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | | | | | | | | | | |
| Rating Date | Jul-17-06 | Aug-04-06 | Aug-04-06 | Aug-04-06 | Aug-04-06 | Aug-04-06 | Aug-04-06 | Aug-04-06 | | | | | | | | | | |
| Trt-Eval Interval | 42 DAT | 58 DAE | 58 DAE | 58 DAE | 58 DAE | 58 DAE | 58 DAE | 58 DAE | | | | | | | | | | |
| Trt No. | Treatment Name | Rate | Rate Unit | | | | | | | | | | | | | | | |
| 1 | UNTREATED CHECK | | | 59.5 | ab | 7.23 | a | 3.0 | bc | 7.3 | b | 21.7 | a | 2.8 | ab | 0.9 | a | 35.8ab |
| 2 | PYRAZON | 540 | G A/HA | 62.5 | a | 6.95 | a | 5.0 | a | 9.8 | a | 19.1 | a | 2.9 | ab | 0.0 | a | 36.8a |
| | TRIFLUSULFURON-METHYL | 4.5 | G A/HA | | | | | | | | | | | | | | | |
| | CLOPYRALID | 45 | G A/HA | | | | | | | | | | | | | | | |
| | SUPER SPREADER | 0.75 | % V/V | | | | | | | | | | | | | | | |
| 3 | PYRAZON | 1080 | G A/HA | 34.0 | c | 6.52 | a | 4.6 | ab | 7.6 | b | 17.6 | a | 1.5 | b | 0.0 | a | 31.3b |
| | TRIFLUSULFURON-METHYL | 9 | G A/HA | | | | | | | | | | | | | | | |
| | CLOPYRALID | 90 | G A/HA | | | | | | | | | | | | | | | |
| | SUPER SPREADER | 1.5 | % V/V | | | | | | | | | | | | | | | |
| 4 | PYRAZON | 2160 | G A/HA | 41.4 | bc | 7.32 | a | 2.2 | c | 3.9 | c | 20.2 | a | 5.2 | a | 1.9 | a | 33.3ab |
| | S-METOLACHLOR | 1200 | G A/HA | | | | | | | | | | | | | | | |
| | LSD (P=.05) | | | 19.86 | | 1.264 | | 2.03 | | 1.86 | | 4.81 | | 3.24 | | 2.13 | | 4.74 |
| | Standard Deviation | | | 12.42 | | 0.790 | | 1.27 | | 1.16 | | 3.01 | | 2.03 | | 1.33 | | 2.97 |
| | CV | | | 25.15 | | 11.28 | | 34.28 | | 16.28 | | 15.31 | | 65.28 | | 190.28 | | 8.65 |

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

Trial Comments

CONCLUSIONS: This experiment was conducted to determine the effectiveness of pyridate micro-rates or a preemergence tank-mix of pyridate+s-metolachlor, and the potential for injury from each herbicide treatment in red beets.

Pyridate micro-rates caused some visual injury (leaf burning around the margins and chlorosis) to red beet at the 2X rate - plants were stunted and there was a decrease in plant dry weight. The yield of #1 and #2 red beets were no different than the untreated check, but there were fewer #3, #4 and #5 (oversized) beets at the 2X rate. Total yield was not significantly less than the untreated check.

Visual injury - stunting and reduced plant dry weight was observed in the pyridate+s-metolachlor treatment. Pyridate+s-metolachlor applied early POST did reduce yield of #1 and #2 beets, while #3, #4 and #5 beet yields were significantly greater than the untreated check. Total yield was not less than the untreated check.

The pyridate micro-rates did not reduce the quality of red beets, however, the pyridate+s-metolachlor treatment did increase the number of larger and oversized beets (#3, #4 and #5), which is undesirable for processing red beets.

TOLERANCE OF RED BEET TO PHENMEDIPHAM/DESMEDIPHAM AND TRIFLUSULFURON-METHYL

DAVE BILYEA, DARREN ROBINSON

Experiment ID: RB06T1

CROP: BEAVA, BEET, RED (DETROIT DARK RED MT). Planted: May-29-06, 38 CM Row Width.

Planting Method: MONOSEM VACUUM PLANTER. Emerged On: Jun-07-06.

FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RIDGETOWN

Site Description: Soil Texture: LOAM. %OM: 5.8 %Sand: 49.3 %Silt: 29.5 %Clay: 21.2 pH: 5.8 CEC: 14.

APPLICATION DESCRIPTION

Application: A
 Date : Jun-15-06
 Time of Day: 8:00
 Method : SPRAY
 Timing : POST
 Placement : FOLIAR
 Air Temp. : 21 C
 % Humidity : 40
 Wind Speed : 1 KPH
 Cloud Cover: 0%
 Equipment : CO2 SPRAY
 Pressure : 207
 Nozzle Type: AIR INDUC
 Nozzle Size: UDL120-02
 Noz.Spacing: 50 CM
 Boom Length: 1.5 M
 Boom Height: 50 CM
 Carrier : WATER
 Appl.Volume: 200 L/HA

| Weed Code | Grade #1 | Grade #2 |
|----------------------------|-------------|--|
| Crop Code | BEAVD | BEAVD |
| Part Rated | BEAVD | BEAVD |
| Rating Data Type | TOTAL | TOTAL |
| Rating Unit | YIELD | YIELD |
| Rating Date | T/HA | T/HA |
| Crop Stage | Aug-04-06 | Aug-04-06 |
| Trt-Eval Interval | 50 DA-A | 50 DA-A |
| Trt Treatment | Rate | Unit |
| No. Name | | |
| 1 UNTREATED CHECK | 0 | a 0 a 0 a 58.4 b 7.18 a 4.4 a 5.7 a |
| 2 PHENMEDIPHAM/DESMEDIPHAM | 420 G A/HA | 0 a 0 a 0 a 76.0 ab 7.68 a 3.5 a 6.2 a |
| 3 TRIFLUSULFURON-METHYL | 17.5 G A/HA | 1 a 0 a 0 a 58.7 b 8.13 a 4.4 a 7.6 a |
| AGRAL 90 | 0.25 % V/V | |
| 4 PHENMEDIPHAM/DESMEDIPHAM | 840 G A/HA | 1 a 0 a 0 a 67.3 ab 7.53 a 4.5 a 7.2 a |
| 5 TRIFLUSULFURON-METHYL | 35 G A/HA | 3 a 0 a 0 a 101.4 a 7.45 a 4.7 a 8.2 a |
| AGRAL 90 | 0.5 G A/HA | |
| 6 PYRAZON | 2160 G A/HA | 1 a 0 a 0 a 50.7 b 7.33 a 4.0 a 5.9 a |
| LSD (P=.05) | 3.1 | 0.0 0.0 36.92 1.469 1.60 2.98 |
| Standard Deviation | 2.0 | 0.0 0.0 24.50 0.975 1.06 1.98 |
| CV | 194.32 | 0.0 0.0 35.65 12.92 24.9 29.06 |

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

| Weed Code | Grade #3 | Grade #4 | Grade #5 |
|----------------------------|-------------|----------------------------|-----------|
| Crop Code | BEAVD | BEAVD | BEAVD |
| Part Rated | BEAVD | BEAVD | BEAVD |
| Rating Data Type | TOTAL | TOTAL | TOTAL |
| Rating Unit | YIELD | YIELD | YIELD |
| Rating Date | T/HA | T/HA | T/HA |
| Rating Date | Aug-04-06 | Aug-04-06 | Aug-04-06 |
| Trt-Eval Interval | 50 DA-A | 50 DA-A | 50 DA-A |
| Trt Treatment | Rate | Unit | |
| No. Name | | | |
| 1 UNTREATED CHECK | 20.1 | a 2.3 a 0.0 a 32.5 a | |
| 2 PHENMEDIPHAM/DESMEDIPHAM | 420 G A/HA | 17.8 ab 4.3 a 0.0 a 31.9 a | |
| 3 TRIFLUSULFURON-METHYL | 17.5 G A/HA | 18.7 ab 3.0 a 0.0 a 33.7 a | |
| AGRAL 90 | 0.25 % V/V | | |
| 4 PHENMEDIPHAM/DESMEDIPHAM | 840 G A/HA | 15.7 b 2.7 a 0.6 a 30.6 a | |
| 5 TRIFLUSULFURON-METHYL | 35 G A/HA | 17.2 ab 1.4 a 0.0 a 31.5 a | |
| AGRAL 90 | 0.5 G A/HA | | |
| 6 PYRAZON | 2160 G A/HA | 17.1 ab 1.1 a 0.5 a 28.5 a | |
| LSD (P=.05) | 4.31 | 3.86 0.92 5.82 | |
| Standard Deviation | 2.86 | 2.56 0.61 3.86 | |
| CV | 16.12 | 104.21 358.79 12.26 | |

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

Trial Comments

CONCLUSIONS: This experiment was conducted to determine the tolerance of red beet to desmedipham/phenmedipham and trisulfuron-methyl, pyridate was included for comparison to the industry standard. Desmedipham/phenmedipham and trisulfuron-methyl did not cause significant visual injury to red beets, nor did they reduce plant dry weight, sugars or yield.

EFFECT OF TIMING ON TOLERANCE OF RED BEET TO S-METOLACHLOR

DAVE BILYEY, DARREN ROBINSON

Experiment ID: RB06T2

CROP: BEAVA, BEET, RED (DETROIT DARK RED MT). Planted: May-29-06, 38 CM Row Width.

Planting Method: MONOSEM VACUUM PLANTER. Emerged On: Jun-07-06.

FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RIDGETOWN
 Site Description: Soil Texture: LOAM. %OM: 5.8 %Sand: 49.3 %Silt: 29.5 %Clay: 21.2 pH: 5.8 CEC: 14.

APPLICATION DESCRIPTION

| Application: | A | B | C |
|--------------|-----------|-----------|-----------|
| Date | May-29-06 | May-30-06 | Jun-07-06 |
| Time of Day | 20:00 | 8:00 | 14:00 |
| Method | SPRAY | SPRAY | SPRAY |
| Timing | PPI | PRE | POST 1 |
| Placement | SOIL | SOIL | FOLIAR |
| Air Temp. | 28 C | 24 C | 29 C |
| % Humidity | 65 | 88 | 28 |
| Wind Speed | 1.8 KPH | 4 KPH | 2 KPH |
| Cloud Cover | 0% | 0% | 60% |
| Equipment | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY |
| Pressure | 207 | 207 | 207 |
| Nozzle Type | AIR INDUC | AIR INDUC | AIR INDUC |
| Nozzle Size | UDL120-02 | UDL120-02 | UDL120-02 |
| Noz.Spacing | 50 CM | 50 CM | 50 CM |
| Boom Length | 1.5 M | 1.5 M | 1.5 M |
| Boom Height | 50 CM | 50 CM | 50 CM |
| Carrier | WATER | WATER | WATER |
| Appl.Volume | 200 L/HA | 200 L/HA | 200 L/HA |

| Weed Code | | | | | | GRADE #1 | GRADE #2 | GRADE #3 |
|-------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | | BEAVD | BEAVD | BEAVD | BEAVD | BEAVD | BEAVD | BEAVD |
| Rating Data Type | | INJURY | INJURY | INJURY | DRY WT | SUGARS | YIELD | YIELD |
| Rating Unit | | % | % | % | G | % | T/HA | T/HA |
| Rating Date | | Jun-14-06 | Jun-21-06 | Jul-03-06 | Jul-17-06 | Jul-31-06 | Jul-31-06 | Jul-31-06 |
| Crop Stage | | COT-2 LF | 2-3 LF | 4-5 LF | | | | |
| Trt-Eval Interval | | 7 DAE | 14 DAE | 28 DAE | 28 DAE | 54 DAE | 54 DAE | 54 DAE |

| Trt No. | Treatment Name | Rate | Unit | | | | | | | | | |
|--------------------|-----------------|------|--------|-----|-----|-----|---------|--------|-------|-------|--------|----|
| 1 | UNTREATED CHECK | | | 0 | a 0 | a 0 | a 70.7 | ab 7.4 | a 4.3 | a 6.3 | a 9.9 | ab |
| 2 | S-METOLACHLOR | 1200 | G A/HA | 0 | a 0 | a 0 | a 95.9 | ab 7.9 | a 4.9 | a 8.3 | a 11.1 | ab |
| 3 | S-METOLACHLOR | 2400 | G A/HA | 0 | a 0 | a 0 | a 76.8 | ab 7.3 | a 4.4 | a 5.7 | a 10.5 | ab |
| 4 | S-METOLACHLOR | 1200 | G A/HA | 0 | a 0 | a 0 | a 70.9 | ab 7.6 | a 5.5 | a 6.6 | a 12.8 | a |
| 5 | S-METOLACHLOR | 2400 | G A/HA | 0 | a 0 | a 0 | a 63.9 | b 7.7 | a 4.4 | a 6.8 | a 12.1 | ab |
| 6 | S-METOLACHLOR | 1200 | G A/HA | 0 | a 0 | a 0 | a 106.6 | a 7.4 | a 5.9 | a 7.4 | a 8.9 | b |
| 7 | S-METOLACHLOR | 2400 | G A/HA | 0 | a 0 | a 0 | a 59.1 | b 7.4 | a 4.3 | a 6.3 | a 11.9 | ab |
| LSD (P=.05) | | | | 0.0 | 0.0 | 0.0 | 40.38 | 1.59 | 1.84 | 3.18 | 3.71 | |
| Standard Deviation | | | | 0.0 | 0.0 | 0.0 | 27.18 | 1.07 | 1.24 | 2.14 | 2.50 | |
| CV | | | | 0.0 | 0.0 | 0.0 | 34.99 | 14.24 | 25.69 | 31.59 | 22.68 | |

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

| Weed Code | | GRADE #4 |
|-------------------|--|---------------------|
| Crop Code | | BEAVD BEAVD |
| Part Rated | | TOTAL |
| Rating Data Type | | YIELD YIELD |
| Rating Unit | | T/HA T/HA |
| Rating Date | | Jul-31-06 Jul-31-06 |
| Trt-Eval Interval | | 54 DAE 54 DAE |

| Trt No. | Treatment Name | Rate | Unit | | | |
|--------------------|-----------------|------|--------|--------|----|-------|
| 1 | UNTREATED CHECK | | | 2.5 | a | 23.1 |
| 2 | S-METOLACHLOR | 1200 | G A/HA | 2.1 | ab | 26.4 |
| 3 | S-METOLACHLOR | 2400 | G A/HA | 0.4 | b | 20.9 |
| 4 | S-METOLACHLOR | 1200 | G A/HA | 0.6 | ab | 25.5 |
| 5 | S-METOLACHLOR | 2400 | G A/HA | 0.0 | b | 23.2 |
| 6 | S-METOLACHLOR | 1200 | G A/HA | 0.0 | b | 22.2 |
| 7 | S-METOLACHLOR | 2400 | G A/HA | 1.3 | ab | 23.8 |
| LSD (P=.05) | | | | 2.12 | | 6.21 |
| Standard Deviation | | | | 1.43 | | 4.18 |
| CV | | | | 146.15 | | 17.72 |

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

Trial Comments

CONCLUSIONS: This experiment was conducted to determine the tolerance of red beet to s-metolachlor applied pre-plant incorporated, preemergence or postemergence. S-metolachlor did not cause visual injury to red beet. Sugar content and yield were not less than the untreated check at any of the herbicide timings or rates.

SUGAR BEET TOLERANCE AND WEED CONTROL WITH MERAMITRON

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T2

CROP: BEAVA, BEET, SUGAR (CRYSTAL 963). Planted: Apr-19-06, 75 CM Row Width.

Planting Method: MONOSEM VACUUM PLANTER. Emerged On: Apr-29-06.

FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 2 M x 40 M.

Expt. Location: RCAT - K RANGE.

Site Description: Soil Texture: WATFORD/ BRADY SERIES. %OM:9.2 %Sand:49.4 %Silt:33.6 %Clay:17.0 pH:7.2 CEC: 20.

APPLICATION DESCRIPTION

| Application: | A | B | C | D |
|--------------|-----------|-----------|-----------|-----------|
| Date | May-01-06 | May-9-06 | May-23-06 | Jun-5-06 |
| Time of Day | 14:00 | 19:00 | 11:00 | 10:00 |
| Method | SPRAY | SPRAY | SPRAY | SPRAY |
| Timing | POST 1 | POST 2 | POST 3 | POST 4 |
| Placement | FOLIAR | FOLIAR | FOLIAR | FOLIAR |
| Air Temp. | 22 C | 15 C | 22 C | 24 C |
| % Humidity | 26 | 54 | 39 | 44 |
| Wind Speed | 4 KPH | 6 KPH | 1 KPH | 2 KPH |
| Cloud Cover | 20% | 50 | 0 | 0 |
| Equipment | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY |
| Pressure | 207 | 207 | 207 | 207 |
| Nozzle Type | AIR INDUC | AIR INDUC | AIR INDUC | AIR INDUC |
| Nozzle Size | UDL120-02 | UDL120-02 | UDL120-02 | UDL120-02 |
| Noz. Spacing | 50 CM | 50 CM | 50 CM | 50 CM |
| Boom Length | 1.5 M | 1.5 M | 1.5 M | 1.5 M |
| Boom Height | 50 CM | 50 CM | 50 CM | 50 CM |
| Carrier | WATER | WATER | WATER | WATER |
| Appl. Volume | 200 L/HA | 200 L/HA | 200 L/HA | 200 L/HA |

STAGE AT APPLICATION

| Application | A | B | C | D |
|-------------|------------|--------------|--------------|--------------|
| Crop Stage | BEAV COT | BEAV .2-3 LF | BEAV 4-5 LF | BEAV 6-7 LF |
| WEED 1 CODE | ABUTH COT | ABUTH COT | ABUTH COT | ABUTH COT |
| DENSITY | 1 SQ M | 1 SQ M | 3 SQ M | 1 SQ M |
| WEED 2 CODE | AMARE COT | AMARE COT | AMARE COT | AMARE COT |
| DENSITY | 49 SQ M | 156 SQ M | 119 SQ M | 88 SQ M |
| WEED 3 CODE | CHEAL COT | CHEAL COT | CHEAL COT | CHEAL COT |
| DENSITY | 491 SQ M | 366 SQ M | 297 SQ M | 220 SQ M |
| WEED4 CODE | PANDI 1 LF | PANDI 1-3 LF | PANDI 1-3 LF | PANDI 1-3 LF |
| DENSITY | 21 SQ M | 383 SQ M | 230 SQ M | 173 SQ M |

| Crop Code | BEAVA | BEAVA | BEAVA | BEAVA |
|------------------|-----------|-----------|-----------|-----------|
| Rating Data Type | INJURY | INJURY | INJURY | INJURY |
| Rating Unit | % | % | % | % |
| Rating Date | May-09-06 | May-17-06 | Jun-02-06 | Jun-15-06 |
| Crop Stage | COT-2 LF | 2 LF | 6 LF | 10-11 LF |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Grow Stg | Appl Code | | | | | |
|---------|--------------------------|-----------|-----------|------|-----------|----------|-----------|-----|-----|--------|-----|---|
| 1 | UNTREATED CHECK | | | | | | | 0 | a 0 | a 0 | b 0 | a |
| 2 | METAMITRON | 70 | WG | 900 | G A/HA | POST1234 | ABCD | 0 | a 0 | a 0 | b 0 | a |
| 3 | METAMITRON | 70 | WG | 1800 | G A/HA | POST1234 | ABCD | 0 | a 0 | a 0 | b 0 | a |
| 4 | PHENMEDIPHAM/DESMEDIPHAM | 150 | EC | 124 | G A/HA | POST1234 | ABCD | 0 | a 0 | a 9 | a 0 | a |
| | TRIFLUSULFURON | 50 | DF | 4.5 | G A/HA | POST1234 | ABCD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABCD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST1234 | ABCD | | | | | |
| 5 | PHENMEDIPHAM/DESMEDIPHAM | 150 | EC | 124 | G A/HA | POST1234 | ABCD | 0 | a 0 | a 8 | a 0 | a |
| | TRIFLUSULFURON | 50 | DF | 4.5 | G A/HA | POST1234 | ABCD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABCD | | | | | |
| | METAMITRON | 70 | WG | 900 | G A/HA | POST1234 | ABCD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST1234 | ABCD | | | | | |
| | LSD (P=.05) | | | | | | | 0.0 | 0.0 | 6.3 | 0.0 | |
| | Standard Deviation | | | | | | | 0.0 | 0.0 | 4.1 | 0.0 | |
| | CV | | | | | | | 0.0 | 0.0 | 125.61 | 0.0 | |

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

SUGAR BEET TOLERANCE AND WEED CONTROL WITH MERAMITRON

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T2

| | | | | |
|--------------------|------------|-----------|-----------|-----------|
| Weed Code | BEAVA | AMARE | CHEAL | PANDI |
| Crop Code | BEAVA | BEAVA | BEAVA | BEAVA |
| Rating Data Type | ST. COUNTS | CONTROL | CONTROL | CONTROL |
| Rating Unit | #/2M ROW | % | % | % |
| Rating Date | May-31-06 | Jun-02-06 | Jun-02-06 | Jun-02-06 |
| Crop Stage | | 6 LF | 6 LF | 6 LF |
| Weed Stage | | 20+ LF | 20+ LF | 1-3 LF |
| Weed Density, Unit | | 87.5SQ M | 220 SQ M | 173 SQ M |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate Rate | Rate Unit | Grow Stg | Appl Code | | | | | |
|---------|--------------------------|-----------|-----------|-----------|-----------|----------|-----------|----|------|-------|---------|----|
| 1 | UNTREATED CHECK | | | | | | | 10 | a 0 | c 0 | c 0.0 | c |
| 2 | METAMITRON | 70 | WG | 900 | G A/HA | POST1234 | ABCD | 9 | a 67 | b 65 | b 25.0 | c |
| 3 | METAMITRON | 70 | WG | 1800 | G A/HA | POST1234 | ABCD | 12 | a 85 | ab 84 | ab 32.5 | bc |
| 4 | PHENMEDIPHAM/DESMEDIPHAM | 150 | EC | 124 | G A/HA | POST1234 | ABCD | 10 | a 94 | a 95 | a 66.3 | ab |
| | TRIFLUSULFURON | 50 | DF | 4.5 | G A/HA | POST1234 | ABCD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABCD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST1234 | ABCD | | | | | |
| 5 | PHENMEDIPHAM/DESMEDIPHAM | 150 | EC | 124 | G A/HA | POST1234 | ABCD | 11 | a 99 | a 99 | a 85.0 | a |
| | TRIFLUSULFURON | 50 | DF | 4.5 | G A/HA | POST1234 | ABCD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABCD | | | | | |
| | METAMITRON | 70 | WG | 900 | G A/HA | POST1234 | ABCD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST1234 | ABCD | | | | | |

| | | | | |
|--------------------|-------|-------|-------|-------|
| LSD (P=.05) | 4.6 | 21.4 | 18.8 | 39.48 |
| Standard Deviation | 3.0 | 13.9 | 12.2 | 25.63 |
| CV | 28.97 | 20.11 | 17.81 | 61.38 |

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

| | | | | |
|--------------------|-----------|-----------|-----------|-----------|
| Weed Code | ABUTH | AMARE | CHEAL | |
| Crop Code | BEAVA | BEAVA | BEAVA | BEAVA |
| Rating Data Type | CONTROL | CONTROL | CONTROL | WEEDY |
| Rating Unit | % | % | % | NO TOTAL |
| Rating Date | Jun-26-06 | Jun-26-06 | Jun-26-06 | Oct-16-06 |
| Crop Stage | 10-11 LF | 10-11 LF | 10-11 LF | |
| Weed Stage | 2-3 LF | 20+ LF | 20+ LF | |
| Weed Density, Unit | 1.5 SQ M | 3 SQ M | 35 SQ M | |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate Rate | Rate Unit | Grow Stg | Appl Code | | | | | |
|---------|--------------------------|-----------|-----------|-----------|-----------|----------|-----------|----|-------|------|------|----|
| 1 | UNTREATED CHECK | | | | | | | 0 | c 0 | b 0 | c 4 | b |
| 2 | METAMITRON | 70 | WG | 900 | G A/HA | POST1234 | ABCD | 79 | ab 85 | a 48 | b 21 | ab |
| 3 | METAMITRON | 70 | WG | 1800 | G A/HA | POST1234 | ABCD | 70 | b 90 | a 75 | a 19 | ab |
| 4 | PHENMEDIPHAM/DESMEDIPHAM | 150 | EC | 124 | G A/HA | POST1234 | ABCD | 94 | a 76 | a 91 | a 26 | a |
| | TRIFLUSULFURON | 50 | DF | 4.5 | G A/HA | POST1234 | ABCD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABCD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST1234 | ABCD | | | | | |
| 5 | PHENMEDIPHAM/DESMEDIPHAM | 150 | EC | 124 | G A/HA | POST1234 | ABCD | 96 | a 98 | a 98 | a 36 | a |
| | TRIFLUSULFURON | 50 | DF | 4.5 | G A/HA | POST1234 | ABCD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABCD | | | | | |
| | METAMITRON | 70 | WG | 900 | G A/HA | POST1234 | ABCD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST1234 | ABCD | | | | | |

| | | | | |
|--------------------|-------|------|-------|-------|
| LSD (P=.05) | 21.0 | 22.6 | 27.2 | 19.7 |
| Standard Deviation | 13.6 | 14.7 | 17.7 | 12.8 |
| CV | 20.19 | 21.0 | 28.34 | 59.66 |

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

SUGAR BEET TOLERANCE AND WEED CONTROL WITH MERAMITRON

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T2

| | | | | | |
|------------------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | BEAVA | BEAVA | BEAVA | BEAVA | BEAVA |
| Rating Data Type | W. FREE | WEEDY | W. FREE | WEEDY | W. FREE |
| Rating Unit | NO TOTAL | T/HA | T/HA | T/AC | T/AC |
| Rating Date | Oct-16-06 | Oct-16-06 | Oct-16-06 | Oct-16-06 | Oct-16-06 |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Grow Stg | Appl Code | | | | | | |
|--------------------|--------------------------|-----------|-----------|------|-----------|----------|-----------|-------|---|-------|----|-------|-----------------|
| 1 | UNTREATED CHECK | | | | | | | 36 | a | 9.6 | c | 77.0 | a 4.3 c 34.3a |
| 2 | METAMITRON | 70 | WG | 900 | G A/HA | POST1234 | ABCD | 33 | a | 31.5 | bc | 72.0 | a 14.1 bc 32.1a |
| 3 | METAMITRON | 70 | WG | 1800 | G A/HA | POST1234 | ABCD | 38 | a | 27.9 | bc | 81.0 | a 12.5 bc 36.1a |
| 4 | PHENMEDIPHAM/DESMEDIPHAM | 150 | EC | 124 | G A/HA | POST1234 | ABCD | 32 | a | 48.1 | ab | 70.2 | a 21.4 ab 31.3a |
| | TRIFLUSULFURON | 50 | DF | 4.5 | G A/HA | POST1234 | ABCD | | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABCD | | | | | | |
| | MERGE | | SO | 1 | L/HA | POST1234 | ABCD | | | | | | |
| 5 | PHENMEDIPHAM/DESMEDIPHAM | 150 | EC | 124 | G A/HA | POST1234 | ABCD | 44 | a | 62.3 | a | 83.3 | a 27.8 a 37.2a |
| | TRIFLUSULFURON | 50 | DF | 4.5 | G A/HA | POST1234 | ABCD | | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABCD | | | | | | |
| | METAMITRON | 70 | WG | 900 | G A/HA | POST1234 | ABCD | | | | | | |
| | MERGE | | SO | 1 | L/HA | POST1234 | ABCD | | | | | | |
| LSD (P=.05) | | | | | | | | 19.4 | | 30.50 | | 30.76 | 13.61 13.72 |
| Standard Deviation | | | | | | | | 12.6 | | 19.80 | | 19.96 | 8.83 8.90 |
| CV | | | | | | | | 34.34 | | 55.17 | | 26.02 | 55.17 26.02 |

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

Trial Comments

CONCLUSIONS: Metamitron was tested alone and in combination with phenmedipham/desmedipham micro-rates or with trisulfuron and clopyralid. The metamitron micro-rates gave similar control to the phenmedipham/desmedipham micro-rates and gave good early season control with trisulfuron and clopyralid, but late season escapes occurred in the metamitron, trisulfuron and clopyralid treatments.

WEED CONTROL AND TOLERANCE OF SUGARBEETS TO TANK MIXES OF DESMEDIPHAM/PHENMEDIPHAM MICRO RATES WITH SINGLE AND SPLIT APPLICATIONS OF S-METOLACHLOR

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T3

CROP: BEAVA, BEET, SUGAR (CRYSTAL 963). Planted: Apr-19-06, 75 CM Row Width.

Planting Method: MONOSEM VACUUM PLANTER. Emerged On: Apr-29-06.

FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 44 M. Expt. Location: RCAT - K.

Site Description: Soil Texture: WATFORD/BRADY SERIES. %OM:9.2 %Sand:49.4 %Silt:33.6 %Clay: 17.0 pH: 7.2 CEC: 20.

APPLICATION DESCRIPTION

| Application: | A | B | C | D |
|--------------|-----------|-----------|-----------|-----------|
| Date | May-01-06 | May-9-06 | May-23-06 | Jun-5-06 |
| Time of Day | 14:00 | 19:00 | 11:00 | 10:00 |
| Method | SPRAY | SPRAY | SPRAY | SPRAY |
| Timing | POST 1 | POST 2 | POST 3 | POST 4 |
| Placement | FOLIAR | FOLIAR | FOLIAR | FOLIAR |
| Air Temp. | 22 C | 15 C | 22 C | 24 C |
| % Humidity | 26 | 54 | 39 | 44 |
| Wind Speed | 4 KPH | 6 KPH | 1 KPH | 2 KPH |
| Cloud Cover | 20% | 50 | 0 | 0 |
| Equipment | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY |
| Pressure | 207 | 207 | 207 | 207 |
| Nozzle Type | AIR INDUC | AIR INDUC | AIR INDUC | AIR INDUC |
| Nozzle Size | UDL120-02 | UDL120-02 | UDL120-02 | UDL120-02 |
| Noz.Spacing | 50 CM | 50 CM | 50 CM | 50 CM |
| Boom Length | 1.5 M | 1.5 M | 1.5 M | 1.5 M |
| Boom Height | 50 CM | 50 CM | 50 CM | 50 CM |
| Carrier | WATER | WATER | WATER | WATER |
| Appl.Volume | 200 L/HA | 200 L/HA | 200 L/HA | 200 L/HA |

STAGE AT APPLICATION

| Application | A | B | C | D |
|-------------|-----------|--------------|-------------|-------------|
| Crop Stage | BEAV COT | BEAV .2-3 LF | BEAV 4-5 LF | BEAV 6-7 LF |
| WEED 1 CODE | ABUTH COT | ABUTH COT | ABUTH COT | ABUTH COT |
| DENSITY | 2 SQ M | 2 SQ M | 8 SQ M | 5 SQ M |
| WEED 2 CODE | AMARE COT | AMARE COT | AMARE COT | AMARE COT |
| DENSITY | | 71 SQ M | 54 SQ M | 33 SQ M |
| WEED 3 CODE | CHEAL COT | CHEAL COT | CHEAL COT | CHEAL COT |
| DENSITY | 124 SQ M | 234 SQ M | 152 SQ M | 166 SQ M |

| Crop Code | BEAVA | BEAVA | BEAVA | BEAVA |
|------------------|-----------|-----------|-----------|-----------|
| Rating Data Type | INJURY | INJURY | INJURY | INJURY |
| Rating Unit | % | % | % | % |
| Rating Date | May-09-06 | May-17-06 | May-25-06 | Jun-06-06 |
| Crop Stage | COT-2 LF | 2 LF | 4 LF | 7-8 LF |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Grow Unit | Grow Stg | Appl Code | | | | | |
|---------|--------------------------|-----------|-----------|------|-----------|----------|-----------|-----|-----|-----|-----|----|
| 1 | UNTREATED | | | | | | 0 | a 0 | a 0 | a 3 | ab | |
| 2 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST1234 | ABDC | 0 | a 0 | a 1 | a 0 | b |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST1234 | ABDC | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABDC | | | | | |
| | MERGE | | SO | 1 | L/HA | POST1234 | ABDC | | | | | |
| 3 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST124 | ABD | 0 | a 0 | a 1 | a 3 | ab |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST124 | ABD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST124 | ABD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST124 | ABD | | | | | |
| | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST3 | C | | | | | |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST3 | C | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST3 | C | | | | | |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 1200 | G A/HA | POST3 | C | | | | | |
| | MERGE | | SO | 1 | L/HA | POST3 | C | | | | | |
| 4 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST13 | AC | 0 | a 0 | a 1 | a 3 | ab |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST13 | AC | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST13 | AC | | | | | |
| | MERGE | | SO | 1 | L/HA | POST13 | AC | | | | | |
| | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST24 | BD | | | | | |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST24 | BD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST24 | BD | | | | | |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST24 | BD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST24 | BD | | | | | |

WEED CONTROL AND TOLERANCE OF SUGARBEETS TO TANK MIXES OF DESMEDIPHAM/PHENMEDIPHAM MICRO RATES WITH SINGLE AND SPLIT APPLICATIONS OF S-METOLACHLOR

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T3

| Crop Code | Rating Data Type | Rating Unit | Rating Date | Crop Stage | BEAVA INJURY % | BEAVA INJURY % | BEAVA INJURY % | BEAVA INJURY % | | | | |
|--------------------|--------------------------|-------------|-------------|------------|----------------|----------------|----------------|----------------|-----|--------|--------|----|
| | | | | | May-09-06 | May-17-06 | May-25-06 | Jun-06-06 | | | | |
| | | | | | COT-2 LF | 2 LF | 4 LF | 7-8 LF | | | | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Unit | Grow Stg | Appl Code | | | | | |
| 5 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST13 | AC | 0 | a 0 | a 1 | a 6 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST13 | AC | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST13 | AC | | | | | |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST13 | AC | | | | | |
| | MERGE | | SO | 1 | L/HA | POST13 | AC | | | | | |
| | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST24 | BD | | | | | |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST24 | BD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST24 | BD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST24 | BD | | | | | |
| 6 | S-METOLACHLOR/BENOXACOR | 915 | EC | 1200 | G A/HA | POST3 | C | 0 | a 0 | a 0 | a 3 | ab |
| 7 | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST24 | BD | 0 | a 0 | a 0 | a 0 | b |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST13 | AC | | | | | |
| LSD (P=.05) | | | | | | | | 0.0 | 0.0 | 2.6 | 5.9 | |
| Standard Deviation | | | | | | | | 0.0 | 0.0 | 1.7 | 4.0 | |
| CV | | | | | | | | 0.0 | 0.0 | 241.52 | 172.16 | |

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

| Weed Code | Crop Code | Rating Data Type | Rating Unit | Rating Date | Crop Stage | Weed Density, Unit | BEAVA INJURY % | BEAVA INJURY % | BEAVA ST. COUNTS #/2M ROW | ABUTH BEAVA CONTROL % | | |
|--------------------|--------------------------|------------------|-------------|-------------|------------|--------------------|----------------|----------------|---------------------------|-----------------------|-------|---|
| | | | | | | | Jun-23-06 | Jul-04-06 | May-31-06 | Jun-06-06 | | |
| | | | | | | | 10-12 LF | 12-14 LF | | 7-8 LF | | |
| | | | | | | | | | | 4.5 SQ M | | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Unit | Grow Stg | Appl Code | | | | | |
| 1 | UNTREATED | | | | | | | 0 | a 0 | a 19 | a 24 | b |
| 2 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST1234 | ABDC | 0 | a 0 | a 18 | ab 92 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST1234 | ABDC | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABDC | | | | | |
| | MERGE | | SO | 1 | L/HA | POST1234 | ABDC | | | | | |
| 3 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST124 | ABD | 0 | a 0 | a 15 | b 90 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST124 | ABD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST124 | ABD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST124 | ABD | | | | | |
| | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST3 | C | | | | | |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST3 | C | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST3 | C | | | | | |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 1200 | G A/HA | POST3 | C | | | | | |
| | MERGE | | SO | 1 | L/HA | POST3 | C | | | | | |
| 4 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST13 | AC | 0 | a 0 | a 17 | ab 97 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST13 | AC | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST13 | AC | | | | | |
| | MERGE | | SO | 1 | L/HA | POST13 | AC | | | | | |
| | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST24 | BD | | | | | |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST24 | BD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST24 | BD | | | | | |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST24 | BD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST24 | BD | | | | | |
| 5 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST13 | AC | 0 | a 0 | a 19 | a 94 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST13 | AC | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST13 | AC | | | | | |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST13 | AC | | | | | |
| | MERGE | | SO | 1 | L/HA | POST13 | AC | | | | | |
| | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST24 | BD | | | | | |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST24 | BD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST24 | BD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST24 | BD | | | | | |
| 6 | S-METOLACHLOR/BENOXACOR | 915 | EC | 1200 | G A/HA | POST3 | C | 0 | a 0 | a 19 | a 46 | b |
| 7 | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST24 | BD | 0 | a 0 | a 15 | b 46 | b |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST13 | AC | | | | | |
| LSD (P=.05) | | | | | | | | 0.0 | 0.0 | 3.2 | 30.2 | |
| Standard Deviation | | | | | | | | 0.0 | 0.0 | 2.1 | 20.4 | |
| CV | | | | | | | | 0.0 | 0.0 | 12.35 | 29.16 | |

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

WEED CONTROL AND TOLERANCE OF SUGARBEETS TO TANK MIXES OF DESMEDIPHAM/PHENMEDIPHAM MICRO RATES WITH SINGLE AND SPLIT APPLICATIONS OF S-METOLACHLOR

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T3

| | | | | |
|--------------------|-----------|-----------|-----------|-----------|
| Weed Code | AMARE | CHEAL | ABUTH | AMARE |
| Crop Code | BEAVA | BEAVA | BEAVA | BEAVA |
| Rating Data Type | CONTROL | CONTROL | CONTROL | CONTROL |
| Rating Unit | % | % | % | % |
| Rating Date | Jun-06-06 | Jun-06-06 | Jul-04-06 | Jul-04-06 |
| Crop Stage | 7-8 LF | 7-8 LF | 12-14 LF | 12-14 LF |
| Weed Stage | | | 6-9 LF | 3-20+ LF |
| Weed Density, Unit | 33 SQ M | 166 SQ M | 1.5 SQ M | 11.5SQ M |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Grow Stg | Appl Code | | | | | |
|---------|--------------------------|-----------|-----------|------|-----------|----------|-----------|----|------|------|-------|---|
| 1 | UNTREATED | | | | | | | 24 | b 24 | b 0 | c 0 | b |
| 2 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST1234 | ABDC | 86 | a 84 | a 97 | ab 95 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST1234 | ABDC | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABDC | | | | | |
| | MERGE | | SO | 1 | L/HA | POST1234 | ABDC | | | | | |
| 3 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST124 | ABD | 87 | a 85 | a 97 | ab 96 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST124 | ABD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST124 | ABD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST124 | ABD | | | | | |
| | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST3 | C | | | | | |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST3 | C | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST3 | C | | | | | |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 1200 | G A/HA | POST3 | C | | | | | |
| | MERGE | | SO | 1 | L/HA | POST3 | C | | | | | |
| 4 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST13 | AC | 91 | a 91 | a 98 | a 99 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST13 | AC | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST13 | AC | | | | | |
| | MERGE | | SO | 1 | L/HA | POST13 | AC | | | | | |
| | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST24 | BD | | | | | |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST24 | BD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST24 | BD | | | | | |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST24 | BD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST24 | BD | | | | | |
| 5 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST13 | AC | 86 | a 90 | a 97 | ab 97 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST13 | AC | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST13 | AC | | | | | |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST13 | AC | | | | | |
| | MERGE | | SO | 1 | L/HA | POST13 | AC | | | | | |
| | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST24 | BD | | | | | |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST24 | BD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST24 | BD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST24 | BD | | | | | |
| 6 | S-METOLACHLOR/BENOXACOR | 915 | EC | 1200 | G A/HA | POST3 | C | 51 | b 43 | b 95 | b 96 | a |
| 7 | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST24 | BD | 35 | b 35 | b 95 | b 97 | a |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST13 | AC | | | | | |

| | | | | |
|--------------------|-------|-------|------|-----|
| LSD (P=.05) | 31.0 | 31.0 | 3.1 | 4.1 |
| Standard Deviation | 20.9 | 20.9 | 2.1 | 2.7 |
| CV | 31.76 | 32.44 | 2.55 | 3.3 |

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

WEED CONTROL AND TOLERANCE OF SUGARBEETS TO TANK MIXES OF DESMEDIPHAM/PHENMEDIPHAM MICRO RATES WITH SINGLE AND SPLIT APPLICATIONS OF S-METOLACHLOR

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T3

Weed Code
 Crop Code
 Rating Data Type
 Rating Unit
 Rating Date
 Crop Stage
 Weed Stage
 Weed Density, Unit

CHEAL
 BEAVA CONTROL %
 BEAVA WEEDY NO TOT
 BEAVA WEED FREE NO TOT
 BEAVA WEEDY T/HA
 Jul-04-06
 12-14 LF
 6-20+ LF
 98 SQ M

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Grow Stg | Appl Code | | | | | |
|---------|--------------------------|-----------|-----------|------|-----------|----------|-----------|-------|-------|-------|--------|---|
| 1 | UNTREATED | | | | | | | 0 | | | | |
| 2 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST1234 | ABDC | 84 | b 6 | b 47 | a 6.4 | b |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST1234 | ABDC | | a 42 | a 48 | a 57.5 | a |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABDC | | | | | |
| | MERGE | | SO | 1 | L/HA | POST1234 | ABDC | | | | | |
| 3 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST124 | ABD | 85 | a 44 | a 52 | a 61.3 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST124 | ABD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST124 | ABD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST124 | ABD | | | | | |
| | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST3 | C | | | | | |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST3 | C | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST3 | C | | | | | |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 1200 | G A/HA | POST3 | C | | | | | |
| | MERGE | | SO | 1 | L/HA | POST3 | C | | | | | |
| 4 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST13 | AC | 90 | a 46 | a 49 | a 68.7 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST13 | AC | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST13 | AC | | | | | |
| | MERGE | | SO | 1 | L/HA | POST13 | AC | | | | | |
| | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST24 | BD | | | | | |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST24 | BD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST24 | BD | | | | | |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST24 | BD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST24 | BD | | | | | |
| 5 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST13 | AC | 90 | a 44 | a 50 | a 62.1 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST13 | AC | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST13 | AC | | | | | |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST13 | AC | | | | | |
| | MERGE | | SO | 1 | L/HA | POST13 | AC | | | | | |
| | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST24 | BD | | | | | |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST24 | BD | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST24 | BD | | | | | |
| | MERGE | | SO | 1 | L/HA | POST24 | BD | | | | | |
| 6 | S-METOLACHLOR/BENOXACOR | 915 | EC | 1200 | G A/HA | POST3 | C | 0 | b 5 | b 45 | a 6.8 | b |
| 7 | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST24 | BD | 8 | b 4 | b 51 | a 8.0 | b |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST13 | AC | | | | | |
| | LSD (P=.05) | | | | | | | 9.2 | 9.6 | 11.0 | 13.28 | |
| | Standard Deviation | | | | | | | 6.2 | 6.5 | 7.4 | 8.94 | |
| | CV | | | | | | | 12.17 | 23.96 | 15.21 | 23.11 | |

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

WEED CONTROL AND TOLERANCE OF SUGARBEETS TO TANK MIXES OF DESMEDIPHAM/PHENMEDIPHAM MICRO RATES WITH SINGLE AND SPLIT APPLICATIONS OF S-METOLACHLOR

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T3

| Crop Code | | | | BEAVA | | BEAVA | | BEAVA | | | | | |
|--------------------|--------------------------|-----------|-----------|-----------|--------|-----------|-----------|-----------|-----|-------|---|-------|-----|
| Rating Data Type | | | | WEED FREE | | WEEDY | | WEED FREE | | | | | |
| Rating Unit | | | | T/HA | | T/AC | | T/AC | | | | | |
| Rating Date | | | | Oct-16-06 | | Oct-16-06 | | Oct-16-06 | | | | | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Unit | Grow Stg | Appl Code | | | | | | |
| 1 | UNTREATED | | | | | | | 87.0 | bc | 2.9 | b | 38.8 | bc |
| 2 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST1234 | ABDC | 83.3 | c | 25.7 | a | 37.1 | c |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST1234 | ABDC | | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABDC | | | | | | |
| | MERGE | | SO | 1 | L/HA | POST1234 | ABDC | | | | | | |
| 3 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST124 | ABD | 97.4 | abc | 27.4 | a | 43.5 | abc |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST124 | ABD | | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST124 | ABD | | | | | | |
| | MERGE | | SO | 1 | L/HA | POST124 | ABD | | | | | | |
| | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST3 | C | | | | | | |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST3 | C | | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST3 | C | | | | | | |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 1200 | G A/HA | POST3 | C | | | | | | |
| | MERGE | | SO | 1 | L/HA | POST3 | C | | | | | | |
| 4 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST13 | AC | 98.8 | ab | 30.6 | a | 44.1 | ab |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST13 | AC | | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST13 | AC | | | | | | |
| | MERGE | | SO | 1 | L/HA | POST13 | AC | | | | | | |
| | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST24 | BD | | | | | | |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST24 | BD | | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST24 | BD | | | | | | |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST24 | BD | | | | | | |
| | MERGE | | SO | 1 | L/HA | POST24 | BD | | | | | | |
| 5 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST13 | AC | 93.9 | bc | 27.7 | a | 41.9 | bc |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST13 | AC | | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST13 | AC | | | | | | |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST13 | AC | | | | | | |
| | MERGE | | SO | 1 | L/HA | POST13 | AC | | | | | | |
| | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST24 | BD | | | | | | |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST24 | BD | | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST24 | BD | | | | | | |
| | MERGE | | SO | 1 | L/HA | POST24 | BD | | | | | | |
| 6 | S-METOLACHLOR/BENOXACOR | 915 | EC | 1200 | G A/HA | POST3 | C | 91.3 | bc | 3.0 | b | 40.7 | bc |
| 7 | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST24 | BD | 110.4 | a | 3.6 | b | 49.3 | a |
| | S-METOLACHLOR/BENOXACOR | 915 | EC | 600 | G A/HA | POST13 | AC | | | | | | |
| LSD (P=.05) | | | | | | | | 14.77 | | 5.92 | | 6.59 | |
| Standard Deviation | | | | | | | | 9.94 | | 3.99 | | 4.44 | |
| CV | | | | | | | | 10.51 | | 23.11 | | 10.51 | |

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

Trial Comments

CONCLUSIONS: The best control and yield was obtained when s-metolachlor (600 g ai ha⁻¹) was applied in the second and fourth micro-rate applications. S-metolachlor applied at(1200 g ai ha⁻¹) applied caused significant injury and some yield loss when applied in a single application.

COMPARISON OF ADJUVANTS FOR WEED CONTROL AND TOLERANCE IN SUGAR BEETS

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T4

CROP: BEAVA, BEET, SUGAR (CRYSTAL 963). Planted: Apr-19-06, 75 CM Row Width.

Planting Method: MONOSEM VACUUM PLANTER. Emerged On: Apr-29-06.

FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 44 M. Expt. Location: RCAT - K.

Site Description: Soil Texture: WATFORD/BRADY SERIES. %OM:9.2 %Sand:49.4 %Silt:33.6 %Clay: 17.0 pH: 7.2 CEC: 20.

APPLICATION DESCRIPTION

| Application: | A | B | C | D |
|--------------|-----------|-----------|-----------|-----------|
| Date | May-01-06 | May-9-06 | May-23-06 | Jun-5-06 |
| Time of Day | 14:00 | 19:00 | 11:00 | 10:00 |
| Method | SPRAY | SPARY | SPRAY | SPRAY |
| Timing | POST 1 | POST 2 | POST 3 | POST 4 |
| Placement | FOLIAR | FOLIAR | FOLIAR | FOLIAR |
| Air Temp. | 22 C | 15 C | 22 C | 24 C |
| % Humidity | 26 | 54 | 39 | 44 |
| Wind Speed | 4 KPH | 6 KPH | 1 KPH | 2 KPH |
| Cloud Cover | 20% | 50 | 0 | 0 |
| Equipment | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY |
| Pressure | 207 | 207 | 207 | 207 |
| Nozzle Type | AIR INDUC | AIR INDUC | AIR INDUC | AIR INDUC |
| Nozzle Size | UDL120-02 | UDL120-02 | UDL120-02 | UDL120-02 |
| Noz.Spacing | 50 CM | 50 CM | 50 CM | 50 CM |
| Boom Length | 1.5 M | 1.5 M | 1.5 M | 1.5 M |
| Boom Height | 50 CM | 50 CM | 50 CM | 50 CM |
| Carrier | WATER | WATER | WATER | WATER |
| Appl.Volume | 200 L/HA | 200 L/HA | 200 L/HA | 200 L/HA |

STAGE AT APPLICATION

| Application | A | B | C | D |
|-------------|-----------|--------------|-------------|-------------|
| Crop Stage | BEAV COT | BEAV .2-3 LF | BEAV 4-5 LF | BEAV 6-7 LF |
| WEED 1 CODE | ABUTH COT | ABUTH COT | ABUTH COT | ABUTH COT |
| DENSITY | 2 SQ M | 2 SQ M | 8 SQ M | 0 SQ M |
| WEED 2 CODE | AMARE COT | AMARE COT | AMARE COT | AMARE COT |
| DENSITY | 4 SQ M | 81 SQ M | 33 SQ M | 35 SQ M |
| WEED 3 CODE | CHEAL COT | CHEAL COT | CHEAL COT | CHEAL COT |
| DENSITY | 79 SQ M | 649 SQ M | 235 SQ M | 131 SQ M |

| Crop Code | BEAVA | BEAVA | BEAVA | BEAVA |
|------------------|-----------|-----------|-----------|-----------|
| Rating Data Type | INJURY | INJURY | INJURY | INJURY |
| Rating Unit | % | % | % | % |
| Rating Date | May-09-06 | May-17-06 | Jun-03-06 | Jun-15-06 |
| Crop Stage | COT-2 LF | 2 LF | 6 LF | 10-11 LF |

| Trt No. | Treatment Name | Form Conc | Form Type | Form Rate | Rate Unit | Grow Stg | Appl Code | | | | |
|---------|--------------------------|-----------|-----------|-----------|-----------|----------|-----------|-----|-----|-----|---|
| 1 | UNTREATED | | | | | | 0 | a 0 | a 3 | a 0 | b |
| 2 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST1234 | ABDC 0 | a 0 | a 3 | a 0 | b |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST1234 | ABDC | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABDC | | | | |
| | MERGE | | SO | 1 | L/HA | POST1234 | ABDC | | | | |
| 3 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST1234 | ABDC 0 | a 0 | a 6 | a 0 | b |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST1234 | ABDC | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABDC | | | | |
| | MSO | | SO | 1.5 | % V/V | POST1234 | ABDC | | | | |
| 4 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST1234 | ABDC 0 | a 0 | a 3 | a 0 | b |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST1234 | ABDC | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABDC | | | | |
| | REDDY-IT | | SO | 0.25 | % V/V | POST1234 | ABDC | | | | |
| | UAN 28% | | SO | 1.25 | L/HA | POST1234 | ABDC | | | | |
| 5 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 250 | G A/HA | POST1234 | ABDC 0 | a 0 | a 3 | a 4 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 9 | G A/HA | POST1234 | ABDC | | | | |
| | CLOPYRALID | 360 | SN | 70 | G A/HA | POST1234 | ABDC | | | | |
| | MSO | | SO | 3 | % V/V | POST1234 | ABDC | | | | |

| | | | | |
|--------------------|-----|-----|--------|--------|
| LSD (P=.05) | 0.0 | 0.0 | 9.5 | 1.7 |
| Standard Deviation | 0.0 | 0.0 | 6.2 | 1.1 |
| CV | 0.0 | 0.0 | 189.47 | 149.07 |

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

COMPARISON OF ADJUVANTS FOR WEED CONTROL AND TOLERANCE IN SUGAR BEETS

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T4

| | | | | | | | | BEAVA | ABUTH | AMARE | CHEAL | |
|--------------------|--------------------------|-----------|-----------|------|-----------|----------|-----------|-----------|-----------|-----------|-----------|---|
| | | | | | | | | BEAVA | BEAVA | BEAVA | BEAVA | |
| | | | | | | | | CONTROL | CONTROL | CONTROL | CONTROL | |
| | | | | | | | | #/2M RW | % | % | % | |
| | | | | | | | | May-31-06 | Jun-03-06 | Jun-03-06 | Jun-03-06 | |
| | | | | | | | | 6 LF | 6 LF | 6 LF | 6 LF | |
| | | | | | | | | 7 SQ M | 54.5SQ M | 124 SQ M | | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Grow Stg | Appl Code | | | | | |
| 1 | UNTREATED | | | | | | | 15 | a 0 | c 0 | c 0 | c |
| 2 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST1234 | ABDC | 17 | a 92 | b 89 | b 89 | b |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST1234 | ABDC | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABDC | | | | | |
| | MERGE | | SO | 1 | L/HA | POST1234 | ABDC | | | | | |
| 3 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST1234 | ABDC | 16 | a 93 | b 89 | b 89 | b |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST1234 | ABDC | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABDC | | | | | |
| | MSO | | SO | 1.5 | % V/V | POST1234 | ABDC | | | | | |
| 4 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST1234 | ABDC | 19 | a 94 | b 94 | b 91 | b |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST1234 | ABDC | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABDC | | | | | |
| | REDDY-IT | | SO | 0.25 | % V/V | POST1234 | ABDC | | | | | |
| | UAN 28% | | SO | 1.25 | L/HA | POST1234 | ABDC | | | | | |
| 5 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 250 | G A/HA | POST1234 | ABDC | 15 | a 99 | a 99 | a 99 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 9 | G A/HA | POST1234 | ABDC | | | | | |
| | CLOPYRALID | 360 | SN | 70 | G A/HA | POST1234 | ABDC | | | | | |
| | MSO | | SO | 3 | % V/V | POST1234 | ABDC | | | | | |
| LSD (P=.05) | | | | | | | | 6.5 | 5.0 | 5.4 | 6.0 | |
| Standard Deviation | | | | | | | | 4.2 | 3.3 | 3.5 | 3.9 | |
| CV | | | | | | | | 25.96 | 4.32 | 4.72 | 5.3 | |

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

| | | | | | | | | ABUTH | AMARE | CHEAL | | |
|--------------------|--------------------------|-----------|-----------|------|-----------|----------|-----------|-----------|-----------|-----------|-----------|---|
| | | | | | | | | BEAVA | BEAVA | BEAVA | BEAVA | |
| | | | | | | | | CONTROL | CONTROL | CONTROL | WEEDY | |
| | | | | | | | | % | % | % | TOT NO | |
| | | | | | | | | Jun-26-06 | Jun-26-06 | Jun-26-06 | Oct-16-06 | |
| | | | | | | | | 10-11 LF | 10-11 LF | 10-11 LF | | |
| | | | | | | | | 1 SQ M | 19 SQ M | 77 SQ M | | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Grow Stg | Appl Code | | | | | |
| 1 | UNTREATED | | | | | | | 0 | b 0 | c 0 | c 2 | b |
| 2 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST1234 | ABDC | 96 | a 91 | ab 88 | b 39 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST1234 | ABDC | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABDC | | | | | |
| | MERGE | | SO | 1 | L/HA | POST1234 | ABDC | | | | | |
| 3 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST1234 | ABDC | 96 | a 88 | b 89 | ab 41 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST1234 | ABDC | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABDC | | | | | |
| | MSO | | SO | 1.5 | % V/V | POST1234 | ABDC | | | | | |
| 4 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST1234 | ABDC | 97 | a 93 | ab 93 | ab 41 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST1234 | ABDC | | | | | |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABDC | | | | | |
| | REDDY-IT | | SO | 0.25 | % V/V | POST1234 | ABDC | | | | | |
| | UAN 28% | | SO | 1.25 | L/HA | POST1234 | ABDC | | | | | |
| 5 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 250 | G A/HA | POST1234 | ABDC | 98 | a 94 | a 95 | a 50 | a |
| | TRIFLUSULFURON-METHYL | 50 | DF | 9 | G A/HA | POST1234 | ABDC | | | | | |
| | CLOPYRALID | 360 | SN | 70 | G A/HA | POST1234 | ABDC | | | | | |
| | MSO | | SO | 3 | % V/V | POST1234 | ABDC | | | | | |
| LSD (P=.05) | | | | | | | | 2.9 | 5.1 | 6.1 | 11.6 | |
| Standard Deviation | | | | | | | | 1.9 | 3.3 | 4.0 | 7.5 | |
| CV | | | | | | | | 2.45 | 4.54 | 5.46 | 21.95 | |

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

COMPARISON OF ADJUVANTS FOR WEED CONTROL AND TOLERANCE IN SUGAR BEETS

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T4

| Crop Code | Rating Data Type | Rating Unit | Rating Date | BEAVA WEED FREE TOT NO Oct-16-06 | BEAVA WEEDY T/HA Oct-16-06 | BEAVA W. FREE T/HA Oct-16-06 | BEAVA WEEDY T/AC Oct-16-06 | BEAVA W. FREE T/AC Oct-16-06 |
|-----------|--------------------------|-------------|-------------|---|-------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|
| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Unit | Grow Stg | Appl Code | |
| 1 | UNTREATED | | | | | | 46 | |
| 2 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST1234 | ABDC 48 | a 4.6 c 80.5 |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST1234 | ABDC | a 59.1 ab 89.9 |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABDC | |
| | MERGE | | SO | 1 | L/HA | POST1234 | ABDC | |
| 3 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST1234 | ABDC 44 | a 54.2 b 84.7 |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST1234 | ABDC | a 24.2 b 37.8a |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABDC | |
| | MSO | | SO | 1.5 | % V/V | POST1234 | ABDC | |
| 4 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 125 | G A/HA | POST1234 | ABDC 57 | a 62.2 ab 99.7 |
| | TRIFLUSULFURON-METHYL | 50 | DF | 4.5 | G A/HA | POST1234 | ABDC | a 27.7 ab 44.5a |
| | CLOPYRALID | 360 | SN | 35 | G A/HA | POST1234 | ABDC | |
| | REDDY-IT | | SO | 0.25 | % V/V | POST1234 | ABDC | |
| | UAN 28% | | SO | 1.25 | L/HA | POST1234 | ABDC | |
| 5 | DESMEDIPHAM/PHENMEDIPHAM | 150 | EC | 250 | G A/HA | POST1234 | ABDC 52 | a 79.3 a 95.0 |
| | TRIFLUSULFURON-METHYL | 50 | DF | 9 | G A/HA | POST1234 | ABDC | a 35.4 a 42.4a |
| | CLOPYRALID | 360 | SN | 70 | G A/HA | POST1234 | ABDC | |
| | MSO | | SO | 3 | % V/V | POST1234 | ABDC | |
| | LSD (P=.05) | | | | | | 14.0 | 21.64 21.89 9.65 9.77 |
| | Standard Deviation | | | | | | 9.1 | 14.04 14.21 6.26 6.34 |
| | CV | | | | | | 18.44 | 27.08 15.79 27.08 15.79 |

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

Trial Comments

CONCLUSIONS: We compared Reddy-It, Merge and MSO in sugarbeets for efficacy with micro-rates. MSO and Merge provided equivalent weed control and yield in sugarbeets.

TIMING OF WEATHERMAX APPLICATIONS IN ROUNDUP READY SUGAR BEETS

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T5

CROP: BEAVA, SUGAR BEET (CRYSTAL 963). Planted: Apr-19-06, 75 CM Row Width. Planting Method: MONOSEM VACUUM
 Emerged On: Apr-29-06.
 FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 44 M. Expt. Location: RCAT - K.
 Site Description: Soil Texture: WATFORD/BRADY SERIES. %OM:9.2% Sand:49.4% Silt:33.6% Clay:17.0 pH:7.2 CEC:20.

APPLICATION DESCRIPTION

| Application: | A | B | C | D |
|--------------|-----------|-----------|-----------|-----------|
| Date : | May-01-06 | May-9-06 | May-23-06 | Jun-5-06 |
| Time of Day: | 14:00 | 19:00 | 11:00 | 10:00 |
| Method : | SPRAY | SPARY | SPRAY | SPRAY |
| Timing : | POST 1 | POST 2 | POST 3 | POST 4 |
| Placement : | FOLIAR | FOLIAR | FOLIAR | FOLIAR |
| Air Temp. : | 22 C | 15 C | 22 C | 24 C |
| % Humidity : | 26 | 54 | 39 | 44 |
| Wind Speed : | 4 KPH | 6 KPH | 1 KPH | 2 KPH |
| Cloud Cover: | 20% | 50 | 0 | 0 |
| Equipment : | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY |
| Pressure : | 207 | 207 | 207 | 207 |
| Nozzle Type: | AIR INDUC | AIR INDUC | AIR INDUC | AIR INDUC |
| Nozzle Size: | UDL120-02 | UDL120-02 | UDL120-02 | UDL120-02 |
| Noz.Spacing: | 50 CM | 50 CM | 50 CM | 50 CM |
| Boom Length: | 1.5 M | 1.5 M | 1.5 M | 1.5 M |
| Boom Height: | 50 CM | 50 CM | 50 CM | 50 CM |
| Carrier : | WATER | WATER | WATER | WATER |
| Appl.Volume: | 200 L/HA | 200 L/HA | 200 L/HA | 200 L/HA |

STAGE AT APPLICATION

| Application | A | B | C | D |
|-------------|-----------|--------------|----------------|-------------|
| Crop Stage | BEAV COT | BEAV .2-3 LF | BEAV 4-5 LF | BEAV 4-5 LF |
| WEED 1 CODE | ABUTH COT | ABUTH COT | ABUTH COT | ABUTH COT |
| DENSITY | 2 SQ M | 6 SQ M | 3 SQ M | 7 SQ M |
| WEED 2 CODE | AMARE COT | AMARE COT | AMARE COT-6 LF | AMARE |
| DENSITY | 25 SQ M | 47 SQ M | 56 SQ M | 0 SQ M |
| WEED 3 CODE | CHEAL COT | CHEAL COT | CHEAL COT | CHEAL COT |
| DENSITY | 117 SQ M | 498 SQ M | 288 SQ M | 58 SQ M |

| Crop Code | BEAVA | BEAVA | BEAVA | BEAVA | BEAVA |
|------------------|-----------|-----------|-----------|-----------|-----------|
| Rating Data Type | INJURY | INJURY | INJURY | INJURY | INJURY |
| Rating Unit | % | % | % | % | % |
| Rating Date | May-09-06 | May-17-06 | May-25-06 | Jun-02-06 | Jun-06-06 |
| Crop Stage | COT LF | 2 LF | 4 LF | 6 LF | 6-8 LF |

| Trt No. | Treatment Name | Form Conc | Form Type | Form Rate | Rate Unit | Grow Stg | Appl Code | | | | | |
|---------|-------------------------|-----------|-----------|-----------|-----------|----------|-----------|---|---|---|---|---|
| 1 | UNTREATED | | | | | | | 0 | a | 0 | a | 0 |
| 2 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 0 | a | 0 | a | 0 |
| 3 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST2 | B | 0 | a | 0 | a | 0 |
| 4 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST3 | C | 0 | a | 0 | a | 0 |
| 5 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | 0 | a | 0 | a | 0 |
| 6 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 0 | a | 0 | a | 0 |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST3 | C | | | | | |
| 7 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 0 | a | 0 | a | 0 |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | | | | | |
| 8 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST2 | B | 0 | a | 0 | a | 0 |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST3 | C | | | | | |
| 9 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST2 | B | 0 | a | 0 | a | 0 |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | | | | | |

| | | | | | |
|--------------------|-----|-----|-----|-----|-----|
| LSD (P=.05) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Standard Deviation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| CV | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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

TIMING OF WEATHERMAX APPLICATIONS IN ROUNDUP READY SUGAR BEETS

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T5

| | | | | | | | BEAVA | BEAVA | BEAVA | ABUTH | | |
|--------------------|-------------------------|-----------|-----------|------|-----------|----------|-----------|-----------|-----------|-----------|---------|-------|
| | | | | | | | INJURY | INJURY | ST. COUNT | BEAVA | | |
| | | | | | | | % | % | #/2M RW | CONTROL | | |
| | | | | | | | Jun-09-06 | Jun-15-06 | May-31-06 | Jun-02-06 | | |
| | | | | | | | 6-8 LF | 8-10 LF | | 6 LF | | |
| | | | | | | | | | | 2 LF | | |
| | | | | | | | | | | 1 SQ M | | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Grow Stg | Appl Code | | | | | |
| 1 | UNTREATED | | | | | | | 0 | a 0 | a 17 | ab 0 d | |
| 2 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 0 | a 0 | a 15 | b 53 c | |
| 3 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST2 | B | 0 | a 0 | a 16 | ab 80 b | |
| 4 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST3 | C | 0 | a 0 | a 18 | ab 98 a | |
| 5 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | 0 | a 0 | a 18 | a 98 a | |
| 6 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 0 | a 0 | a 16 | ab 96 a | |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST3 | C | | | | | |
| 7 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 0 | a 0 | a 15 | b 99 a | |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | | | | | |
| 8 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST2 | B | 0 | a 0 | a 15 | ab 99 a | |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST3 | C | | | | | |
| 9 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST2 | B | 0 | a 0 | a 16 | ab 99 a | |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | | | | | |
| LSD (P=.05) | | | | | | | | | 0.0 | 0.0 | 3.5 | 14.0 |
| Standard Deviation | | | | | | | | | 0.0 | 0.0 | 2.4 | 9.6 |
| CV | | | | | | | | | 0.0 | 0.0 | 14.83 | 11.96 |

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

| | | | | | | | AMARE | CHEAL | ABUTH | AMARE | | |
|--------------------|-------------------------|-----------|-----------|------|-----------|----------|-----------|-----------|-----------|-----------|---------|-------|
| | | | | | | | BEAVA | BEAVA | BEAVA | BEAVA | | |
| | | | | | | | CONTROL | CONTROL | CONTROL | CONTROL | | |
| | | | | | | | % | % | % | % | | |
| | | | | | | | Jun-02-06 | Jun-02-06 | Jun-06-06 | Jun-06-06 | | |
| | | | | | | | 6 LF | 6 LF | 6-8 LF | 6-8 LF | | |
| | | | | | | | 4-22 LF | COT-20+ | COT | COT | | |
| | | | | | | | 26.5SQ M | 206 SQ M | 6.5 SQ M | 1 SQ M | | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Grow Stg | Appl Code | | | | | |
| 1 | UNTREATED | | | | | | | 0 | d 0 | d 0 | c 0 d | |
| 2 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 43 | c 43 | c 57 | b 62 c | |
| 3 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST2 | B | 76 | b 77 | b 81 | a 80 bc | |
| 4 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST3 | C | 98 | a 98 | a 98 | a 97 ab | |
| 5 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | 98 | a 98 | a 99 | a 99 a | |
| 6 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 96 | a 97 | a 87 | a 84 ab | |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST3 | C | | | | | |
| 7 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 97 | a 99 | a 99 | a 99 a | |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | | | | | |
| 8 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST2 | B | 98 | a 99 | a 98 | a 94 ab | |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST3 | C | | | | | |
| 9 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST2 | B | 99 | a 99 | a 99 | a 99 a | |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | | | | | |
| LSD (P=.05) | | | | | | | | | 10.6 | 10.8 | 20.4 | 18.8 |
| Standard Deviation | | | | | | | | | 7.2 | 7.4 | 14.0 | 12.9 |
| CV | | | | | | | | | 9.25 | 9.39 | 17.54 | 16.29 |

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

TIMING OF WEATHERMAX APPLICATIONS IN ROUNDUP READY SUGAR BEETS

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T5

| | | | | |
|--------------------|-----------|-----------|-----------|-----------|
| Weed Code | CHEAL | ABUTH | AMARE | CHEAL |
| Crop Code | BEAVA | BEAVA | BEAVA | BEAVA |
| Rating Data Type | CONTROL | CONTROL | CONTROL | CONTROL |
| Rating Unit | % | % | % | % |
| Rating Date | Jun-06-06 | Jun-23-06 | Jun-23-06 | Jun-23-06 |
| Crop Stage | 6-8 LF | 8-10 LF | 8-10 LF | 8-10 LF |
| Weed Stage | COT | 3-4 LF | 14-20 LF | 20+ LF |
| Weed Density, Unit | 105 SQ M | 4 SQ M | 7 SQ M | 137 SQ M |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Grow Stg | Appl Code | | | | | | |
|--------------------|-------------------------|-----------|-----------|------|-----------|----------|-----------|-------|----|-------|---|-------|--------|
| 1 | UNTREATED | | | | | | | 0 | d | 25 | b | 0 | d 0 c |
| 2 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 57 | c | 65 | a | 35 | c 46 b |
| 3 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST2 | B | 69 | bc | 91 | a | 61 | b 80 a |
| 4 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST3 | C | 97 | a | 97 | a | 89 | a 94 a |
| 5 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | 99 | a | 99 | a | 99 | a 99 a |
| 6 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 86 | ab | 96 | a | 85 | a 93 a |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST3 | C | | | | | | |
| 7 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 99 | a | 98 | a | 92 | a 95 a |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | | | | | | |
| 8 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST2 | B | 98 | a | 86 | a | 88 | a 95 a |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST3 | C | | | | | | |
| 9 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST2 | B | 99 | a | 97 | a | 97 | a 98 a |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | | | | | | |
| LSD (P=.05) | | | | | | | | 22.6 | | 36.4 | | 16.9 | 19.3 |
| Standard Deviation | | | | | | | | 15.5 | | 25.0 | | 11.6 | 13.2 |
| CV | | | | | | | | 19.85 | | 29.81 | | 16.15 | 17.05 |

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

| | | | | |
|--------------------|-----------|-----------|-----------|-----------|
| Weed Code | ABUTH | AMARE | CHEAL | |
| Crop Code | BEAVA | BEAVA | BEAVA | BEAVA |
| Rating Data Type | CONTROL | CONTROL | CONTROL | WEEDY |
| Rating Unit | % | % | % | NO |
| Rating Date | Jun-26-06 | Jun-26-06 | Jun-26-06 | Oct-10-06 |
| Crop Stage | 11-12 LF | 11-12 LF | 11-12 LF | |
| Weed Stage | 3-4 LF | 14-20 LF | 20+ LF | |
| Weed Density, Unit | 4 SQ M | 7 SQ M | 137 SQ M | |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Grow Stg | Appl Code | | | | | | |
|--------------------|-------------------------|-----------|-----------|------|-----------|----------|-----------|-------|---|-------|---|-------|--------|
| 1 | UNTREATED | | | | | | | 13 | c | 13 | d | 0 | c 7 b |
| 2 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 58 | b | 50 | c | 10 | c 14 b |
| 3 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST2 | B | 72 | b | 69 | b | 62 | b 45 a |
| 4 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST3 | C | 96 | a | 90 | a | 95 | a 52 a |
| 5 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | 97 | a | 97 | a | 97 | a 51 a |
| 6 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 96 | a | 93 | a | 96 | a 57 a |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST3 | C | | | | | | |
| 7 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 97 | a | 95 | a | 97 | a 55 a |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | | | | | | |
| 8 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST2 | B | 95 | a | 87 | a | 95 | a 49 a |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST3 | C | | | | | | |
| 9 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST2 | B | 98 | a | 96 | a | 98 | a 41 a |
| | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | | | | | | |
| LSD (P=.05) | | | | | | | | 20.2 | | 17.9 | | 14.3 | 16.6 |
| Standard Deviation | | | | | | | | 13.8 | | 12.2 | | 9.8 | 11.4 |
| CV | | | | | | | | 17.27 | | 16.02 | | 13.59 | 27.67 |

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

TIMING OF WEATHERMAX APPLICATIONS IN ROUNDUP READY SUGAR BEETS

DAVE BILYEA, DARREN ROBINSON

Experiment ID: SB06T5

| | | | | | |
|------------------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | BEAVA | BEAVA | BEAVA | BEAVA | BEAVA |
| Rating Data Type | WEED FREE | WEEDY | WEED FREE | WEEDY | WEED FREE |
| Rating Unit | NO | T/HA | T/HA | T/AC | T/AC |
| Rating Date | Oct-10-06 | Oct-10-06 | Oct-10-06 | Oct-10-06 | Oct+10-06 |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Grow Stg | Appl Code | | | | | | |
|--------------------|-------------------------|-----------|-----------|------|-----------|----------|-----------|-------|--------|----------|----------|------------|--|
| 1 | UNTREATED | | | | | | | 53 | | | | | |
| 2 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 55 | a 8.4 | c 88.9 | c 3.8 | c 39.7c | |
| 3 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST2 | B | 55 | a 13.2 | c 93.5 | bc 5.9 | c 41.7bc | |
| 4 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST3 | C | 63 | a 56.2 | b 109.0 | abc 25.1 | b 48.6abc | |
| 5 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | 61 | a 77.1 | ab 108.8 | abc 34.4 | ab 48.5abc | |
| 6 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 62 | a 89.2 | a 117.9 | a 39.8 | a 52.6a | |
| 7 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST3 | C | 62 | a 84.8 | a 108.6 | abc 37.8 | a 48.4abc | |
| 7 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST1 | A | 54 | a 79.9 | ab 103.8 | abc 35.6 | ab 46.3abc | |
| 8 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | 57 | a 74.3 | ab 112.9 | ab 33.1 | ab 50.4ab | |
| 9 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST2 | B | 52 | a 66.0 | ab 100.3 | abc 29.4 | ab 44.7abc | |
| 9 | GLYPHOSATE - WEATHERMAX | 540 | SL | 900 | G A/HA | POST4 | D | | | | | | |
| LSD (P=.05) | | | | | | | | 12.1 | 28.28 | 23.57 | 12.61 | 10.51 | |
| Standard Deviation | | | | | | | | 8.3 | 19.37 | 16.15 | 8.64 | 7.20 | |
| CV | | | | | | | | 14.46 | 31.75 | 15.4 | 31.75 | 15.4 | |

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

Trial Comments

CONCLUSIONS: Glyphosate applied in single or sequential applications at 900 g ai ha⁻¹ per application did not injure sugarbeets. Treatments applied at the cotyledon, 1-2 leaf or 2-3 leaf stages had significantly less yield than the untreated check due to weed escapes that competed with the crop. Two applications applied at the 1-2 leaf and then at the 4-5 or 5-6 leaf stages provided optimal control and sugarbeet yield.

TOLERANCE OF EIGHT SWEET CORN HYBRIDS TO KIH-485 - I

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T1A

Crop 1: ZEAMS CORN, SWEET Variety: 8 VARIOUS
 Planting Date: May-24-06 Planting Method: MONOSEM Location: RCAT-K
 Rate: 50000 SEEDS/HA Depth: 4 CM Row Spacing: 75 CM Spacing Within Row: 25 CM Seed Bed: MEDIUM
 Soil Moisture: MOIST Emergence Date: Jun-05-06

SITE AND DESIGN

Plot Width, Unit: 6 M Plot Length, Unit: 10 M Reps: 4
 Site Type: FIELD
 Tillage Type: CONVENTIONAL Study Design: FACTORIAL

MAINTENANCE

Field Prep./Maintenance: LEVELED LAND WITH S-TINE CULTIVATOR MAY 4/06. SPREAD 421 KG/HA OF 18-19-19 AND 98 KG/HA OF 46-0-0 AND WORKED FERTILIZER IN WITH S-TINE CULTIVATOR MAY 4/06. S-METOLACHLOR/BENOXACOR/ATRAZINE WAS APPLIED AT A RATE OF 2.88 KG AI/HA ON MAY-8-05 AND INCORPORATED WITH A S-TINE CULTIVATOR. SPRAYED A MAINTENANCE SPRAY OF BROMOXYNIL 480EC (280 G AI/HA) AND ATRAZINE 480SC (1.12 KG AI/HA) ON JUNE 12/06.

SOIL DESCRIPTION

% Sand: 51.3 % OM: 5.5 Texture: LOAM
 % Silt: 32.4 pH: 7.2 Soil Name: WATFORD/BRADY SERIES
 % Clay: 16.4 CEC: 19.0

APPLICATION DESCRIPTION

A

Application Date: Jun-01-06
 Time of Day: 10:00 AM
 Application Method: CO2 SPRAY
 Application Timing: PRE
 Applic. Placement: SOIL
 Air Temp., Unit: 17.8 C
 % Relative Humidity: 96
 Wind Velocity, Unit: 6.2 KPH
 Dew Presence (Y/N): Y
 Soil Temp., Unit: 23.0 C
 Soil Moisture: MOIST
 % Cloud Cover: 100

CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage: ZEAMS

APPLICATION EQUIPMENT

A

Appl. Equipment: CO2 SPRAY
 Operating Pressure: 207 kPa
 Nozzle Type: AIR INDUC
 Nozzle Size: ULD120-02
 Nozzle Spacing, Unit: 50 CM
 Boom Length, Unit: 1.5 M
 Boom Height, Unit: 50 CM
 Carrier: WATER
 Spray Volume, Unit: 200 L/HA
 Propellant: CO2

TOLERANCE OF EIGHT SWEET CORN HYBRIDS TO KIH-485 - I

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T1A

| Crop Code | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS |
|-------------------|-----------|-----------|-----------|-----------|-------------|-------------|--------|--------|--------|
| Part Rated | | | | | | | | | |
| Rating Data Type | INJURY | INJURY | INJURY | HEIGHT | MARKET | TOTAL | MARKET | MARKET | MARKET |
| Rating Unit | % | % | % | CM | AVG. COB WT | AVG. COB WT | YIELD | YIELD | YIELD |
| Rating Date | Jun-12-06 | Jun-20-06 | Jul-03-06 | Jun-26-06 | G | G | T/HA | T/HA | T/AC |
| Crop Stage | 3-5 LEAF | 3-7 LEAF | 9-10 LF | 6-8 LEAF | | | | | |
| Crop Stage Scale | 10-25 CM | 20-42 CM | 85-108CM | 37-75 CM | | | | | |
| Trt-Eval Interval | 7 DAE | 14 DAE | 28 DAE | 21 DAE | | | | | |

| Trt No. | Treatment Name | Rate | Unit | | | | | | | | | |
|------------------|----------------|------|------|---|--|---|--|------|-------|-------|------|-----|
| TABLE OF R MEANS | | | | | | | | | | | | |
| Replicate 1 | | 1 | | 1 | | 2 | | 49.8 | 304.2 | 224.1 | 12.3 | 5.5 |
| Replicate 2 | | 1 | | 1 | | 0 | | 59.8 | 330.3 | 231.8 | 15.3 | 6.8 |
| Replicate 3 | | 3 | | 1 | | 1 | | 62.6 | 326.7 | 229.8 | 15.8 | 7.0 |
| Replicate 4 | | 2 | | 1 | | 1 | | 57.4 | 318.8 | 215.9 | 13.7 | 6.1 |

| TABLE OF A MEANS | | | | | | | | | | | | | |
|------------------|-----------------|-----|--------|------|-----|-----|--|-----|------|-------|-------|------|-----|
| 1 | untreated check | | | 0a | | 0a | | 0a | 56.9 | 331.3 | 227.7 | 14.7 | 6.6 |
| 2 | KIH-485 | 209 | G A/HA | 2b | | 1b | | 1b | 57.9 | 318.6 | 225.9 | 14.1 | 6.3 |
| 3 | KIH-485 | 418 | G A/HA | 2b | | 2c | | 2c | 57.3 | 310.2 | 222.6 | 14.0 | 6.3 |
| | | | | LSD= | 2 | 1 | | 1 | NS | NS | NS | NS | NS |
| | | | | CV= | 159 | 118 | | 154 | 17 | 15 | 9 | 10 | 10 |

| TABLE OF B MEANS | | | | | | | | | | | | | |
|------------------|--------------|--|--|---|--|---|--|---|------|-------|-------|------|-----|
| 1 | HARVEST GOLD | | | 2 | | 1 | | 2 | 55.6 | 279.2 | 199.9 | 10.2 | 4.5 |
| 2 | GH2041 | | | 1 | | 1 | | 1 | 59.2 | 296.1 | 203.5 | 13.8 | 6.2 |
| 3 | GH9589 | | | 1 | | 0 | | 0 | 62.9 | 329.6 | 241.6 | 16.4 | 7.3 |
| 4 | GSS 9299 | | | 2 | | 0 | | 0 | 51.9 | 262.5 | 208.2 | 10.9 | 4.9 |
| 5 | GG214 | | | 1 | | 0 | | 0 | 58.4 | 310.6 | 214.6 | 15.0 | 6.7 |
| 6 | GG446 | | | 1 | | 0 | | 0 | 63.9 | 387.0 | 276.7 | 18.2 | 8.1 |
| 7 | GG763 | | | 5 | | 5 | | 4 | 48.5 | 308.3 | 196.0 | 11.4 | 5.1 |
| 8 | GG447 | | | 1 | | 1 | | 1 | 58.8 | 386.8 | 262.6 | 18.4 | 8.2 |

| TABLE OF AB MEANS | | | | | | | | | | | | | |
|-------------------|-----------------|-----|--------|-----|--|-----|--|---|------|-------|-------|------|-----|
| 1 | untreated check | | | 0a | | 0a | | 0 | 59.3 | 330.0 | 212.9 | 11.5 | 5.1 |
| 1 | HARVEST GOLD | | | | | | | | | | | | |
| 2 | KIH-485 | 209 | G A/HA | 3b | | 1ab | | 1 | 53.4 | 276.4 | 193.6 | 9.8 | 4.4 |
| 1 | HARVEST GOLD | | | | | | | | | | | | |
| 3 | KIH-485 | 418 | G A/HA | 3b | | 2a | | 5 | 53.9 | 231.1 | 193.3 | 9.3 | 4.1 |
| 1 | HARVEST GOLD | | | | | | | | | | | | |
| 1 | untreated check | | | 0a | | 0a | | 0 | 57.9 | 284.6 | 198.5 | 13.2 | 5.9 |
| 2 | GH2041 | | | | | | | | | | | | |
| 2 | KIH-485 | 209 | G A/HA | 1ab | | 1a | | 0 | 62.9 | 304.0 | 210.8 | 15.0 | 6.7 |
| 2 | GH2041 | | | | | | | | | | | | |
| 3 | KIH-485 | 418 | G A/HA | 2b | | 1a | | 3 | 56.9 | 299.8 | 201.1 | 13.2 | 5.9 |
| 2 | GH2041 | | | | | | | | | | | | |
| 1 | untreated check | | | 0a | | 0a | | 0 | 62.3 | 336.0 | 243.4 | 18.6 | 8.3 |
| 3 | GH9589 | | | | | | | | | | | | |
| 2 | KIH-485 | 209 | G A/HA | 1a | | 0a | | 0 | 62.8 | 317.9 | 232.7 | 14.9 | 6.7 |
| 3 | GH9589 | | | | | | | | | | | | |
| 3 | KIH-485 | 418 | G A/HA | 1a | | 1a | | 0 | 63.8 | 334.9 | 248.6 | 15.8 | 7.0 |
| 3 | GH9589 | | | | | | | | | | | | |
| 1 | untreated check | | | 0a | | 0a | | 0 | 49.3 | 256.5 | 205.1 | 10.6 | 4.7 |
| 4 | GSS 9299 | | | | | | | | | | | | |
| 2 | KIH-485 | 209 | G A/HA | 4b | | 1a | | 0 | 54.0 | 274.9 | 213.6 | 11.1 | 5.0 |
| 4 | GSS 9299 | | | | | | | | | | | | |
| 3 | KIH-485 | 418 | G A/HA | 1a | | 1a | | 0 | 52.3 | 256.2 | 205.9 | 11.0 | 4.9 |
| 4 | GSS 9299 | | | | | | | | | | | | |
| 1 | untreated check | | | 0a | | 0a | | 0 | 58.1 | 333.5 | 219.0 | 15.1 | 6.7 |
| 5 | GG214 | | | | | | | | | | | | |
| 2 | KIH-485 | 209 | G A/HA | 2b | | 0a | | 0 | 58.2 | 298.0 | 216.2 | 14.1 | 6.3 |
| 5 | GG214 | | | | | | | | | | | | |
| 3 | KIH-485 | 418 | G A/HA | 2b | | 0a | | 0 | 58.9 | 300.4 | 208.8 | 15.8 | 7.1 |
| 5 | GG214 | | | | | | | | | | | | |
| 1 | untreated check | | | 0a | | 0a | | 0 | 62.5 | 404.1 | 278.2 | 17.7 | 7.9 |
| 6 | GG446 | | | | | | | | | | | | |
| 2 | KIH-485 | 209 | G A/HA | 2b | | 0a | | 0 | 63.8 | 394.2 | 278.2 | 18.6 | 8.3 |
| 6 | GG446 | | | | | | | | | | | | |
| 3 | KIH-485 | 418 | G A/HA | 2b | | 0a | | 0 | 65.4 | 362.6 | 273.6 | 18.3 | 8.2 |
| 6 | GG446 | | | | | | | | | | | | |

TOLERANCE OF EIGHT SWEET CORN HYBRIDS TO KIH-485 - I

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T1A

| Crop Code | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS |
|-------------------|-----------------|-----------|-----------|-----------|-------------|-------------|--------|--------|--------|
| Part Rated | INJURY | INJURY | INJURY | HEIGHT | MARKET | TOTAL | MARKET | MARKET | MARKET |
| Rating Data Type | % | % | % | CM | AVG. COB WT | AVG. COB WT | YIELD | YIELD | YIELD |
| Rating Unit | G | G | G | G | G | G | T/HA | T/HA | T/AC |
| Rating Date | Jun-12-06 | Jun-20-06 | Jul-03-06 | Jun-26-06 | | | | | |
| Crop Stage | 3-5 LEAF | 3-7 LEAF | 9-10 LF | 6-8 LEAF | | | | | |
| Crop Stage Scale | 10-25 CM | 20-42 CM | 85-108CM | 37-75 CM | | | | | |
| Trt-Eval Interval | 7 DAE | 14 DAE | 28 DAE | 21 DAE | | | | | |
| Trt No. | Treatment Name | Rate | Unit | Rate | Unit | Rate | Unit | Rate | Unit |
| 1 | untreated check | | | 0a | 0a | 0 | | 48.9 | 322.6 |
| 7 | GG763 | | | | | | | 197.1 | 11.9 |
| 2 | KIH-485 | 209 | G A/HA | 8b | 8b | 6 | | 50.6 | 305.1 |
| 7 | GG763 | | | | | | | 204.5 | 11.9 |
| 3 | KIH-485 | 418 | G A/HA | 7b | 9b | 6 | | 46.0 | 297.0 |
| 7 | GG763 | | | | | | | 186.4 | 10.4 |
| 1 | untreated check | | | 0a | 0a | 0 | | 57.0 | 382.8 |
| 8 | GG447 | | | | | | | 267.2 | 19.2 |
| 2 | KIH-485 | 209 | G A/HA | 0a | 0a | 1 | | 57.8 | 378.1 |
| 8 | GG447 | | | | | | | 257.7 | 17.4 |
| 3 | KIH-485 | 418 | G A/HA | 2b | 2b | 1 | | 61.4 | 399.4 |
| 8 | GG447 | | | | | | | 262.9 | 18.4 |
| | | | | LSD= | 2 | 2 | NS | NS | NS |
| | | | | CV= | 89 | 164 | 239 | 9 | 14 |
| | | | | | | | | NS | NS |
| | | | | | | | | 10 | 20 |
| | | | | | | | | 20 | 20 |

| Crop Code | ZEAMS | ZEAMS | ZEAMS | ZEAMS |
|------------------|-----------------|-------|--------|-------|
| Part Rated | TOTAL | TOTAL | TOTAL | TOTAL |
| Rating Data Type | YIELD | YIELD | YIELD | YIELD |
| Rating Unit | T/HA | T/HA | T/HA | T/AC |
| Trt No. | Treatment Name | Rate | Unit | Rate |
| TABLE OF R MEANS | | | | |
| Replicate 1 | | | | 19.9 |
| Replicate 2 | | | | 8.9 |
| Replicate 3 | | | | 20.4 |
| Replicate 4 | | | | 9.1 |
| | | | | 20.6 |
| | | | | 9.2 |
| | | | | 19.2 |
| | | | | 8.6 |
| TABLE OF A MEANS | | | | |
| 1 | untreated check | | | 20.5 |
| 2 | KIH-485 | 209 | G A/HA | 19.8 |
| 3 | KIH-485 | 418 | G A/HA | 19.7 |
| | | | | 9.2 |
| | | | | 8.9 |
| | | | | 8.8 |
| | | | | LSD= |
| | | | | NS |
| | | | | NS |
| | | | | 11 |
| | | | | 11 |

| TABLE OF B MEANS | | | | |
|------------------|--------------|--|--|------|
| 1 | HARVEST GOLD | | | 18.0 |
| 2 | GH2041 | | | 8.0 |
| 3 | GH9589 | | | 19.3 |
| 4 | GSS 9299 | | | 8.6 |
| 5 | GG214 | | | 25.2 |
| 6 | GG446 | | | 11.2 |
| 7 | GG763 | | | 13.1 |
| 8 | GG447 | | | 5.9 |
| | | | | 18.2 |
| | | | | 8.1 |
| | | | | 26.2 |
| | | | | 11.7 |
| | | | | 17.4 |
| | | | | 7.7 |
| | | | | 23.0 |
| | | | | 10.3 |

| TABLE OF AB MEANS | | | | |
|-------------------|-----------------|-----|--------|------|
| 1 | untreated check | | | 19.2 |
| 1 | HARVEST GOLD | | | 8.6 |
| 2 | KIH-485 | 209 | G A/HA | 17.2 |
| 1 | HARVEST GOLD | | | 7.7 |
| 3 | KIH-485 | 418 | G A/HA | 17.4 |
| 1 | HARVEST GOLD | | | 7.8 |
| 1 | untreated check | | | 19.4 |
| 2 | GH2041 | | | 8.6 |
| 2 | KIH-485 | 209 | G A/HA | 20.4 |
| 2 | GH2041 | | | 9.1 |
| 3 | KIH-485 | 418 | G A/HA | 18.1 |
| 2 | GH2041 | | | 8.1 |
| 1 | untreated check | | | 26.4 |
| 3 | GH9589 | | | 11.8 |
| 2 | KIH-485 | 209 | G A/HA | 23.3 |
| 3 | GH9589 | | | 10.4 |

TOLERANCE OF EIGHT SWEET CORN HYBRIDS TO KIH-485 - I

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T1A

| | | | |
|------------------|--|-------|-------|
| Crop Code | | ZEAMS | ZEAMS |
| Part Rated | | TOTAL | TOTAL |
| Rating Data Type | | YIELD | YIELD |
| Rating Unit | | T/HA | T/AC |

| Trt No. | Treatment Name | Rate | Unit | ZEAMS YIELD T/HA | ZEAMS YIELD T/AC |
|---------|-----------------|------|--------|------------------|------------------|
| 3 | KIH-485 | 418 | G A/HA | 25.8 | 11.5 |
| 3 | GH9589 | | | | |
| 1 | untreated check | | | 13.3 | 5.9 |
| 4 | GSS 9299 | | | | |
| 2 | KIH-485 | 209 | G A/HA | 13.6 | 6.1 |
| 4 | GSS 9299 | | | | |
| 3 | KIH-485 | 418 | G A/HA | 12.6 | 5.6 |
| 4 | GSS 9299 | | | | |
| 1 | untreated check | | | 18.3 | 8.2 |
| 5 | GG214 | | | | |
| 2 | KIH-485 | 209 | G A/HA | 17.4 | 7.7 |
| 5 | GG214 | | | | |
| 3 | KIH-485 | 418 | G A/HA | 18.8 | 8.4 |
| 5 | GG214 | | | | |
| 1 | untreated check | | | 26.1 | 11.7 |
| 6 | GG446 | | | | |
| 2 | KIH-485 | 209 | G A/HA | 27.1 | 12.1 |
| 6 | GG446 | | | | |
| 3 | KIH-485 | 418 | G A/HA | 25.3 | 11.3 |
| 6 | GG446 | | | | |
| 1 | untreated check | | | 18.3 | 8.1 |
| 7 | GG763 | | | | |
| 2 | KIH-485 | 209 | G A/HA | 17.1 | 7.6 |
| 7 | GG763 | | | | |
| 3 | KIH-485 | 418 | G A/HA | 16.7 | 7.5 |
| 7 | GG763 | | | | |
| 1 | untreated check | | | 23.5 | 10.5 |
| 8 | GG447 | | | | |
| 2 | KIH-485 | 209 | G A/HA | 22.6 | 10.1 |
| 8 | GG447 | | | | |
| 3 | KIH-485 | 418 | G A/HA | 23.0 | 10.2 |
| 8 | GG447 | | | | |
| | | LSD= | NS | NS | |
| | | CV= | 10 | 10 | |

Trial Comments

Harvest Dates: AUGUST 3/06: GH 2041.
 AUGUST 8/06: GSS 9299 AND GG 214.
 AUGUST 9/06: HARVEST GOLD.
 AUGUST 10/06: GG 446.
 AUGUST 11/06: GH 9589 AND GG 763.
 AUGUST 14/06: GG 447.

CONCLUSIONS: KIH-485 applied preemergence at 209 and 418 g ai ha⁻¹, to eight processing sweet corn cultivars (GG446, GG214, Harvest Gold, GH2041, GH9589, GG763, GG447 and GSS9299) did not cause visual injury and did not reduce height, marketable cob weight or marketable yield.

TOLERANCE OF EIGHT SWEET CORN HYBRIDS TO NICOSULFURON - I

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T2A

Objective: Determine the tolerance of eight sweet corn varieties to nicosulfuron at 1X and 2X the label rate.

CROP AND WEED DESCRIPTION

| Weed Code | Common Name | Scientific Name |
|-----------|-----------------------------|--------------------------------|
| 1. | AMARE PIGWEED, REDROOT | AMARANTHUS RETROFLEXUS L. |
| 2. | CHEAL LAMBSQUARTERS, COMMON | CHENOPODIUM ALBUM L. |
| 3. | SETVI FOXTAIL, GREEN | SETARIA VIRIDIS (L.) P.BEAUUV. |

Crop 1: ZEAMS CORN, SWEET Variety: 8 VARIOUS
 Planting Date: May-24-06 Planting Method: MONOSEM Location: RCAT-K
 Rate: 50000 SEEDS/HA Depth: 4 CM Row Spacing: 75 CM Spacing Within Row: 25 CM Seed Bed: MEDIUM
 Soil Moisture: MOIST Emergence Date: May-29-06

SITE AND DESIGN

Plot Width, Unit: 6 M Plot Length, Unit: 10 M Reps: 4
 Site Type: FIELD
 Tillage Type: CONVENTIONAL Study Design: FACTORIAL

MAINTENANCE

Field Prep./Maintenance: LEVELED LAND WITH S-TINE CULTIVATOR MAY 4/06. SPREAD 421 KG/HA OF 18-19-19 AND 98 KG/HA OF 46-0-0 AND WORKED FERTILIZER IN WITH S-TINE CULTIVATOR MAY 4/06. S-METOLACHLOR/BENOXACOR/ATRAZINE WAS APPLIED AT A RATE OF 2.88 KG AI/HA ON MAY-8-05 AND INCORPORATED WITH A S-TINE CULTIVATOR. SPRAYED A MAINTENANCE SPRAY OF BROMOXYNIL 480EC (280 G AI/HA) AND ATRAZINE 480SC (1.12 KG AI/HA) ON JUNE 12/06.

SOIL DESCRIPTION

| | | |
|--------------|-----------|---------------------------------|
| % Sand: 51.3 | % OM: 5.5 | Texture: LOAM |
| % Silt: 32.4 | pH: 7.2 | Soil Name: WATFORD/BRADY SERIES |
| % Clay: 16.4 | CEC: 19.0 | |

APPLICATION DESCRIPTION

A
 Application Date: Jun-06-06
 Time of Day: 7:00 PM
 Application Method: CO2 SPRAY
 Application Timing: 3 LEAF
 Applic. Placement: FOLIAR
 Air Temp., Unit: 21.5 C
 % Relative Humidity: 55
 Wind Velocity, Unit: 3.8 KPH
 Dew Presence (Y/N): N
 Soil Temp., Unit: 27.0 C
 Soil Moisture: MOIST
 % Cloud Cover: 85

CROP STAGE AT EACH APPLICATION

A
 Crop 1 Code, Stage: ZEAMS
 Stage Scale: 2-5 LEAF
 Height, Unit: 15.3 CM

WEED STAGE AT EACH APPLICATION

A
 Weed 1 Code, Stage: AMARE 1.2 CM
 Stage Scale: COT-4 LF
 Density, Unit: 33.0 SQ.M.
 Weed 2 Code, Stage: CHEAL 1.8 CM
 Stage Scale: COT-7 LF
 Density, Unit: 16.5 SQ.M.
 Weed 3 Code, Stage: SETVI 1.8CM
 Stage Scale: 1-3 LF
 Density, Unit: 17.5 SQ.M.

APPLICATION EQUIPMENT

A
 Appl. Equipment: CO2 SPRAY
 Operating Pressure: 207 kPa
 Nozzle Type: AIR INDUC
 Nozzle Size: ULD120-02
 Nozzle Spacing, Unit: 50 CM
 Boom Length, Unit: 1.5 M
 Boom Height, Unit: 50 CM
 Carrier: WATER
 Spray Volume, Unit: 200 L/HA
 Propellant: CO2

TOLERANCE OF EIGHT SWEET CORN HYBRIDS TO NICOSULFURON - I

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T2A

| Crop Code | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS |
|-------------------|-----------|-----------|-----------|-----------|-------------|-------------|--------|--------|--------|
| Part Rated | | | | | | | | | |
| Rating Data Type | INJURY | INJURY | INJURY | HEIGHT | MARKET | TOTAL | MARKET | MARKET | MARKET |
| Rating Unit | % | % | % | CM | AVG. COB WT | AVG. COB WT | YIELD | YIELD | YIELD |
| Rating Date | Jun-13-06 | Jun-20-06 | Jul-04-06 | Jun-27-06 | G | G | T/HA | T/HA | T/AC |
| Crop Stage | 5-6 LEAF | 5-7 LEAF | 9-10 LF | 6-8 LEAF | | | | | |
| Crop Stage Scale | 20-40 CM | 32-49 CM | 95-110CM | 52-89 CM | | | | | |
| Trt-Eval Interval | 7 DAT | 14 DAT | 28 DAT | 21 DAT | | | | | |

| Trt No. | Treatment Name | Rate | Unit | | | | | | | |
|------------------|----------------|------|------|---|--|------|-------|-------|------|-----|
| TABLE OF R MEANS | | | | | | | | | | |
| Replicate 1 | | 5 | | 1 | | 76.0 | 306.8 | 207.2 | 15.5 | 6.9 |
| Replicate 2 | | 5 | | 0 | | 73.7 | 287.9 | 192.9 | 13.7 | 6.1 |
| Replicate 3 | | 8 | | 0 | | 69.7 | 303.5 | 199.5 | 14.1 | 6.3 |
| Replicate 4 | | 9 | | 1 | | 69.0 | 301.2 | 200.8 | 14.0 | 6.3 |

| | | | | | | | | | | |
|------------------|-----------------|------|--------|-----|----|------|-------|-------|------|-----|
| TABLE OF A MEANS | | | | | | | | | | |
| 1 | untreated check | | 0a | 0 | | 72.0 | 297.9 | 202.3 | 14.6 | 6.5 |
| 2 | nicosulfuron | 25 | G A/HA | 10b | 1 | 71.8 | 296.5 | 194.9 | 13.8 | 6.1 |
| 2 | Agral 90 | 0.2 | % V/V | | | | | | | |
| 3 | nicosulfuron | 50 | G A/HA | 11b | 1 | 72.4 | 305.1 | 203.1 | 14.6 | 6.5 |
| 3 | Agral 90 | 0.4 | % V/V | | | | | | | |
| | | LSD= | 6 | NS | NS | NS | NS | NS | NS | NS |
| | | CV= | 138 | 208 | 0 | 24 | 12 | 14 | 28 | 28 |

| | | | | | | | | | | | |
|------------------|--------------|--|--|---|---|---|------|-------|-------|------|-----|
| TABLE OF B MEANS | | | | | | | | | | | |
| 1 | HARVEST GOLD | | | 9 | 0 | 0 | 70.8 | 310.4 | 202.3 | 14.8 | 6.6 |
| 2 | GH2042 | | | 6 | 0 | 0 | 68.5 | 274.6 | 177.5 | 14.1 | 6.3 |
| 3 | GH9589 | | | 7 | 0 | 0 | 76.0 | 315.8 | 222.5 | 15.3 | 6.8 |
| 4 | GH6631 | | | 8 | 0 | 0 | 73.3 | 312.8 | 230.7 | 16.1 | 7.2 |
| 5 | GG228 | | | 7 | 0 | 0 | 74.5 | 273.4 | 174.2 | 12.2 | 5.4 |
| 6 | GG236 | | | 7 | 0 | 0 | 74.5 | 273.9 | 178.5 | 12.5 | 5.6 |
| 7 | GG763 | | | 8 | 3 | 2 | 65.8 | 295.6 | 186.8 | 13.2 | 5.9 |
| 8 | GG447 | | | 3 | 0 | 0 | 73.4 | 342.2 | 228.5 | 16.4 | 7.3 |

| | | | | | | | | | | | |
|-------------------|-----------------|-----|--------|-----|----|----|------|-------|-------|------|-----|
| TABLE OF AB MEANS | | | | | | | | | | | |
| 1 | untreated check | | | 0a | 0a | 0a | 71.2 | 309.0 | 214.3 | 15.1 | 6.7 |
| 1 | HARVEST GOLD | | | | | | | | | | |
| 2 | nicosulfuron | 25 | G A/HA | 13b | 1b | 0a | 70.6 | 315.7 | 195.8 | 14.4 | 6.4 |
| 2 | Agral 90 | 0.2 | % V/V | | | | | | | | |
| 1 | HARVEST GOLD | | | | | | | | | | |
| 3 | nicosulfuron | 50 | G A/HA | 16c | 0a | 1a | 70.4 | 306.6 | 196.7 | 14.9 | 6.6 |
| 3 | Agral 90 | 0.4 | % V/V | | | | | | | | |
| 1 | HARVEST GOLD | | | | | | | | | | |
| 1 | untreated check | | | 0a | 0a | 0a | 66.4 | 280.1 | 184.2 | 14.8 | 6.6 |
| 2 | GH2042 | | | | | | | | | | |
| 2 | nicosulfuron | 25 | G A/HA | 8b | 1b | 0a | 70.3 | 264.6 | 171.8 | 13.5 | 6.0 |
| 2 | Agral 90 | 0.2 | % V/V | | | | | | | | |
| 2 | GH2042 | | | | | | | | | | |
| 3 | nicosulfuron | 50 | G A/HA | 9b | 1b | 1a | 68.6 | 279.2 | 176.5 | 13.9 | 6.2 |
| 3 | Agral 90 | 0.4 | % V/V | | | | | | | | |
| 2 | GH2042 | | | | | | | | | | |
| 1 | untreated check | | | 0a | 0a | 0a | 77.1 | 303.0 | 220.6 | 15.8 | 7.0 |
| 3 | GH9589 | | | | | | | | | | |
| 2 | nicosulfuron | 25 | G A/HA | 10b | 0a | 0a | 75.6 | 319.7 | 222.9 | 15.1 | 6.7 |
| 2 | Agral 90 | 0.2 | % V/V | | | | | | | | |
| 3 | GH9589 | | | | | | | | | | |
| 3 | nicosulfuron | 50 | G A/HA | 13c | 0a | 0a | 75.5 | 324.6 | 224.0 | 15.0 | 6.7 |
| 3 | Agral 90 | 0.4 | % V/V | | | | | | | | |
| 3 | GH9589 | | | | | | | | | | |
| 1 | untreated check | | | 0a | 0a | 0a | 76.3 | 306.3 | 233.0 | 16.5 | 7.4 |
| 4 | GH6631 | | | | | | | | | | |
| 2 | nicosulfuron | 25 | G A/HA | 12b | 0a | 0a | 70.4 | 298.6 | 219.2 | 15.2 | 6.8 |
| 2 | Agral 90 | 0.2 | % V/V | | | | | | | | |
| 4 | GH6631 | | | | | | | | | | |
| 3 | nicosulfuron | 50 | G A/HA | 12b | 1b | 0a | 73.1 | 333.4 | 239.9 | 16.7 | 7.4 |
| 3 | Agral 90 | 0.4 | % V/V | | | | | | | | |
| 4 | GH6631 | | | | | | | | | | |

TOLERANCE OF EIGHT SWEET CORN HYBRIDS TO NICOSULFURON - I

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T2A

| Crop Code | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS |
|-------------------|-----------|-----------|-----------|-----------|-------------|-------------|--------|--------|--------|
| Part Rated | INJURY | INJURY | INJURY | HEIGHT | MARKET | TOTAL | MARKET | MARKET | MARKET |
| Rating Data Type | % | % | % | CM | AVG. COB WT | AVG. COB WT | YIELD | YIELD | YIELD |
| Rating Unit | % | % | % | CM | G | G | T/HA | T/AC | T/AC |
| Rating Date | Jun-13-06 | Jun-20-06 | Jul-04-06 | Jun-27-06 | | | | | |
| Crop Stage | 5-6 LEAF | 5-7 LEAF | 9-10 LF | 6-8 LEAF | | | | | |
| Crop Stage Scale | 20-40 CM | 32-49 CM | 95-110CM | 52-89 CM | | | | | |
| Trt-Eval Interval | 7 DAT | 14 DAT | 28 DAT | 21 DAT | | | | | |

| Trt No. | Treatment Name | Rate | Unit | | | | | | | | |
|---------|-----------------|------|--------|-----|-----|----|------|-------|-------|------|-----|
| 1 | untreated check | | | 0a | 0a | 0a | 75.7 | 282.4 | 177.4 | 12.0 | 5.3 |
| 5 | GG228 | | | | | | | | | | |
| 2 | nicosulfuron | 25 | G A/HA | 10b | 0a | 0a | 73.0 | 265.3 | 169.0 | 12.0 | 5.3 |
| 2 | Agral 90 | 0.2 | % V/V | | | | | | | | |
| 5 | GG228 | | | | | | | | | | |
| 3 | nicosulfuron | 50 | G A/HA | 11b | 0a | 0a | 74.7 | 272.6 | 176.1 | 12.6 | 5.6 |
| 3 | Agral 90 | 0.4 | % V/V | | | | | | | | |
| 5 | GG228 | | | | | | | | | | |
| 1 | untreated check | | | 0a | 0a | 0a | 76.0 | 274.5 | 177.4 | 12.3 | 5.5 |
| 6 | GG236 | | | | | | | | | | |
| 2 | nicosulfuron | 25 | G A/HA | 9b | 0a | 0a | 73.8 | 268.8 | 175.6 | 12.9 | 5.7 |
| 2 | Agral 90 | 0.2 | % V/V | | | | | | | | |
| 6 | GG236 | | | | | | | | | | |
| 3 | nicosulfuron | 50 | G A/HA | 11b | 0a | 0a | 73.9 | 278.4 | 182.3 | 12.3 | 5.5 |
| 3 | Agral 90 | 0.4 | % V/V | | | | | | | | |
| 6 | GG236 | | | | | | | | | | |
| 1 | untreated check | | | 0a | 0a | 0a | 63.1 | 298.7 | 192.1 | 13.6 | 6.1 |
| 7 | GG763 | | | | | | | | | | |
| 2 | nicosulfuron | 25 | G A/HA | 13c | 5c | 4b | 65.3 | 296.6 | 179.4 | 12.4 | 5.5 |
| 2 | Agral 90 | 0.2 | % V/V | | | | | | | | |
| 7 | GG763 | | | | | | | | | | |
| 3 | nicosulfuron | 50 | G A/HA | 10b | 4b | 3b | 68.9 | 291.5 | 188.8 | 13.8 | 6.2 |
| 3 | Agral 90 | 0.4 | % V/V | | | | | | | | |
| 7 | GG763 | | | | | | | | | | |
| 1 | untreated check | | | 0a | 0a | 0a | 70.3 | 329.5 | 219.2 | 16.5 | 7.4 |
| 8 | GG447 | | | | | | | | | | |
| 2 | nicosulfuron | 25 | G A/HA | 4b | 0a | 0a | 75.8 | 342.6 | 225.8 | 14.9 | 6.6 |
| 2 | Agral 90 | 0.2 | % V/V | | | | | | | | |
| 8 | GG447 | | | | | | | | | | |
| 3 | nicosulfuron | 50 | G A/HA | 6b | 0a | 0a | 74.1 | 354.5 | 240.5 | 17.9 | 8.0 |
| 3 | Agral 90 | 0.4 | % V/V | | | | | | | | |
| 8 | GG447 | | | | | | | | | | |
| | | LSD= | | 3 | 1 | 2 | NS | NS | NS | NS | NS |
| | | CV= | | 28 | 205 | 0 | 6 | 7 | 10 | 15 | 15 |

| Crop Code | ZEAMS | ZEAMS | | | |
|------------------|-----------------|-------|--------|------|-----|
| Part Rated | TOTAL | TOTAL | | | |
| Rating Data Type | YIELD | YIELD | | | |
| Rating Unit | T/HA | T/AC | | | |
| Trt No. | Treatment Name | Rate | Unit | | |
| TABLE OF R MEANS | | | | | |
| Replicate 1 | | | 20.4 | 9.1 | |
| Replicate 2 | | | 18.9 | 8.4 | |
| Replicate 3 | | | 19.3 | 8.6 | |
| Replicate 4 | | | 19.5 | 8.7 | |
| TABLE OF A MEANS | | | | | |
| 1 | untreated check | | 19.9 | 8.9 | |
| 2 | nicosulfuron | 25 | G A/HA | 19.1 | 8.5 |
| 2 | Agral 90 | 0.2 | % V/V | | |
| 3 | nicosulfuron | 50 | G A/HA | 19.5 | 8.7 |
| 3 | Agral 90 | 0.4 | % V/V | | |
| | | LSD= | NS | NS | |
| | | CV= | 18 | 18 | |

TOLERANCE OF EIGHT SWEET CORN HYBRIDS TO NICOSULFURON - I

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T2A

| | | |
|------------------|-------|-------|
| Crop Code | ZEAMS | ZEAMS |
| Part Rated | TOTAL | TOTAL |
| Rating Data Type | YIELD | YIELD |
| Rating Unit | T/HA | T/AC |

| Trt No. | Treatment Name | Rate | Unit | | |
|-------------------|-----------------|------|--------|------|------|
| TABLE OF B MEANS | | | | | |
| 1 | HARVEST GOLD | | | 19.3 | 8.6 |
| 2 | GH2042 | | | 18.3 | 8.2 |
| 3 | GH9589 | | | 22.2 | 9.9 |
| 4 | GH6631 | | | 21.9 | 9.8 |
| 5 | GG228 | | | 15.7 | 7.0 |
| 6 | GG236 | | | 17.7 | 7.9 |
| 7 | GG763 | | | 20.3 | 9.0 |
| 8 | GG447 | | | 20.7 | 9.3 |
| TABLE OF AB MEANS | | | | | |
| 1 | untreated check | | | 20.1 | 9.0 |
| 1 | HARVEST GOLD | | | | |
| 2 | nicosulfuron | 25 | G A/HA | 19.2 | 8.6 |
| 2 | Agral 90 | 0.2 | % V/V | | |
| 1 | HARVEST GOLD | | | | |
| 3 | nicosulfuron | 50 | G A/HA | 18.6 | 8.3 |
| 3 | Agral 90 | 0.4 | % V/V | | |
| 1 | HARVEST GOLD | | | | |
| 1 | untreated check | | | 19.7 | 8.8 |
| 2 | GH2042 | | | | |
| 2 | nicosulfuron | 25 | G A/HA | 17.6 | 7.8 |
| 2 | Agral 90 | 0.2 | % V/V | | |
| 2 | GH2042 | | | | |
| 3 | nicosulfuron | 50 | G A/HA | 17.6 | 7.9 |
| 3 | Agral 90 | 0.4 | % V/V | | |
| 2 | GH2042 | | | | |
| 1 | untreated check | | | 22.0 | 9.8 |
| 3 | GH9589 | | | | |
| 2 | nicosulfuron | 25 | G A/HA | 22.7 | 10.1 |
| 2 | Agral 90 | 0.2 | % V/V | | |
| 3 | GH9589 | | | | |
| 3 | nicosulfuron | 50 | G A/HA | 22.0 | 9.8 |
| 3 | Agral 90 | 0.4 | % V/V | | |
| 3 | GH9589 | | | | |
| 1 | untreated check | | | 22.2 | 9.9 |
| 4 | GH6631 | | | | |
| 2 | nicosulfuron | 25 | G A/HA | 21.2 | 9.5 |
| 2 | Agral 90 | 0.2 | % V/V | | |
| 4 | GH6631 | | | | |
| 3 | nicosulfuron | 50 | G A/HA | 22.2 | 9.9 |
| 3 | Agral 90 | 0.4 | % V/V | | |
| 4 | GH6631 | | | | |
| 1 | untreated check | | | 16.3 | 7.3 |
| 5 | GG228 | | | | |
| 2 | nicosulfuron | 25 | G A/HA | 15.0 | 6.7 |
| 2 | Agral 90 | 0.2 | % V/V | | |
| 5 | GG228 | | | | |
| 3 | nicosulfuron | 50 | G A/HA | 15.7 | 7.0 |
| 3 | Agral 90 | 0.4 | % V/V | | |
| 5 | GG228 | | | | |
| 1 | untreated check | | | 17.2 | 7.7 |
| 6 | GG236 | | | | |
| 2 | nicosulfuron | 25 | G A/HA | 17.8 | 8.0 |
| 2 | Agral 90 | 0.2 | % V/V | | |
| 6 | GG236 | | | | |
| 3 | nicosulfuron | 50 | G A/HA | 18.0 | 8.0 |
| 3 | Agral 90 | 0.4 | % V/V | | |
| 6 | GG236 | | | | |

TOLERANCE OF EIGHT SWEET CORN HYBRIDS TO NICOSULFURON - I

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T2A

Crop Code ZEAMS ZEAMS
 Part Rated TOTAL TOTAL
 Rating Data Type YIELD YIELD
 Rating Unit T/HA T/AC

| Trt No. | Treatment Name | Rate | Unit | | |
|---------|-----------------|------|--------|------|-----|
| 1 | untreated check | | | 21.5 | 9.6 |
| 7 | GG763 | | | | |
| 2 | nicosulfuron | 25 | G A/HA | 19.4 | 8.7 |
| 2 | Agral 90 | 0.2 | % V/V | | |
| 7 | GG763 | | | | |
| 3 | nicosulfuron | 50 | G A/HA | 19.9 | 8.9 |
| 3 | Agral 90 | 0.4 | % V/V | | |
| 7 | GG763 | | | | |
| 1 | untreated check | | | 20.5 | 9.2 |
| 8 | GG447 | | | | |
| 2 | nicosulfuron | 25 | G A/HA | 20.0 | 8.9 |
| 2 | Agral 90 | 0.2 | % V/V | | |
| 8 | GG447 | | | | |
| 3 | nicosulfuron | 50 | G A/HA | 21.7 | 9.7 |
| 3 | Agral 90 | 0.4 | % V/V | | |
| 8 | GG447 | | | | |
| | | LSD= | NS | NS | |
| | | CV= | 9 | 9 | |

Trial Comments

Harvest Dates: AUGUST 2/06: GG 228 AND GG 236.
 AUGUST 3/06: GH 2042.
 AUGUST 8/06: GG 763.
 AUGUST 9/06: HARVEST GOLD.
 AUGUST 10/06: GH 9589, GH 6631, AND GG 447.

CONCLUSIONS: Visual injury was observed at 7 DAT in all varieties tested, but by 14 DAT the injury was no longer present. Height, marketable cob size and yield were not reduced by nicosulfuron. The nicosulfuron URMULE has been re-written so individual varieties no longer have to be continually added to the label.

TOLERANCE OF EIGHT SWEET CORN HYBRIDS TO HALOSULFURON-METHYL - I

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T3A

CROP AND WEED DESCRIPTION

| Weed Code | Common Name | Scientific Name |
|-----------|-----------------------------|-------------------------------|
| 1. | ABUTH VELVETLEAF | ABUTILON THEOPHRASTI MEDIK. |
| 2. | AMARE FIGWEED, REDROOT | AMARANTHUS RETROFLEXUS L. |
| 3. | CHEAL LAMBSQUARTERS, COMMON | CHENOPODIUM ALBUM L. |
| 4. | SETVI FOXTAIL, GREEN | SETARIA VIRIDIS (L.) P.BEAUV. |

Crop 1: ZEAMS CORN, SWEET Variety: 8 VARIOUS
 Planting Date: May-24-06 Planting Method: MONOSEM Location: RCAT-K
 Rate: 50000 SEEDS/HA Depth: 4 CM Row Spacing: 75 CM Spacing Within Row: 25 CM Seed Bed: MEDIUM
 Soil Moisture: MOIST Emergence Date: May-29-06

SITE AND DESIGN

Plot Width, Unit: 6 M Plot Length, Unit: 10 M Reps: 4 Site Type: FIELD
 Tillage Type: CONVENTIONAL Study Design: FACTORIAL

MAINTENANCE

Field Prep./Maintenance: LEVELED LAND WITH S-TINE CULTIVATOR MAY 4/06. SPREAD 421 KG/HA OF 18-19-19 AND 98 KG/HA OF 46-0-0 AND WORKED FERTILIZER IN WITH S-TINE CULTIVATOR MAY 4/06. S-METOLACHLOR/BENOXACOR/ATRAZINE WAS APPLIED AT A RATE OF 2.88 KG AI/HA ON MAY-8-05 AND INCORPORATED WITH A S-TINE CULTIVATOR. SPRAYED A MAINTENANCE SPRAY OF BROMOXYNIL 480EC (280 G AI/HA) AND ATRAZINE 480SC (1.12 KG AI/HA) ON JUNE 12/06.

SOIL DESCRIPTION

| | | |
|--------------|-----------|---------------------------------|
| % Sand: 51.3 | % OM: 5.5 | Texture: LOAM |
| % Silt: 32.4 | pH: 7.2 | Soil Name: WATFORD/BRADY SERIES |
| % Clay: 16.4 | CEC: 19.0 | |

APPLICATION DESCRIPTION

A

Application Date: Jun-06-06
 Time of Day: 7:30 PM
 Application Method: CO2 SPRAY
 Application Timing: 3 LEAF
 Applic. Placement: FOLIAR
 Air Temp., Unit: 21.5 C
 % Relative Humidity: 55
 Wind Velocity, Unit: 3.8 KPH
 Dew Presence (Y/N): N
 Soil Temp., Unit: 27.0 C
 Soil Moisture: MOIST
 % Cloud Cover: 85

CROP STAGE AT EACH APPLICATION

A

Crop 1 Code, Stage: ZEAMS
 Stage Scale: 3 LEAF
 Height, Unit: 16.4 CM

WEED STAGE AT EACH APPLICATION

A

| | |
|---------------------|--------------|
| Weed 1 Code, Stage: | ABUTH 2.3 CM |
| Stage Scale: | 1-4 LF |
| Density, Unit: | 23.5 SQ.M. |
| Weed 2 Code, Stage: | AMARE 1.2 CM |
| Stage Scale: | 1-5 LF |
| Density, Unit: | 2.0 SQ.M. |
| Weed 3 Code, Stage: | CHEAL 1.8 CM |
| Stage Scale: | 2-5 LF |
| Density, Unit: | 3.5 SQ.M. |
| Weed 4 Code, Stage: | SETVI 1.3 CM |
| Stage Scale: | 1-2 LF |
| Density, Unit: | 32.0 SQ.M. |

APPLICATION EQUIPMENT

A

Appl. Equipment: CO2 SPRAY
 Operating Pressure: 207 kPa
 Nozzle Type: AIR INDUC
 Nozzle Size: ULD120-02
 Nozzle Spacing, Unit: 50 CM
 Boom Length, Unit: 1.5 M
 Boom Height, Unit: 50 CM
 Carrier: WATER
 Spray Volume, Unit: 200 L/HA
 Propellant: CO2

TOLERANCE OF EIGHT SWEET CORN HYBRIDS TO HALOSULFURON-METHYL - I

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T3A

| Crop Code | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS |
|-------------------|-----------|-----------|-----------|-----------|----------|----------|--------|--------|-------|-------|-------|
| Part Rated | | | | | | | | | | | |
| Rating Data Type | INJURY | INJURY | INJURY | HEIGHT | MARKET | TOTAL | MARKET | MARKET | TOTAL | TOTAL | |
| Rating Unit | % | % | % | CM | AVG. COB | AVG. COB | YIELD | YIELD | YIELD | YIELD | |
| Rating Date | Jun-13-06 | Jun-20-06 | Jul-03-06 | Jun-27-06 | G | G | T/HA | T/AC | T/HA | T/AC | |
| Crop Stage | 4-6 LEAF | 4-7 LEAF | 9-10 LF | 6-8 LEAF | | | | | | | |
| Crop Stage Scale | 24-32 CM | 28-48 CM | 98-112CM | 51-83 CM | | | | | | | |
| Trt-Eval Interval | 7 DAT | 14 DAT | 28 DAT | 21 DAT | | | | | | | |

| Trt | Treatment | Rate | Unit | | | | | | | | |
|-----|-----------|------|------|--|--|--|--|--|--|--|--|
| No. | Name | Rate | Unit | | | | | | | | |

TABLE OF R MEANS

| | | | | | | | | | | | | |
|-------------|--|---|--|---|---|------|-------|-------|------|-----|------|-----|
| Replicate 1 | | 2 | | 0 | | 69.0 | 321.5 | 210.4 | 15.6 | 6.9 | 19.9 | 8.9 |
| Replicate 2 | | 1 | | 0 | | 70.8 | 304.5 | 203.9 | 15.4 | 6.9 | 20.0 | 8.9 |
| Replicate 3 | | 1 | | 0 | 1 | 62.8 | 297.0 | 195.1 | 13.1 | 5.8 | 18.4 | 8.2 |
| Replicate 4 | | 2 | | 0 | | 69.9 | 298.6 | 198.8 | 14.7 | 6.5 | 18.9 | 8.4 |

TABLE OF A MEANS

| | | | | | | | | | | | | |
|---|---------------------|------|--------|---|---|------|-------|-------|------|-----|------|-----|
| 1 | untreated check | | | 0 | | 69.1 | 304.7 | 201.5 | 14.8 | 6.6 | 19.6 | 8.8 |
| 2 | halosulfuron-methyl | 25 | G A/HA | 2 | 0 | 68.0 | 311.7 | 203.4 | 14.5 | 6.5 | 19.2 | 8.5 |
| 2 | Agral 90 | 0.25 | % V/V | | | | | | | | | |
| 3 | halosulfuron-methyl | 50 | G A/HA | 2 | 1 | 67.3 | 299.8 | 201.3 | 14.7 | 6.6 | 19.1 | 8.5 |
| 3 | Agral 90 | 0.5 | % V/V | | | | | | | | | |

| | | | | | | | | | | | |
|------|-----|----|----|----|----|----|----|----|----|----|----|
| LSD= | 1 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| CV= | 149 | 0 | 0 | 10 | 12 | 10 | 17 | 17 | 10 | 10 | |

TABLE OF B MEANS

| | | | | | | | | | | | | |
|---|--------------|--|--|---|---|------|-------|-------|------|-----|------|------|
| 1 | HARVEST GOLD | | | 2 | 0 | 66.1 | 284.2 | 176.8 | 12.7 | 5.7 | 17.8 | 7.9 |
| 2 | GH2041 | | | 1 | 1 | 65.5 | 285.2 | 181.3 | 13.8 | 6.2 | 17.9 | 8.0 |
| 3 | GH9589 | | | 1 | 0 | 71.1 | 325.4 | 233.3 | 15.5 | 6.9 | 22.8 | 10.2 |
| 4 | GSS9299 | | | 0 | 0 | 66.5 | 246.3 | 170.0 | 11.8 | 5.3 | 14.8 | 6.6 |
| 5 | GG214 | | | 2 | 0 | 71.4 | 282.9 | 203.6 | 12.9 | 5.8 | 15.8 | 7.0 |
| 6 | GG446 | | | 1 | 0 | 74.9 | 360.3 | 238.4 | 19.1 | 8.5 | 24.6 | 11.0 |
| 7 | GG763 | | | 2 | 1 | 62.2 | 306.9 | 184.5 | 13.7 | 6.1 | 19.2 | 8.6 |
| 8 | GG447 | | | 0 | 0 | 67.3 | 352.1 | 228.6 | 17.9 | 8.0 | 21.5 | 9.6 |

TABLE OF AB MEANS

| | | | | | | | | | | | | |
|---|---------------------|------|--------|---|---|------|-------|-------|------|-----|------|------|
| 1 | untreated check | | | 0 | 0 | 66.9 | 295.2 | 175.7 | 13.1 | 5.8 | 18.5 | 8.3 |
| 1 | HARVEST GOLD | | | | | | | | | | | |
| 2 | halosulfuron-methyl | 25 | G A/HA | 3 | 1 | 65.7 | 282.9 | 184.4 | 13.7 | 6.1 | 18.7 | 8.3 |
| 2 | Agral 90 | 0.25 | % V/V | | | | | | | | | |
| 1 | HARVEST GOLD | | | | | | | | | | | |
| 3 | halosulfuron-methyl | 50 | G A/HA | 4 | 1 | 65.6 | 274.7 | 170.4 | 11.4 | 5.1 | 16.3 | 7.3 |
| 3 | Agral 90 | 0.5 | % V/V | | | | | | | | | |
| 1 | HARVEST GOLD | | | | | | | | | | | |
| 1 | untreated check | | | 0 | 0 | 67.3 | 286.6 | 181.9 | 14.1 | 6.3 | 18.4 | 8.2 |
| 2 | GH2041 | | | | | | | | | | | |
| 2 | halosulfuron-methyl | 25 | G A/HA | 2 | 1 | 65.9 | 284.4 | 183.8 | 13.9 | 6.2 | 18.0 | 8.0 |
| 2 | Agral 90 | 0.25 | % V/V | | | | | | | | | |
| 2 | GH2041 | | | | | | | | | | | |
| 3 | halosulfuron-methyl | 50 | G A/HA | 2 | 1 | 63.3 | 284.5 | 178.1 | 13.5 | 6.0 | 17.4 | 7.7 |
| 3 | Agral 90 | 0.5 | % V/V | | | | | | | | | |
| 2 | GH2041 | | | | | | | | | | | |
| 1 | untreated check | | | 0 | 0 | 73.3 | 312.1 | 220.3 | 13.9 | 6.2 | 22.1 | 9.9 |
| 3 | GH9589 | | | | | | | | | | | |
| 2 | halosulfuron-methyl | 25 | G A/HA | 2 | 0 | 70.1 | 343.2 | 237.9 | 15.7 | 7.0 | 22.4 | 10.0 |
| 2 | Agral 90 | 0.25 | % V/V | | | | | | | | | |
| 3 | GH9589 | | | | | | | | | | | |
| 3 | halosulfuron-methyl | 50 | G A/HA | 2 | 0 | 69.9 | 320.9 | 241.5 | 17.0 | 7.6 | 23.8 | 10.6 |
| 3 | Agral 90 | 0.5 | % V/V | | | | | | | | | |
| 3 | GH9589 | | | | | | | | | | | |
| 1 | untreated check | | | 0 | 0 | 67.7 | 241.8 | 167.7 | 12.0 | 5.4 | 15.1 | 6.7 |
| 4 | GSS9299 | | | | | | | | | | | |
| 2 | halosulfuron-methyl | 25 | G A/HA | 1 | 0 | 66.6 | 250.4 | 168.3 | 12.0 | 5.3 | 14.7 | 6.6 |
| 2 | Agral 90 | 0.25 | % V/V | | | | | | | | | |
| 4 | GSS9299 | | | | | | | | | | | |
| 3 | halosulfuron-methyl | 50 | G A/HA | 1 | 0 | 65.1 | 246.8 | 174.0 | 11.4 | 5.1 | 14.5 | 6.5 |
| 3 | Agral 90 | 0.5 | % V/V | | | | | | | | | |
| 4 | GSS9299 | | | | | | | | | | | |
| 1 | untreated check | | | 0 | 0 | 71.8 | 289.8 | 209.0 | 13.4 | 6.0 | 15.8 | 7.1 |
| 5 | GG214 | | | | | | | | | | | |
| 2 | halosulfuron-methyl | 25 | G A/HA | 2 | 0 | 72.8 | 290.7 | 204.9 | 11.5 | 5.1 | 15.5 | 6.9 |
| 2 | Agral 90 | 0.25 | % V/V | | | | | | | | | |
| 5 | GG214 | | | | | | | | | | | |

TOLERANCE OF EIGHT SWEET CORN HYBRIDS TO HALOSULFURON-METHYL - I

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T3A

| Crop Code | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | |
|-------------------|---------------------|-----------|-----------|-----------|----------|----------|--------|--------|--------|-------|-------|-------|------|
| Part Rated | | | | | | | | | | | | | |
| Rating Data Type | INJURY | INJURY | INJURY | HEIGHT | MARKET | TOTAL | MARKET | MARKET | MARKET | TOTAL | TOTAL | TOTAL | |
| Rating Unit | % | % | % | CM | AVG. COB | AVG. COB | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | |
| Rating Date | Jun-13-06 | Jun-20-06 | Jul-03-06 | Jun-27-06 | G | G | T/HA | T/AC | T/HA | T/AC | T/HA | T/AC | |
| Crop Stage | 4-6 LEAF | 4-7 LEAF | 9-10 LF | 6-8 LEAF | | | | | | | | | |
| Crop Stage Scale | 24-32 CM | 28-48 CM | 98-112CM | 51-83 CM | | | | | | | | | |
| Trt-Eval Interval | 7 DAT | 14 DAT | 28 DAT | 21 DAT | | | | | | | | | |
| Trt No. | Treatment Name | Rate | Unit | | | | | | | | | | |
| 3 | halosulfuron-methyl | 50 | G A/HA | 4 | 1 | 0 | 69.6 | 268.2 | 196.7 | 13.9 | 6.2 | 16.0 | 7.1 |
| 3 | Agral 90 | 0.5 | % V/V | | | | | | | | | | |
| 5 | GG214 | | | | | | | | | | | | |
| 1 | untreated check | | | 0 | 0 | 0 | 76.6 | 358.0 | 235.8 | 19.1 | 8.5 | 24.9 | 11.1 |
| 6 | GG446 | | | | | | | | | | | | |
| 2 | halosulfuron-methyl | 25 | G A/HA | 1 | 0 | 0 | 73.2 | 354.0 | 237.5 | 19.0 | 8.5 | 24.2 | 10.8 |
| 2 | Agral 90 | 0.25 | % V/V | | | | | | | | | | |
| 6 | GG446 | | | | | | | | | | | | |
| 3 | halosulfuron-methyl | 50 | G A/HA | 2 | 0 | 0 | 74.9 | 368.8 | 241.9 | 19.2 | 8.6 | 24.6 | 11.0 |
| 3 | Agral 90 | 0.5 | % V/V | | | | | | | | | | |
| 6 | GG446 | | | | | | | | | | | | |
| 1 | untreated check | | | 0 | 0 | 0 | 64.1 | 292.9 | 191.8 | 14.3 | 6.4 | 20.1 | 9.0 |
| 7 | GG763 | | | | | | | | | | | | |
| 2 | halosulfuron-methyl | 25 | G A/HA | 4 | 1 | 0 | 61.2 | 342.7 | 184.4 | 13.0 | 5.8 | 19.0 | 8.5 |
| 2 | Agral 90 | 0.25 | % V/V | | | | | | | | | | |
| 7 | GG763 | | | | | | | | | | | | |
| 3 | halosulfuron-methyl | 50 | G A/HA | 3 | 1 | 3 | 61.4 | 285.0 | 177.1 | 13.6 | 6.1 | 18.6 | 8.3 |
| 3 | Agral 90 | 0.5 | % V/V | | | | | | | | | | |
| 7 | GG763 | | | | | | | | | | | | |
| 1 | untreated check | | | 0 | 0 | 0 | 65.0 | 361.5 | 229.9 | 18.4 | 8.2 | 22.2 | 9.9 |
| 8 | GG447 | | | | | | | | | | | | |
| 2 | halosulfuron-methyl | 25 | G A/HA | 0 | 0 | 0 | 68.5 | 345.1 | 225.6 | 17.4 | 7.8 | 20.8 | 9.3 |
| 2 | Agral 90 | 0.25 | % V/V | | | | | | | | | | |
| 8 | GG447 | | | | | | | | | | | | |
| 3 | halosulfuron-methyl | 50 | G A/HA | 1 | 0 | 0 | 68.4 | 349.9 | 230.2 | 17.8 | 7.9 | 21.6 | 9.6 |
| 3 | Agral 90 | 0.5 | % V/V | | | | | | | | | | |
| 8 | GG447 | | | | | | | | | | | | |
| | LSD= | 1 | | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | CV= | 89 | | 0 | 0 | 5 | 9 | 8 | 10 | 10 | 6 | 6 | |

Trial Comments

HARVEST DATES:
 AUGUST 3/06: GH 2041.
 AUGUST 4/06: GSS 9299 AND 66 214.
 AUGUST 9/06: HARVEST GOLD.
 AUGUST 10/06: GG 446 AND GG 763.
 AUGUST 11/06: GH 9589.
 AUGUST 14/06: GG 447.

CONCLUSIONS: Halosulfuron-methyl applied postemergence at 25 and 50 g ai ha⁻¹ to eight processing sweet corn cultivars (GG446, GG214, Harvest Gold, GH2041, GH9589, GG763, GG447 and GSS9299) did not cause visual injury and did not reduce height, marketable cob weight or marketable yield.

IMPACT EFFICACY AND TOLERANCE IN SWEET CORN APPLIED EARLY POSTEMERGENCE-I

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T4A

CROP: ZEAMS, CORN, SWEET (HARVEST GOLD). Planted: May-24-06, 50000 SEEDS/HA, 4 CM Deep, 75 CM Row Width.
 Planting Method: MONOSEM. Emerged On: May-29-06.
 ZEAMS, CORN, SWEET (GH 2042). Planted: May-24-06, 50000 SEEDS/HA, 4 CM Deep, 75 CM Row Width.
 Planting Method: MONOSEM. Emerged On: May-29-06.
 ZEAMS, CORN, SWEET (DELMONTE 2038). Planted: May-24-06, 50000 SEEDS/HA, 4 CM Deep, 75 CM Row Width.
 Planting Method: MONOSEM. Emerged On: May-29-06.
 ZEAMS, CORN, SWEET (GH 6631 (ROCKER)). Planted: May-24-06, 50000 SEEDS/HA, 4 CM Deep, 75 CM Row Width.
 Planting Method: MONOSEM. Emerged On: May-29-06.

FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RCAT-K.

Site Description: Soil Texture: LOAM. %OM: 5.5 %Sand: 51.3 %Silt: 32.4 %Clay: 16.4 pH: 7.2 CEC: 19.0.

| APPLICATION DESCRIPTION | | STAGE AT APPLICATION | |
|-------------------------|-------------|----------------------|--------------|
| Application: | A | B | Application: |
| Date | : May-26-06 | Jun-01-06 | Crop 1 ZEAMS |
| Time of Day | : 2:50 PM | 9:00 PM | Height : |
| Method | : CO2 SPRAY | CO2 SPRAY | Crop 2 ZEAMS |
| Timing | : PRE | 2 LEAF | Height : |
| Placement | : SOIL | FOLIAR | Crop 3 ZEAMS |
| Air Temp. | : 22.9 C | 18.8 C | Height : |
| % Humidity | : 70 | 95 | Crop 4 ZEAMS |
| Wind Speed | : 8.2 KPH | 5.5 KPH | Height : |
| Dew Present | : N | N | Weed 1 ABUTH |
| Soil Moist.: | MOIST | MOIST | Stg.Scale: |
| Cloud Cover: | 90% | 90% | Density : |
| Equipment | : CO2 SPRAY | CO2 SPRAY | Weed 2 AMARE |
| Pressure | : 207 kPa | 207 kPa | Stg.Scale: |
| Nozzle Type | : AIR INDUC | AIR INDUC | Density : |
| Nozzle Size | : ULD120-02 | ULD120-02 | Weed 3 CHEAL |
| Noz.Spacing | : 50 CM | 50 CM | Stg.Scale: |
| Boom Length | : 1.5 M | 1.5 M | Density : |
| Boom Height | : 50 CM | 50 CM | Weed 4 SOLPT |
| Carrier | : WATER | WATER | Stg.Scale: |
| Appl.Volume | : 200 L/HA | 200 L/HA | Density : |
| Propellant | : CO2 | CO2 | Weed 5 STEME |
| | | | Stg.Scale: |
| | | | Density : |
| | | | Weed 6 SETVI |
| | | | Stg.Scale: |
| | | | Density : |

| Weed Code | HAR.GOLD | GH 2042 | DEL 2038 | GH 6631 | HAR.GOLD | GH 2042 | DEL 2038 | GH 6631 |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS |
| Rating Data Type | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY |
| Rating Unit | % | % | % | % | % | % | % | % |
| Rating Date | Jun-08-06 | Jun-08-06 | Jun-08-06 | Jun-08-06 | Jun-15-06 | Jun-15-06 | Jun-15-06 | Jun-15-06 |
| Crop Stage | 3-4 LEAF | 3-4 LEAF | 3-4 LEAF | 3-4 LEAF | 5-6 LEAF | 5-6 LEAF | 5-6 LEAF | 5-6 LEAF |
| Crop Stage Scale | 19-25 CM | 17-21 CM | 19-27 CM | 19-24 CM | 30-40 CM | 30-41 CM | 30-42 CM | 28-35 CM |
| Trt-Eval Interval | 7 DAT-B | 7 DAT-B | 7 DAT-B | 7 DAT-B | 14 DAT-B | 14 DAT-B | 14 DAT-B | 14 DAT-B |

| Trt No. | Treatment Name | Rate | Unit | | | | | | | | | |
|---------|---------------------|-------|--------|-----|-----|-----|-----|-----|-----|-----|------|---|
| 1 | untreated, weedfree | 0 | | c 0 | c 0 | c 0 | b 0 | b 0 | c 0 | c 0 | b | |
| 2 | dimethenamid-p | 544 | G A/HA | 0 | c 0 | c 0 | c 0 | b 0 | b 0 | c 0 | c 0 | b |
| 3 | dimethenamid-p | 544 | G A/HA | 1 | c 1 | c 1 | c 0 | b 0 | b 0 | c 1 | bc 0 | b |
| | IMPACT | 12.5 | G A/HA | | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | | |
| 4 | dimethenamid-p | 544 | G A/HA | 1 | c 2 | c 1 | c 0 | b 0 | b 0 | c 1 | bc 0 | b |
| | IMPACT | 18.75 | G A/HA | | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | | |
| 5 | dimethenamid-p | 544 | G A/HA | 3 | b 6 | b 5 | b 1 | b 1 | b 1 | b 2 | b 0 | b |
| | IMPACT | 37.5 | G A/HA | | | | | | | | | |
| | atrazine | 1000 | G A/HA | | | | | | | | | |
| | Assist | 2.5 | % V/V | | | | | | | | | |
| | UAN 28% | 2.5 | % V/V | | | | | | | | | |

IMPACT EFFICACY AND TOLERANCE IN SWEET CORN APPLIED EARLY POSTEMERGENCE-I

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T4A

| Trt No. | Treatment Name | Rate | Unit | HAR.GOLD | GH 2042 | DEL 2038 | GH 6631 | HAR.GOLD | GH 2042 | DEL 2038 | GH 6631 | |
|--------------------|----------------|------|--------|----------|---------|----------|---------|----------|---------|----------|---------|---|
| 6 | s-metolachlor | 1090 | G A/HA | 0 | c 0 | c 0 | c 0 | b 0 | b 0 | c 0 | c 0 | b |
| | mesotrione | 219 | G A/HA | | | | | | | | | |
| 7 | s-metolachlor | 1090 | G A/HA | 8 | a 14 | a 29 | a 4 | a 2 | a 5 | a 11 | a 1 | a |
| | mesotrione | 210 | G A/HA | | | | | | | | | |
| | atrazine | 1040 | G A/HA | | | | | | | | | |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | |
| LSD (P=.05) | | | | 1.1 | 1.5 | 2.9 | 0.8 | 0.6 | 0.9 | 2.0 | 0.6 | |
| Standard Deviation | | | | 0.7 | 1.0 | 1.9 | 0.5 | 0.4 | 0.6 | 1.3 | 0.4 | |
| CV | | | | 41.89 | 33.86 | 39.01 | 80.21 | 100.14 | 67.76 | 65.28 | 305.51 | |

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

| Trt No. | Treatment Name | Rate | Unit | HAR.GOLD | GH 2042 | DEL 2038 | GH 6631 | HAR.GOLD | GH 2042 | DEL 2038 | GH 6631 | |
|--------------------|---------------------|-------|--------|----------|---------|----------|---------|----------|---------|----------|----------|----|
| 1 | untreated, weedfree | | | 0 | b 0 | b 0 | b 0 | b 52.7 | ab 55.1 | a 57.3 | abc 56.2 | ab |
| 2 | dimethenamid-p | 544 | G A/HA | 8 | a 9 | a 6 | a 1 | a 46.9 | b 43.2 | b 52.8 | c 52.7 | b |
| 3 | dimethenamid-p | 544 | G A/HA | 0 | b 0 | b 0 | b 0 | b 54.6 | a 59.6 | a 65.9 | a 60.7 | a |
| | IMPACT | 12.5 | G A/HA | | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | | |
| 4 | dimethenamid-p | 544 | G A/HA | 0 | b 0 | b 0 | b 0 | b 55.4 | a 56.1 | a 63.7 | ab 58.8 | ab |
| | IMPACT | 18.75 | G A/HA | | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | | |
| 5 | dimethenamid-p | 544 | G A/HA | 0 | b 0 | b 0 | b 0 | b 56.7 | a 54.6 | a 62.1 | ab 56.9 | ab |
| | IMPACT | 37.5 | G A/HA | | | | | | | | | |
| | atrazine | 1000 | G A/HA | | | | | | | | | |
| | Assist | 2.5 | % V/V | | | | | | | | | |
| | UAN 28% | 2.5 | % V/V | | | | | | | | | |
| 6 | s-metolachlor | 1090 | G A/HA | 0 | b 0 | b 0 | b 0 | b 56.1 | a 58.7 | a 63.5 | ab 59.0 | ab |
| | mesotrione | 219 | G A/HA | | | | | | | | | |
| 7 | s-metolachlor | 1090 | G A/HA | 0 | b 0 | b 3 | a 0 | b 57.6 | a 55.6 | a 55.0 | bc 54.8 | ab |
| | mesotrione | 210 | G A/HA | | | | | | | | | |
| | atrazine | 1040 | G A/HA | | | | | | | | | |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | |
| LSD (P=.05) | | | | 1.2 | 1.7 | 3.2 | 0.8 | 6.01 | 6.96 | 8.99 | 6.70 | |
| Standard Deviation | | | | 0.8 | 1.1 | 2.1 | 0.6 | 4.04 | 4.69 | 6.05 | 4.51 | |
| CV | | | | 70.38 | 90.29 | 157.2 | 317.49 | 7.45 | 8.57 | 10.09 | 7.91 | |

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

IMPACT EFFICACY AND TOLERANCE IN SWEET CORN APPLIED EARLY POSTEMERGENCE-I

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T4A

| Weed Code | ABUTH | AMARE | CHEAL | SETVI | ABUTH | AMARE | CHEAL | SETVI |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS |
| Rating Data Type | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL |
| Rating Unit | % | % | % | % | % | % | % | % |
| Rating Date | Jun-29-06 | Jun-29-06 | Jun-29-06 | Jun-29-06 | Jul-25-06 | Jul-25-06 | Jul-25-06 | Jul-25-06 |
| Crop Stage | 9-11 LF | 9-11 LF | 9-11 LF | 9-11 LF | COB | COB | COB | COB |
| Crop Stage Scale | 80-95 CM | 80-95 CM | 80-95 CM | 80-95 CM | 0.9-2.0M | 0.9-2.0M | 0.9-2.0M | 0.9-2.0M |
| Weed Stage | 3-6 LF | 2-8 LF | 2-22 LF | 2-10 LF | 3-8 LF | 6-20+ LF | 4-20+ LF | 3-18 LF |
| Weed Density, Unit | 11.5SQ.M. | 6.0 SQ.M. | 146 SQ.M. | 35.0SQ.M. | 14.0SQ.M. | 3.0 SQ.M. | 78.0SQ.M. | 17.5SQ.M. |
| Trt-Eval Interval | 28 DAT-B | 28 DAT-B | 28 DAT-B | 28 DAT-B | 56 DAE | 56 DAE | 56 DAE | 56 DAE |

| Trt No. | Treatment Name | Rate | Rate Unit | | | | | | | | | | | |
|---------|---------------------|-------|-----------|----|-----|----|-----|----|-----|----|-----|-----|-----|----|
| 1 | untreated, weedfree | | 100 | a | 100 | a | 100 | a | 100 | a | 100 | a | 100 | a |
| 2 | dimethenamid-p | 544 | G A/HA | 0 | d | 0 | c | 0 | e | 0 | c | 0 | c | 0 |
| 3 | dimethenamid-p | 544 | G A/HA | 49 | c | 78 | b | 58 | d | 64 | b | 6 | bc | 76 |
| | IMPACT | 12.5 | G A/HA | | | | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | | | | |
| 4 | dimethenamid-p | 544 | G A/HA | 62 | bc | 80 | b | 61 | d | 56 | b | 19 | bc | 84 |
| | IMPACT | 18.75 | G A/HA | | | | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | | | | |
| 5 | dimethenamid-p | 544 | G A/HA | 68 | b | 78 | b | 66 | cd | 60 | b | 28 | b | 74 |
| | IMPACT | 37.5 | G A/HA | | | | | | | | | | | |
| | atrazine | 1000 | G A/HA | | | | | | | | | | | |
| | Assist | 2.5 | % V/V | | | | | | | | | | | |
| | UAN 28% | 2.5 | % V/V | | | | | | | | | | | |
| 6 | s-metolachlor | 1090 | G A/HA | 98 | a | 79 | b | 76 | bc | 20 | c | 100 | a | 73 |
| | mesotrione | 219 | G A/HA | | | | | | | | | | | |
| 7 | s-metolachlor | 1090 | G A/HA | 94 | a | 91 | ab | 84 | b | 48 | b | 98 | a | 88 |
| | mesotrione | 210 | G A/HA | | | | | | | | | | | |
| | atrazine | 1040 | G A/HA | | | | | | | | | | | |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | | |

| | | | | | | | | |
|--------------------|-------|-------|------|-------|-------|-------|-------|------|
| LSD (P=.05) | 13.5 | 18.5 | 11.2 | 20.9 | 26.2 | 19.1 | 17.9 | 20.2 |
| Standard Deviation | 9.1 | 12.5 | 7.5 | 14.1 | 17.6 | 12.9 | 12.0 | 13.6 |
| CV | 13.53 | 17.29 | 11.9 | 28.42 | 35.35 | 18.21 | 22.54 | 46.4 |

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

| Weed Code | HAR.GOLD | HAR.GOLD | HAR.GOLD | GH 2042 | GH 2042 | GH 2042 | DEL 2038 | DEL 2038 |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS |
| Part Rated | TOTAL | TOTAL | TOTAL | TOTAL | TOTAL | TOTAL | TOTAL | TOTAL |
| Rating Data Type | AVG. COB | YIELD | YIELD | AVG. COB | YIELD | YIELD | AVG. COB | YIELD |
| Rating Unit | G | T/HA | T/AC | G | T/HA | T/AC | G | T/HA |
| Rating Date | Aug-08-06 | Aug-08-06 | Aug-08-06 | Aug-03-06 | Aug-03-06 | Aug-03-06 | Aug-08-06 | Aug-08-06 |
| Crop Stage | COB | COB | COB | COB | COB | COB | COB | COB |
| Crop Stage Scale | 0.9-2.0M | 0.9-2.0M | 0.9-2.0M | 0.9-2.0M | 0.9-2.0M | 0.9-2.0M | 0.9-2.0M | 0.9-2.0M |
| Trt-Eval Interval | 72 DAE | 72 DAE | 72 DAE | 67 DAE | 67 DAE | 67 DAE | 72 DAE | 72 DAE |

| Trt No. | Treatment Name | Rate | Rate Unit | | | | | | | | | | | | |
|---------|---------------------|-------|-----------|-------|------|------|-----|-----|-------|-------|------|------|-----|-----|-------|
| 1 | untreated, weedfree | | 182.1 | a | 16.0 | ab | 7.1 | ab | 192.4 | a | 19.1 | ab | 8.5 | ab | 243.6 |
| 2 | dimethenamid-p | 544 | G A/HA | 94.5 | b | 4.4 | c | 1.9 | c | 75.8 | b | 4.2 | c | 1.9 | |
| 3 | dimethenamid-p | 544 | G A/HA | 179.2 | a | 14.8 | ab | 6.6 | ab | 183.0 | a | 18.4 | ab | 8.2 | |
| | IMPACT | 12.5 | G A/HA | | | | | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | | | | | |
| 4 | dimethenamid-p | 544 | G A/HA | 182.7 | a | 15.0 | ab | 6.7 | ab | 179.9 | a | 16.8 | ab | 7.5 | |
| | IMPACT | 18.75 | G A/HA | | | | | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | | | | | |
| 5 | dimethenamid-p | 544 | G A/HA | 176.4 | a | 14.6 | ab | 6.5 | ab | 175.5 | a | 17.2 | ab | 7.7 | |
| | IMPACT | 37.5 | G A/HA | | | | | | | | | | | | |
| | atrazine | 1000 | G A/HA | | | | | | | | | | | | |
| | Assist | 2.5 | % V/V | | | | | | | | | | | | |
| | UAN 28% | 2.5 | % V/V | | | | | | | | | | | | |
| 6 | s-metolachlor | 1090 | G A/HA | 198.2 | a | 14.4 | b | 6.4 | b | 171.2 | a | 15.8 | b | 7.1 | |
| | mesotrione | 219 | G A/HA | | | | | | | | | | | | |

IMPACT EFFICACY AND TOLERANCE IN SWEET CORN APPLIED EARLY POSTEMERGENCE-I

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T4A

| Weed Code | HAR.GOLD | HAR.GOLD | HAR.GOLD | GH 2042 | GH 2042 | GH 2042 | DEL 2038 | DEL 2038 | | | | | | | | | | | |
|--------------------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---|-------|---|------|---|------|---|-------|---|-------|----|
| Crop Code | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | | | | | | | | | | | |
| Part Rated | TOTAL | TOTAL | TOTAL | TOTAL | TOTAL | TOTAL | TOTAL | TOTAL | | | | | | | | | | | |
| Rating Data Type | AVG. COB | YIELD | YIELD | AVG. COB | YIELD | YIELD | AVG. COB | YIELD | | | | | | | | | | | |
| Rating Unit | G | T/HA | T/AC | G | T/HA | T/AC | G | T/HA | | | | | | | | | | | |
| Rating Date | Aug-08-06 | Aug-08-06 | Aug-08-06 | Aug-03-06 | Aug-03-06 | Aug-03-06 | Aug-08-06 | Aug-08-06 | | | | | | | | | | | |
| Crop Stage | COB | COB | COB | COB | COB | COB | COB | COB | | | | | | | | | | | |
| Crop Stage Scale | 0.9-2.0M | 0.9-2.0M | 0.9-2.0M | 0.9-2.0M | 0.9-2.0M | 0.9-2.0M | 0.9-2.0M | 0.9-2.0M | | | | | | | | | | | |
| Trt-Eval Interval | 72 DAE | 72 DAE | 72 DAE | 67 DAE | 67 DAE | 67 DAE | 72 DAE | 72 DAE | | | | | | | | | | | |
| 7 | s-metolachlor | 1090 | G A/HA | 197.3 | a | 17.2 | a | 7.7 | a | 193.6 | a | 20.8 | a | 9.3 | a | 238.9 | a | 21.0 | ab |
| | mesotrione | 210 | G A/HA | | | | | | | | | | | | | | | | |
| | atrazine | 1040 | G A/HA | | | | | | | | | | | | | | | | |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | | | | | | | |
| LSD (P=.05) | | | | 37.36 | | 2.78 | | 1.24 | | 34.58 | | 4.17 | | 1.86 | | 43.23 | | 4.08 | |
| Standard Deviation | | | | 25.15 | | 1.87 | | 0.83 | | 23.28 | | 2.81 | | 1.25 | | 29.10 | | 2.75 | |
| CV | | | | 14.55 | | 13.6 | | 13.6 | | 13.91 | | 17.5 | | 17.5 | | 13.34 | | 15.79 | |

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

| Weed Code | DEL 2038 | GH 6631 | GH 6631 | GH 6631 | | | | | |
|-------------------|---------------------|-----------|-----------|-----------|----|-------|----|------|----|
| Crop Code | ZEAMS | ZEAMS | ZEAMS | ZEAMS | | | | | |
| Part Rated | TOTAL | TOTAL | TOTAL | TOTAL | | | | | |
| Rating Data Type | YIELD | AVG. COB | YIELD | YIELD | | | | | |
| Rating Unit | T/AC | G | T/HA | T/AC | | | | | |
| Rating Date | Aug-08-06 | Aug-08-06 | Aug-08-06 | Aug-08-06 | | | | | |
| Crop Stage | COB | COB | COB | COB | | | | | |
| Crop Stage Scale | 0.9-2.0M | 0.9-2.0M | 0.9-2.0M | 0.9-2.0M | | | | | |
| Trt-Eval Interval | 72 DAE | 72 DAE | 72 DAE | 72 DAE | | | | | |
| 1 | untreated, weedfree | 9.9 | a | 240.6 | a | 22.2 | a | 9.9 | a |
| 2 | dimethenamid-p | 544 | G A/HA | 2.7 | c | 165.1 | c | 10.8 | c |
| 3 | dimethenamid-p | 544 | G A/HA | 8.2 | ab | 212.8 | ab | 17.3 | b |
| | IMPACT | 12.5 | G A/HA | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | |
| 4 | dimethenamid-p | 544 | G A/HA | 7.7 | b | 204.4 | b | 17.3 | b |
| | IMPACT | 18.75 | G A/HA | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | |
| 5 | dimethenamid-p | 544 | G A/HA | 8.7 | ab | 213.7 | ab | 21.0 | ab |
| | IMPACT | 37.5 | G A/HA | | | | | 9.4 | ab |
| | atrazine | 1000 | G A/HA | | | | | | |
| | Assist | 2.5 | % V/V | | | | | | |
| | UAN 28% | 2.5 | % V/V | | | | | | |
| 6 | s-metolachlor | 1090 | G A/HA | 7.8 | b | 212.7 | ab | 19.2 | ab |
| | mesotrione | 219 | G A/HA | | | | | 8.6 | ab |
| 7 | s-metolachlor | 1090 | G A/HA | 9.4 | ab | 219.3 | ab | 21.4 | ab |
| | mesotrione | 210 | G A/HA | | | | | 9.5 | ab |
| | atrazine | 1040 | G A/HA | | | | | | |
| | Agral 90 | 0.2 | % V/V | | | | | | |

| | | | | | | | | | | |
|--------------------|--|--|--|-------|--|-------|--|-------|--|-------|
| LSD (P=.05) | | | | 1.82 | | 30.83 | | 4.70 | | 2.10 |
| Standard Deviation | | | | 1.23 | | 20.75 | | 3.16 | | 1.41 |
| CV | | | | 15.79 | | 9.89 | | 17.14 | | 17.14 |

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

Trial Comments

CONCLUSIONS: Topramezone did not cause significant or commercially unacceptable visual injury (<6%) to the four sweet corn varieties tested. There were no reductions in corn height, cob weight or marketable yield, when compared to the untreated check. Season long control of velvetleaf, common lambsquarters and green foxtail was poor in this study, while pigweed control was good. The applications were made at the 2-leaf stage of corn, and many flushes of weeds emerged after application, indicating that topramezone does not possess enough residual activity to control these weeds. SC06T4B was conducted at a later stage, and resulted in acceptable control for these weed species, indicating that topramezone is best applied later in the season.

IMPACT EFFICACY AND TOLERANCE IN SWEET CORN APPLIED EARLY POSTEMERGENCE-II

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T4B

CROP: ZEAMS, CORN, SWEET (HARVEST GOLD). Planted: May-24-06, 50000 SEEDS/HA, 4 CM Deep, 75 CM Row Width.
 Planting Method: MONOSEM. Emerged On: May-29-06.
 ZEAMS, CORN, SWEET (GH 2042). Planted: May-24-06, 50000 SEEDS/HA, 4 CM Deep, 75 CM Row Width.
 Planting Method: MONOSEM. Emerged On: May-29-06.
 ZEAMS, CORN, SWEET (DELMONTE 2038). Planted: May-24-06, 50000 SEEDS/HA, 4 CM Deep, 75 CM Row Width.
 Planting Method: MONOSEM. Emerged On: May-29-06.
 ZEAMS, CORN, SWEET (GH 6631 (ROCKER)). Planted: May-24-06, 50000 SEEDS/HA, 4 CM Deep, 75 CM Row Width.
 Planting Method: MONOSEM. Emerged On: May-29-06.

FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RCAT-L6.

Site Description: Soil Texture: SANDY CLAY LOAM. %OM: 5.2 %Sand: 54.0 %Silt: 25.1 %Clay: 20.9 pH: 6.7 CEC: 11.0.

| APPLICATION DESCRIPTION | | STAGE AT APPLICATION | | | |
|-------------------------|-------------|----------------------|--------------|---|------------|
| Application: | A | B | Application: | A | B |
| Date | : May-26-06 | Jun-13-06 | Crop 1 ZEAMS | | |
| Time of Day | : 4:15 PM | 6:45 AM | Height | : | 20.9 CM |
| Method | : CO2 SPRAY | CO2 SPRAY | Crop 2 ZEAMS | | |
| Timing | : PRE | 4 LEAF | Height | : | 20.9 CM |
| Placement | : SOIL | FOLIAR | Crop 3 ZEAMS | | |
| Air Temp. | : 24.1 C | 11.1 C | Height | : | 20.9 CM |
| % Humidity | : 66 | 72 | Crop 4 ZEAMS | | |
| Wind Speed | : 7.2 KPH | 2.4 KPH | Height | : | 20.9 CM |
| Dew Present | : N | Y | Weed 1 ABUTH | | 0.5-6 CM |
| Soil Moist.: | MOIST | DRY | Stg.Scale: | | COT.-4 LF |
| Cloud Cover: | 80% | 0% | Density | : | 12.5 SQ.M. |
| Equipment | : CO2 SPRAY | CO2 SPRAY | Weed 2 AMBEL | | 2-9 CM |
| Pressure | : 207 kPa | 207 kPa | Stg.Scale: | | 2-6 LEAF |
| Nozzle Type: | AIR INDUC | AIR INDUC | Density | : | 6.5 SQ.M. |
| Nozzle Size: | ULD120-02 | ULD120-02 | Weed 3 CHEAL | | 2-5 CM |
| Noz.Spacing: | 50 CM | 50 CM | Stg.Scale: | | 4-8 LEAF |
| Boom Length: | 1.5 M | 1.5 M | Density | : | 8.5 SQ.M. |
| Boom Height: | 50 CM | 50 CM | Weed 4 POLPE | | 1-4 CM |
| Carrier | : WATER | WATER | Stg.Scale: | | COT-10 LF |
| Appl.Volume: | 200 L/HA | 200 L/HA | Density | : | 6.0 SQ.M. |
| Propellant | : CO2 | CO2 | Weed 5 ECHCG | | 0.5-6 CM |
| | | | Stg.Scale: | | 1-3 LEAF |
| | | | Density | : | 9.5 SQ.M. |
| | | | Weed 6 SETVI | | 1-9 CM |
| | | | Stg.Scale: | | COT.-6 LF |
| | | | Density | : | 25.0 SQ.M. |

| Weed Code | HAR.GOLD | GH 2042 | DEL 2038 | GH 6631 | HAR.GOLD | GH 2042 | DEL 2038 | GH 6631 |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS |
| Rating Data Type | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY |
| Rating Unit | % | % | % | % | % | % | % | % |
| Rating Date | Jun-20-06 | Jun-20-06 | Jun-20-06 | Jun-20-06 | Jun-26-06 | Jun-26-06 | Jun-26-06 | Jun-26-06 |
| Crop Stage | 4-6 LEAF | 5-6 LEAF | 5-6 LEAF | 4-6 LEAF | 7-8 LEAF | 7-9 LEAF | 7-9 LEAF | 7-8 LEAF |
| Crop Stage Scale | 24-34 CM | 26-41 CM | 21-48 CM | 31-42 CM | 58-69 CM | 63-70 CM | 73-80 CM | 60-65 CM |
| Trt-Eval Interval | 7 DAT-B | 7 DAT-B | 7 DAT-B | 7 DAT-B | 14 DAT-B | 14 DAT-B | 14 DAT-B | 14 DAT-B |

| Trt No. | Treatment Name | Rate | Unit | | | | | | | | |
|---------|---------------------|-------|--------|-----|-----|-----|-----|------|------|-----|-----|
| 1 | untreated, weedfree | | 0 | d 0 | d 0 | b 0 | c 0 | d 0 | c 0 | b 0 | b |
| 2 | dimethenamid-p | 544 | G A/HA | 0 | d 0 | d 0 | b 0 | c 0 | d 0 | c 0 | b 0 |
| 3 | dimethenamid-p | 544 | G A/HA | 1 | d 3 | c 2 | b 1 | bc 1 | cd 1 | c 1 | b 0 |
| | IMPACT | 12.5 | G A/HA | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | |
| 4 | dimethenamid-p | 544 | G A/HA | 4 | c 5 | b 3 | b 2 | b 3 | bc 3 | b 1 | b 1 |
| | IMPACT | 18.75 | G A/HA | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | |
| 5 | dimethenamid-p | 544 | G A/HA | 8 | a 8 | a 5 | b 5 | a 7 | a 7 | a 5 | b 4 |
| | IMPACT | 37.5 | G A/HA | | | | | | | | |
| | atrazine | 1000 | G A/HA | | | | | | | | |
| | Assist | 2.5 | % V/V | | | | | | | | |
| | UAN 28% | 2.5 | % V/V | | | | | | | | |

IMPACT EFFICACY AND TOLERANCE IN SWEET CORN APPLIED EARLY POSTEMERGENCE-II

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T4B

| Trt No. | Treatment Name | Rate | Unit | HAR.GOLD | GH 2042 | DEL 2038 | GH 6631 | HAR.GOLD | GH 2042 | DEL 2038 | GH 6631 | |
|--------------------|-------------------|------|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----|
| | Weed Code | | | HAR.GOLD | GH 2042 | DEL 2038 | GH 6631 | HAR.GOLD | GH 2042 | DEL 2038 | GH 6631 | |
| | Crop Code | | | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | |
| | Rating Data Type | | | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | |
| | Rating Unit | | | % | % | % | % | % | % | % | % | |
| | Rating Date | | | Jun-20-06 | Jun-20-06 | Jun-20-06 | Jun-20-06 | Jun-26-06 | Jun-26-06 | Jun-26-06 | Jun-26-06 | |
| | Crop Stage | | | 4-6 LEAF | 5-6 LEAF | 5-6 LEAF | 4-6 LEAF | 7-8 LEAF | 7-9 LEAF | 7-9 LEAF | 7-8 LEAF | |
| | Crop Stage Scale | | | 24-34 CM | 26-41 CM | 21-48 CM | 31-42 CM | 58-69 CM | 63-70 CM | 73-80 CM | 60-65 CM | |
| | Trt-Eval Interval | | | 7 DAT-B | 7 DAT-B | 7 DAT-B | 7 DAT-B | 14 DAT-B | 14 DAT-B | 14 DAT-B | 14 DAT-B | |
| Trt No. | Treatment Name | Rate | Unit | | | | | | | | | |
| 6 | s-metolachlor | 1090 | G A/HA | 0 | d 0 | d 0 | b 0 | c 2 | cd 2 | bc 2 | b 2 | ab |
| | mesotrione | 219 | G A/HA | | | | | | | | | |
| 7 | s-metolachlor | 1090 | G A/HA | 6 | b 9 | a 26 | a 1 | bc 4 | b 7 | a 55 | a 1 | b |
| | mesotrione | 210 | G A/HA | | | | | | | | | |
| | atrazine | 1040 | G A/HA | | | | | | | | | |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | |
| LSD (P=.05) | | | | 1.1 | 1.2 | 5.7 | 1.1 | 1.8 | 2.1 | 11.2 | 2.2 | |
| Standard Deviation | | | | 0.8 | 0.8 | 3.8 | 0.8 | 1.2 | 1.4 | 7.5 | 1.5 | |
| CV | | | | 29.0 | 22.54 | 75.56 | 66.83 | 51.71 | 51.22 | 83.11 | 145.97 | |

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

| Trt No. | Treatment Name | Rate | Unit | HAR.GOLD | GH 2042 | DEL 2038 | GH 6631 | HAR.GOLD | GH 2042 | DEL 2038 | GH 6631 | |
|--------------------|---------------------|-------|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---|
| | Weed Code | | | HAR.GOLD | GH 2042 | DEL 2038 | GH 6631 | HAR.GOLD | GH 2042 | DEL 2038 | GH 6631 | |
| | Crop Code | | | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | |
| | Rating Data Type | | | INJURY | INJURY | INJURY | INJURY | HEIGHT | HEIGHT | HEIGHT | HEIGHT | |
| | Rating Unit | | | % | % | % | % | CM | CM | CM | CM | |
| | Rating Date | | | Jul-11-06 | Jul-11-06 | Jul-11-06 | Jul-11-06 | Jul-04-06 | Jul-04-06 | Jul-04-06 | Jul-04-06 | |
| | Crop Stage | | | 10-11 LF | 11-12 LF | 11-12 LF | 11-12 LF | 7-11 LF | 7-11 LF | 7-12 LF | 8-11 LF | |
| | Crop Stage Scale | | | 1-1.15 M | 1.1-1.2M | 1.2-1.3M | 1.2-1.3M | 68-118CM | 72-117CM | 70-131CM | 74-125CM | |
| | Trt-Eval Interval | | | 28 DAT-B | 28 DAT-B | 28 DAT-B | 28 DAT-B | 21 DAT-B | 21 DAT-B | 21 DAT-B | 21 DAT-B | |
| Trt No. | Treatment Name | Rate | Unit | | | | | | | | | |
| 1 | untreated, weedfree | | | 0 | a 0 | a 0 | b 0 | a 98.7 | a 102.5 | a 112.5 | a 105.1 | a |
| 2 | dimethenamid-p | 544 | G A/HA | 1 | a 1 | a 1 | b 1 | a 94.8 | a 100.0 | ab 107.7 | a 105.3 | a |
| 3 | dimethenamid-p | 544 | G A/HA | 0 | a 0 | a 0 | b 0 | a 93.4 | a 97.9 | ab 105.0 | a 101.7 | a |
| | IMPACT | 12.5 | G A/HA | | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | | |
| 4 | dimethenamid-p | 544 | G A/HA | 0 | a 0 | a 0 | b 0 | a 89.1 | a 91.8 | b 106.1 | a 99.7 | a |
| | IMPACT | 18.75 | G A/HA | | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | | |
| 5 | dimethenamid-p | 544 | G A/HA | 0 | a 0 | a 0 | b 0 | a 92.0 | a 97.3 | ab 102.7 | a 100.4 | a |
| | IMPACT | 37.5 | G A/HA | | | | | | | | | |
| | atrazine | 1000 | G A/HA | | | | | | | | | |
| | Assist | 2.5 | % V/V | | | | | | | | | |
| | UAN 28% | 2.5 | % V/V | | | | | | | | | |
| 6 | s-metolachlor | 1090 | G A/HA | 1 | a 0 | a 0 | b 0 | a 97.2 | a 95.7 | ab 110.1 | a 103.8 | a |
| | mesotrione | 219 | G A/HA | | | | | | | | | |
| 7 | s-metolachlor | 1090 | G A/HA | 2 | a 1 | a 13 | a 0 | a 95.0 | a 98.6 | ab 86.5 | b 98.9 | a |
| | mesotrione | 210 | G A/HA | | | | | | | | | |
| | atrazine | 1040 | G A/HA | | | | | | | | | |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | |
| LSD (P=.05) | | | | 3.1 | 2.0 | 6.4 | 1.4 | 9.89 | 10.13 | 13.96 | 9.80 | |
| Standard Deviation | | | | 2.1 | 1.4 | 4.3 | 0.9 | 6.65 | 6.82 | 9.39 | 6.60 | |
| CV | | | | 329.55 | 384.42 | 207.84 | 529.15 | 7.06 | 6.98 | 9.0 | 6.46 | |

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

IMPACT EFFICACY AND TOLERANCE IN SWEET CORN APPLIED EARLY POSTEMERGENCE-II

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T4B

| Weed Code | ABUTH | AMBEL | CHEAL | POLPE | PANDI | SETVI | ABUTH | AMBEL |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS |
| Rating Data Type | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL |
| Rating Unit | % | % | % | % | % | % | % | % |
| Rating Date | Jul-11-06 | Jul-11-06 | Jul-11-06 | Jul-11-06 | Jul-11-06 | Jul-11-06 | Aug-05-06 | Aug-05-06 |
| Crop Stage | 10-12 LF | 10-12 LF | 10-12 LF | 10-12 LF | 10-12 LF | 10-12 LF | COB | COB |
| Crop Stage Scale | 1-1.35M | 1-1.35M | 1-1.35M | 1-1.35M | 1-1.35M | 1-1.35M | 1-1.35M | 1-1.35M |
| Weed Stage | 1-10 LF | 8-16 LF | 10-20 LF | 8-12 LF | 3-14 LF | 3-8 LF | 3-10 LF | 18-20+LF |
| Weed Density, Unit | 9.0 SQ.M. | 3.0 SQ.M. | 7.5 SQ.M. | 9.5 SQ.M. | 4.5 SQ.M. | 35.5SQ.M. | 6.0 SQ.M. | 6.5 SQ.M. |
| Trt-Eval Interval | 28 DAT-B | 28 DAT-B | 28 DAT-B | 28 DAT-B | 28 DAT-B | 28 DAT-B | 56 DAT-B | 56 DAT-B |

| Trt No. | Treatment Name | Rate | Rate Unit | | | | | | | | | | |
|---------|---------------------|-------|-----------|-----|----|-----|---|-----|---|-----|----|-----|----|
| 1 | untreated, weedfree | | | 100 | a | 100 | a | 100 | a | 100 | a | 100 | a |
| 2 | dimethenamid-p | 544 | G A/HA | 0 | d | 0 | c | 0 | b | 0 | c | 0 | d |
| 3 | dimethenamid-p | 544 | G A/HA | 83 | c | 97 | a | 95 | a | 88 | b | 75 | b |
| | IMPACT | 12.5 | G A/HA | | | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | | | |
| 4 | dimethenamid-p | 544 | G A/HA | 88 | bc | 96 | a | 100 | a | 96 | ab | 77 | b |
| | IMPACT | 18.75 | G A/HA | | | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | | | |
| 5 | dimethenamid-p | 544 | G A/HA | 97 | ab | 100 | a | 100 | a | 100 | a | 88 | ab |
| | IMPACT | 37.5 | G A/HA | | | | | | | | | | |
| | atrazine | 1000 | G A/HA | | | | | | | | | | |
| | Assist | 2.5 | % V/V | | | | | | | | | | |
| | UAN 28% | 2.5 | % V/V | | | | | | | | | | |
| 6 | s-metolachlor | 1090 | G A/HA | 98 | ab | 86 | b | 94 | a | 97 | ab | 90 | ab |
| | mesotrione | 219 | G A/HA | | | | | | | | | | |
| 7 | s-metolachlor | 1090 | G A/HA | 99 | ab | 100 | a | 100 | a | 100 | a | 86 | ab |
| | mesotrione | 210 | G A/HA | | | | | | | | | | |
| | atrazine | 1040 | G A/HA | | | | | | | | | | |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | |

| | | | | | | | | |
|--------------------|------|------|------|------|------|------|-------|-------|
| LSD (P=.05) | 11.7 | 6.2 | 6.4 | 9.8 | 17.1 | 18.0 | 13.4 | 12.5 |
| Standard Deviation | 7.9 | 4.2 | 4.3 | 6.6 | 10.2 | 12.1 | 9.0 | 8.4 |
| CV | 9.82 | 5.09 | 5.15 | 7.96 | 13.9 | 18.3 | 11.79 | 10.23 |

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

| Weed Code | CHEAL | POLPE | PANDI | SETVI | HAR.GOLD | HAR.GOLD | HAR.GOLD |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS |
| Part Rated | | | | | TOTAL | TOTAL | TOTAL |
| Rating Data Type | CONTROL | CONTROL | CONTROL | CONTROL | AVG. COB | YIELD | YIELD |
| Rating Unit | % | % | % | % | G | T/HA | T/AC |
| Rating Date | Aug-05-06 | Aug-05-06 | Aug-05-06 | Aug-05-06 | Aug-11-06 | Aug-11-06 | Aug-11-06 |
| Crop Stage | COB | COB | COB | COB | | | |
| Crop Stage Scale | 1-1.35M | 1-1.35M | 1-1.35M | 1-1.35M | | | |
| Weed Stage | 18-20+LF | 15-20+LF | 3-14 LF | 4-10 LF | | | |
| Weed Density, Unit | 18.5SQ.M. | 9.5 SQ.M. | 9.5 SQ.M. | 22.0SQ.M. | | | |
| Trt-Eval Interval | 56 DAT-B | 56 DAT-B | 56 DAT-B | 56 DAT-B | 75 DAE | 75 DAE | 75 DAE |

| Trt No. | Treatment Name | Rate | Rate Unit | | | | | | | | | | |
|---------|---------------------|-------|-----------|-----|---|-----|---|-----|----|-------|----|-------|----|
| 1 | untreated, weedfree | | | 100 | a | 100 | a | 100 | a | 209.7 | ab | 19.6 | ab |
| 2 | dimethenamid-p | 544 | G A/HA | 0 | b | 0 | b | 0 | f | 0 | d | 194.6 | ab |
| 3 | dimethenamid-p | 544 | G A/HA | 91 | a | 85 | a | 58 | d | 60 | c | 185.5 | b |
| | IMPACT | 12.5 | G A/HA | | | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | | | |
| 4 | dimethenamid-p | 544 | G A/HA | 93 | a | 86 | a | 62 | cd | 65 | c | 275.4 | a |
| | IMPACT | 18.75 | G A/HA | | | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | | | |
| 5 | dimethenamid-p | 544 | G A/HA | 100 | a | 100 | a | 85 | b | 83 | b | 213.6 | ab |
| | IMPACT | 37.5 | G A/HA | | | | | | | | | | |
| | atrazine | 1000 | G A/HA | | | | | | | | | | |
| | Assist | 2.5 | % V/V | | | | | | | | | | |
| | UAN 28% | 2.5 | % V/V | | | | | | | | | | |

IMPACT EFFICACY AND TOLERANCE IN SWEET CORN APPLIED EARLY POSTEMERGENCE-II

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: SC06T4B

| Weed Code | CHEAL | POLPE | PANDI | SETVI | HAR.GOLD | HAR.GOLD | HAR.GOLD | | | | |
|--------------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|---------|---------|-------|---|
| Crop Code | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | | | | |
| Part Rated | TOTAL | TOTAL | TOTAL | TOTAL | AVG. COB | YIELD | YIELD | | | | |
| Rating Data Type | CONTROL | CONTROL | CONTROL | CONTROL | AVG. COB | YIELD | YIELD | | | | |
| Rating Unit | % | % | % | % | G | T/HA | T/AC | | | | |
| Rating Date | Aug-05-06 | Aug-05-06 | Aug-05-06 | Aug-05-06 | Aug-11-06 | Aug-11-06 | Aug-11-06 | | | | |
| Crop Stage | COB | COB | COB | COB | | | | | | | |
| Crop Stage Scale | 1-1.35M | 1-1.35M | 1-1.35M | 1-1.35M | | | | | | | |
| Weed Stage | 18-20+LF | 15-20+LF | 3-14 LF | 4-10 LF | | | | | | | |
| Weed Density, Unit | 18.5SQ.M. | 9.5 SQ.M. | 9.5 SQ.M. | 22.0SQ.M. | | | | | | | |
| Trt-Eval Interval | 56 DAT-B | 56 DAT-B | 56 DAT-B | 56 DAT-B | 75 DAE | 75 DAE | 75 DAE | | | | |
| Trt No. | Treatment Name | Rate | Rate Unit | | | | | | | | |
| 6 | s-metolachlor | 1090 | G A/HA | 93 | a 100 | a 48 | e 10 | d 208.1 | ab 17.7 | b 7.9 | b |
| | mesotrione | 219 | G A/HA | | | | | | | | |
| 7 | s-metolachlor | 1090 | G A/HA | 100 | a 100 | a 70 | c 64 | c 178.0 | b 16.4 | b 7.3 | b |
| | mesotrione | 210 | G A/HA | | | | | | | | |
| | atrazine | 1040 | G A/HA | | | | | | | | |
| | Agral 90 | 0.2 | % V/V | | | | | | | | |
| LSD (P=.05) | | | | 10.0 | 18.3 | 9.5 | 13.6 | 84.88 | 8.46 | 3.77 | |
| Standard Deviation | | | | 6.7 | 12.3 | 5.2 | 9.1 | 57.14 | 5.69 | 2.54 | |
| CV | | | | 8.16 | 15.13 | 8.56 | 16.75 | 27.3 | 31.05 | 31.04 | |

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

| Weed Code | GH 2042 | GH 2042 | GH 2042 | DEL 2038 | DEL 2038 | DEL 2038 | GH 6631 | GH 6631 | GH | | | |
|--------------------|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|--------|----------|
| Crop Code | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | ZEAMS | | | |
| Part Rated | TOTAL | TOTAL | TOTAL | TOTAL | TOTAL | TOTAL | TOTAL | TOTAL | TOTAL | | | |
| Rating Data Type | AVG. COB | YIELD | YIELD | AVG. COB | YIELD | YIELD | AVG. COB | YIELD | YIELD | | | |
| Rating Unit | G | T/HA | T/AC | G | T/HA | T/AC | G | T/HA | T/AC | | | |
| Rating Date | Aug-04-06 | Aug-04-06 | Aug-04-06 | Aug-11-06 | Aug-11-06 | Aug-11-06 | Aug-11-06 | Aug-11-06 | Aug-11-06 | | | |
| Trt-Eval Interval | 68 DAE | 68 DAE | 68 DAE | 75 DAE | 75 DAE | 75 DAE | 75 DAE | 75 DAE | 75 DAE | | | |
| Trt No. | Treatment Name | Rate | Rate Unit | | | | | | | | | |
| 1 | untreated, weedfree | | | 187.9 | a 19.1 | a 8.5 | a 251.5 | ab 23.5 | a 10.5 | a 213.5 | a 21.7 | a 9.7a |
| 2 | dimethenamid-p | 544 | G A/HA | 156.0 | b 14.7 | b 6.5 | b 211.9 | c 15.5 | c 6.9 | c 200.7 | a 17.3 | b 7.7b |
| 3 | dimethenamid-p | 544 | G A/HA | 183.5 | a 19.3 | a 8.6 | a 242.6 | ab 21.0 | ab 9.4 | ab 201.0 | a 20.2 | ab 9.0ab |
| | IMPACT | 12.5 | G A/HA | | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | | |
| 4 | dimethenamid-p | 544 | G A/HA | 180.8 | a 19.3 | a 8.6 | a 255.6 | a 23.9 | a 10.6 | a 220.9 | a 21.9 | a 9.8a |
| | IMPACT | 18.75 | G A/HA | | | | | | | | | |
| | atrazine | 500 | G A/HA | | | | | | | | | |
| | Assist | 1.25 | % V/V | | | | | | | | | |
| | UAN 28% | 1.25 | % V/V | | | | | | | | | |
| 5 | dimethenamid-p | 544 | G A/HA | 188.2 | a 17.7 | a 7.9 | a 234.4 | abc 21.6 | ab 9.6 | ab 221.8 | a 21.9 | a 9.8a |
| | IMPACT | 37.5 | G A/HA | | | | | | | | | |
| | atrazine | 1000 | G A/HA | | | | | | | | | |
| | Assist | 2.5 | % V/V | | | | | | | | | |
| | UAN 28% | 2.5 | % V/V | | | | | | | | | |
| 6 | s-metolachlor | 1090 | G A/HA | 181.2 | a 17.3 | a 7.7 | a 228.0 | bc 20.2 | b 9.0 | b 210.4 | a 20.7 | a 9.2a |
| | mesotrione | 219 | G A/HA | | | | | | | | | |
| 7 | s-metolachlor | 1090 | G A/HA | 177.4 | a 19.3 | a 8.6 | a 187.0 | d 14.4 | c 6.4 | c 216.2 | a 20.7 | a 9.2a |
| | mesotrione | 210 | G A/HA | | | | | | | | | |
| | atrazine | 1040 | G A/HA | | | | | | | | | |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | |
| LSD (P=.05) | | | | 19.64 | 2.26 | 1.01 | 24.52 | 3.09 | 1.38 | 23.52 | 2.92 | 1.30 |
| Standard Deviation | | | | 13.22 | 1.52 | 0.68 | 16.51 | 2.08 | 0.93 | 15.83 | 1.97 | 0.88 |
| CV | | | | 7.37 | 8.39 | 8.39 | 7.17 | 10.4 | 10.4 | 7.47 | 9.54 | 9.54 |

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

Trial Comments

CONCLUSIONS: Topramezone (BAS 670) did not cause significant or commercially unacceptable visual injury (<6%) to the four sweet corn varieties tested. There were no reductions in corn height, cob weight or marketable yield, when compared to the untreated check. Season long control of common ragweed and common lambsquarters was excellent, and velvetleaf and green foxtail were fair in this study. The applications were made at the 4-leaf stage of corn, and very few weeds emerged after application, resulting in acceptable control for these weed species, indicating that topramezone is best applied later in the season.

THE EFFECT OF WEED MANAGEMENT PROGRAMS ON TOMATO ESTABLISHMENT AND YIELD

KRISTEN MCNAUGHTON, DARREN ROBINSON

Experiment ID: T006M1

CROP: LYPES, TOMATO (H 9478). Planted: May-25-06, 29167 PLANTS/HA, 5 CM Deep, 1.5 CM Row Width.
 Planting Method: TRANSPLANT. Emerged On: May-25-06.
 FIELD Site. Expt.Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RCAT-C1&2.
 Site Description: Soil Texture: LOAM. %OM: 5.8 %Sand: 45.7 %Silt: 30.9 %Clay: 23.3 pH: 6.5 CEC: 12.0.

APPLICATION DESCRIPTION

| Application: | A | B | C | D | E |
|--------------|-----------|-----------|-----------|-----------|------------|
| Date | May-24-06 | Jun-01-06 | Jun-08-06 | Jun-14-06 | Jun-06-06 |
| Time of Day | 6:50 PM | 11:45 AM | 7:20 AM | 6:15 AM | 7:10 AM |
| Method | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY |
| Timing | PPI | COT.WEEDS | 7 DAT-B | 14 DAT-B | 1-2LFWEEED |
| Placement | SOIL | FOLIAR | FOLIAR | FOLIAR | FOLIAR |
| Air Temp. | 18.5 C | 20.3 C | 18.4 C | 12.2 C | 20.7 C |
| % Humidity | 63 | 84 | 85 | 85 | 66 |
| Wind Speed | 4.2 KPH | 7.5 KPH | 3.1 KPH | 0.0 KPH | 0.0 KPH |
| Dew Present | N | Y | Y | Y | Y |
| Soil Moist. | MOIST | MOIST | MOIST | DRY | MOIST |
| Cloud Cover | 90% | 100% | 10% | 0% | 0% |
| Equipment | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY |
| Pressure | 207 KPA | 207 KPA | 207 KPA | 207 KPA | 207 KPA |
| Nozzle Type | AIR INDUC | AIR INDUC | AIR INDUC | AIR INDUC | AIR INDUC |
| Nozzle Size | ULD120-02 | ULD120-02 | ULD120-02 | ULD120-02 | ULD120-02 |
| Noz.Spacing | 50 CM | 50 CM | 50 CM | 50 CM | 50 CM |
| Boom Length | 1.5 M | 1.5 M | 1.5 M | 1.5 M | 1.5 M |
| Boom Height | 50 CM | 50 CM | 50 CM | 50 CM | 50 CM |
| Carrier | WATER | WATER | WATER | WATER | WATER |
| Appl.Volume | 200 L/HA | 200 L/HA | 200 L/HA | 200 L/HA | 200 L/HA |
| Propellant | CO2 | CO2 | CO2 | CO2 | CO2 |

STAGE AT APPLICATION

| Crop 1 LYPES | A | B | C | D | E |
|--------------|------------|------------|-----------|-----------|-----------|
| Height | 15 CM | 15 CM | 19.5 CM | 21.5 CM | 19.5 CM |
| Weed 1 ABUTH | 2.2 CM | 2.2 CM | 1.9 CM | 3.2 CM | 1.9 CM |
| Stg.Scale: | 2 LEAF | 2 LEAF | COT-2 LF | 1-3 LF | COT-2 LF |
| Density | 5 SQ.M. | 5 SQ.M. | 9.5 SQ.M. | 5 SQ.M. | 9.5 SQ.M. |
| Weed 2 AMARE | 1.1 CM | 1.1 CM | 2.1 CM | 4.2 CM | 2.1 CM |
| Stg.Scale: | COT-2 LF | COT-2 LF | 2-6 LF | 2-10 LF | 2-6 LF |
| Density | 4.5 SQ.M. | 4.5 SQ.M. | 17 SQ.M. | 20 SQ.M. | 17 SQ.M. |
| Weed 3 CHEAL | 1.9 CM | 1.9 CM | 2 CM | 3.8 CM | 2 CM |
| Stg.Scale: | COT-4 LF | COT-4 LF | COT-6 LF | 4-8 LF | COT-7 LF |
| Density | 18 SQ.M. | 18 SQ.M. | 21 SQ.M. | 18 SQ.M. | 21 SQ.M. |
| Weed 4 SOLPT | 1.2 CM | 1.2 CM | 1.1 CM | 1.5 CM | 1.1 CM |
| Stg.Scale: | 1-4 LEAF | 1-4 LEAF | 2-4 LF | 2-4 LF | 2-4 LF |
| Density | 6 SQ.M. | 6 SQ.M. | 8.5 SQ.M. | 3 SQ.M. | 8.5 SQ.M. |
| Weed 5 ECHCG | 3.6 CM | 3.6 CM | 7.0 CM | 3.6 CM | |
| Stg.Scale: | 1-5 LEAF | 1-5 LEAF | 1-8 LEAF | 1-5 LEAF | |
| Density | 128 SQ.M. | 128 SQ.M. | 88 SQ.M. | 128 SQ.M. | |
| Weed 6 SETVI | 1.5 CM | 1.5 CM | 1.4 CM | 7.2 CM | 1.4 CM |
| Stg.Scale: | COT-3 LF | COT-3 LF | 1-3 LF | 1-4 LF | 1-3 LF |
| Density | 35.5 SQ.M. | 35.5 SQ.M. | 23 SQ.M. | 17 SQ.M. | 23 SQ.M. |

| Weed Code | A | B | C | D | E | F | G | ABUTH |
|--------------------|---|---|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | | | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES |
| Part Rated | | | | | | | | |
| Rating Data Type | | | INJURY | INJURY | INJURY | INJURY | INJURY | CONTROL |
| Rating Unit | | | % | % | % | % | % | % |
| Rating Date | | | Jun-01-06 | Jun-08-06 | Jun-20-06 | Jun-13-06 | Jun-20-06 | Jul-04-06 |
| Crop Stage | | | 4-5 LEAF | 5-7 LEAF | 10-12 LF | 7-9 LEAF | 10-12 LF | 10-12 LF |
| Crop Stage Scale | | | 14-16 CM | 14-18 CM | 25-33 CM | 18-25 CM | 25-33 CM | 25-33 CM |
| Weed Stage | | | | | | | | 5-8 LEAF |
| Weed Density, Unit | | | | | | | | 4.5 SQ.M. |
| Trt-Eval Interval | | | 7 DAE | 14 DAE | 28 DAE | 7 DAT-E | 14 DAT-E | 28 DAT-E |

| Trt No. | Treatment Name | Rate | Unit | A | B | C | D | E | F | G |
|---------|-----------------|------|--------|-------|-----|------|------|------|-------|----|
| 1 | UNTREATED CHECK | 0 | | a 0 | c 0 | b 0 | c 0 | b 0 | b 25 | d |
| 2 | TRIFLURALIN | 1105 | G A/HA | 1 a 0 | c 3 | ab 2 | bc 3 | ab 2 | ab 28 | d |
| 3 | S-METOLACHLOR | 1600 | G A/HA | 0 a 0 | c 0 | b 0 | c 0 | b 0 | b 61 | bc |

THE EFFECT OF WEED MANAGEMENT PROGRAMS ON TOMATO ESTABLISHMENT AND YIELD

KRISTEN MCNAUGHTON, DARREN ROBINSON

Experiment ID: T006M1

| Weed Code | | | | | | | | | | | ABUTH |
|--------------------|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|--------|---------|
| Crop Code | | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES |
| Part Rated | | | | | | | | | | | |
| Rating Data Type | | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | CONTROL |
| Rating Unit | | % | % | % | % | % | % | % | % | % | % |
| Rating Date | | Jun-01-06 | Jun-08-06 | Jun-20-06 | Jun-13-06 | Jun-20-06 | Jun-04-06 | Jun-22-06 | | | |
| Crop Stage | | 4-5 LEAF | 5-7 LEAF | 10-12 LF | 7-9 LEAF | 10-12 LF | 10-12 LF | 7-13 LF | | | |
| Crop Stage Scale | | 14-16 CM | 14-18 CM | 25-33 CM | 18-25 CM | 25-33 CM | 25-33 CM | 18-35 CM | | | |
| Weed Stage | | | | | | | | 5-8 LEAF | | | |
| Weed Density, Unit | | | | | | | | 4.5 SQ.M. | | | |
| Trt-Eval Interval | | 7 DAE | 14 DAE | 28 DAE | 7 DAT-E | 14 DAT-E | 28 DAT-E | 28 DAE | | | |
| Trt No. | Treatment Name | Rate | Unit | | | | | | | | |
| 4 | METRIBUZIN | 700 | G A/HA | 0 | a 0 | c 0 | b 0 | c 0 | b 0 | b 76 | abc |
| 5 | TRIFLURALIN | 1105 | G A/HA | 0 | a 1 | c 2 | b 2 | abc 2 | b 1 | b 48 | cd |
| | S-METOLACHLOR | 1600 | G A/HA | | | | | | | | |
| 6 | TRIFLURALIN | 1105 | G A/HA | 0 | a 1 | bc 3 | ab 3 | abc 3 | ab 1 | ab 79 | ab |
| | METRIBUZIN | 700 | G A/HA | | | | | | | | |
| 7 | S-METOLACHLOR | 1600 | G A/HA | 0 | a 1 | c 1 | b 1 | bc 1 | b 1 | b 85 | ab |
| | METRIBUZIN | 700 | G A/HA | | | | | | | | |
| 8 | TRIFLURALIN | 1105 | G A/HA | 1 | a 1 | abc 3 | ab 5 | ab 3 | ab 1 | ab 78 | abc |
| | S-METOLACHLOR | 1600 | G A/HA | | | | | | | | |
| | METRIBUZIN | 700 | G A/HA | | | | | | | | |
| 9 | S-METOLACHLOR | 1600 | G A/HA | 0 | a 1 | bc 4 | ab 3 | abc 4 | ab 2 | ab 100 | a |
| | METRIBUZIN | 250 | G A/HA | | | | | | | | |
| | METRIBUZIN | 150 | G A/HA | | | | | | | | |
| | METRIBUZIN | 150 | G A/HA | | | | | | | | |
| | METRIBUZIN | 150 | G A/HA | | | | | | | | |
| 10 | S-METOLACHLOR | 1600 | G A/HA | 0 | a 0 | c 3 | b 2 | abc 3 | b 1 | ab 96 | a |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | |
| 11 | S-METOLACHLOR | 1600 | G A/HA | 0 | a 4 | a 3 | ab 3 | abc 3 | ab 1 | ab 97 | a |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | |
| | THIFENSULFURON-METHYL | 6 | G A/HA | | | | | | | | |
| | AGRAL 90 | 0.2 | % V/V | | | | | | | | |
| 12 | S-METOLACHLOR | 1600 | G A/HA | 0 | a 4 | ab 8 | a 6 | a 8 | a 4 | a 95 | a |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | |
| | RIMSULFURON | 15 | G A/HA | | | | | | | | |
| | AGRAL 90 | 0.2 | % V/V | | | | | | | | |
| 13 | S-METOLACHLOR | 1600 | G A/HA | 0 | a 2 | abc 3 | ab 4 | abc 3 | ab 1 | ab 92 | a |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | |
| | FENOXAPROP-P-ETHYL | 540 | G A/HA | | | | | | | | |
| 14 | S-METOLACHLOR | 1600 | G A/HA | 0 | a 2 | abc 3 | b 2 | abc 3 | b 2 | ab 99 | a |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | |
| | FLUAZIFOP-P-BUTYL | 75 | G A/HA | | | | | | | | |
| 15 | S-METOLACHLOR | 1600 | G A/HA | 0 | a 0 | c 2 | b 3 | abc 2 | b 1 | b 92 | ab |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | |
| | SETHOXYDIM | 150 | G A/HA | | | | | | | | |
| | MERGE | 1 | L/HA | | | | | | | | |
| LSD (P=.05) | | | | 0.5 | 2.8 | 5.0 | 4.4 | 5.0 | 3.6 | 30.5 | |
| Standard Deviation | | | | 0.4 | 1.9 | 3.5 | 3.1 | 3.5 | 2.5 | 21.3 | |
| CV | | | | 554.2 | 190.94 | 143.26 | 136.7 | 143.26 | 213.16 | 27.87 | |

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

THE EFFECT OF WEED MANAGEMENT PROGRAMS ON TOMATO ESTABLISHMENT AND YIELD

KRISTEN MCNAUGHTON, DARREN ROBINSON

Experiment ID: T006M1

| | | | | | | | |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Weed Code | AMARE | CHEAL | DIGSA | SETVI | ABUTH | AMARE | CHEAL |
| Crop Code | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES |
| Rating Data Type | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL |
| Rating Unit | % | % | % | % | % | % | % |
| Rating Date | Jun-22-06 | Jun-22-06 | Jun-22-06 | Jun-22-06 | Jul-18-06 | Jul-18-06 | Jul-18-06 |
| Crop Stage | 7-13 LF | 7-13 LF | 7-13 LF | 7-13 LF | FRUIT | FRUIT | FRUIT |
| Crop Stage Scale | 18-35 CM | 18-35 CM | 18-35 CM | 18-35 CM | 30-40 CM | 30-40 CM | 30-40 CM |
| Weed Stage | 2-10 LF | 4-14 LF | 2-8 LEAF | 2-8 LEAF | 3-9 LF | 4-20+ LF | 6-20+ LF |
| Weed Density, Unit | 25.0SQ.M. | 27.0SQ.M. | 10.0SQ.M. | 40.0SQ.M. | 6.0 SQ.M. | 9.0 SQ.M. | 19.0SQ.M. |
| Trt-Eval Interval | 28 DAE | 28 DAE | 28 DAE | 28 DAE | 56 DAE | 56 DAE | 56 DAE |

| Trt No. | Treatment Name | Rate | Unit | Rate | Unit | Rate | Unit | Rate | Unit | Rate | Unit | Rate | Unit |
|---------|-----------------------|------|--------|------|------|------|------|------|------|------|------|------|--------|
| 1 | UNTREATED CHECK | 0 | | c 0 | | d 0 | | c 0 | | d 0 | | f 0 | |
| 2 | TRIFLURALIN | 1105 | G A/HA | 90 | ab | 84 | ab | 95 | a | 75 | bc | 14 | f 63 |
| 3 | S-METOLACHLOR | 1600 | G A/HA | 71 | b | 55 | c | 50 | b | 58 | c | 50 | d 63 |
| 4 | METRIBUZIN | 700 | G A/HA | 96 | a | 98 | ab | 90 | a | 81 | ab | 45 | de 99 |
| 5 | TRIFLURALIN | 1105 | G A/HA | 94 | a | 87 | ab | 100 | a | 73 | bc | 23 | ef 81 |
| | S-METOLACHLOR | 1600 | G A/HA | | | | | | | | | | |
| 6 | TRIFLURALIN | 1105 | G A/HA | 90 | ab | 81 | b | 98 | a | 85 | ab | 69 | bcd 79 |
| | METRIBUZIN | 700 | G A/HA | | | | | | | | | | |
| 7 | S-METOLACHLOR | 1600 | G A/HA | 100 | a | 95 | ab | 98 | a | 83 | ab | 65 | bcd 98 |
| | METRIBUZIN | 700 | G A/HA | | | | | | | | | | |
| 8 | TRIFLURALIN | 1105 | G A/HA | 100 | a | 96 | ab | 98 | a | 83 | ab | 58 | cd 97 |
| | S-METOLACHLOR | 1600 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 700 | G A/HA | | | | | | | | | | |
| 9 | S-METOLACHLOR | 1600 | G A/HA | 100 | a | 100 | a | 100 | a | 100 | a | 100 | a 100 |
| | METRIBUZIN | 250 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 150 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 150 | G A/HA | | | | | | | | | | |
| 10 | S-METOLACHLOR | 1600 | G A/HA | 100 | a | 100 | a | 100 | a | 96 | a | 90 | ab 99 |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| 11 | S-METOLACHLOR | 1600 | G A/HA | 100 | a | 100 | a | 100 | a | 98 | a | 85 | ab 99 |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | THIFENSULFURON-METHYL | 6 | G A/HA | | | | | | | | | | |
| | AGRAL 90 | 0.2 | % V/V | | | | | | | | | | |
| 12 | S-METOLACHLOR | 1600 | G A/HA | 100 | a | 100 | a | 100 | a | 95 | a | 91 | ab 100 |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | RIMSULFURON | 15 | G A/HA | | | | | | | | | | |
| | AGRAL 90 | 0.2 | % V/V | | | | | | | | | | |
| 13 | S-METOLACHLOR | 1600 | G A/HA | 100 | a | 98 | ab | 100 | a | 96 | a | 83 | abc 95 |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | FENOXAPROP-P-ETHYL | 540 | G A/HA | | | | | | | | | | |
| 14 | S-METOLACHLOR | 1600 | G A/HA | 100 | a | 100 | a | 97 | a | 92 | ab | 98 | a 100 |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | FLUAZIFOP-P-BUTYL | 75 | G A/HA | | | | | | | | | | |
| 15 | S-METOLACHLOR | 1600 | G A/HA | 99 | a | 99 | ab | 100 | a | 98 | a | 86 | ab 98 |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | SETHOXYDIM | 150 | G A/HA | | | | | | | | | | |
| | MERGE | 1 | L/HA | | | | | | | | | | |

| | | | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|-------|
| LSD (P=.05) | 18.8 | 18.2 | 27.7 | 20.0 | 26.4 | 25.4 | 28.4 |
| Standard Deviation | 13.1 | 12.7 | 15.9 | 14.0 | 18.5 | 17.8 | 19.9 |
| CV | 14.72 | 14.77 | 18.01 | 17.29 | 29.02 | 21.07 | 25.67 |

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

THE EFFECT OF WEED MANAGEMENT PROGRAMS ON TOMATO ESTABLISHMENT AND YIELD

KRISTEN MCNAUGHTON, DARREN ROBINSON

Experiment ID: T006M1

| | | | | | | | | | |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|-------|
| Weed Code | SOLPT | DIGSA | SETVI | | | | | | |
| Crop Code | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES |
| Part Rated | | | | RED | GREEN | ROTS | RD+GRN | | |
| Rating Data Type | CONTROL | CONTROL | CONTROL | YIELD | YIELD | YIELD | YIELD | | |
| Rating Unit | % | % | % | T/HA | T/HA | T/HA | T/HA | | |
| Rating Date | Jul-18-06 | Jul-18-06 | Jul-18-06 | Aug-22-06 | Aug-22-06 | Aug-22-06 | Aug-22-06 | | |
| Crop Stage | FRUIT | FRUIT | FRUIT | | | | | | |
| Crop Stage Scale | 30-40 CM | 30-40 CM | 30-40 CM | | | | | | |
| Weed Stage | 6-12 LF | 4-10 LF | 4-8 LF | | | | | | |
| Weed Density, Unit | 0.5 SQ.M. | 1.0 SQ.M. | 25.0SQ.M. | | | | | | |
| Assessed By | | | | WEEDY | WEEDY | WEEDY | WEEDY | | |
| Trt-Eval Interval | 56 DAE | 56 DAE | 56 DAE | 89 DAE | 89 DAE | 89 DAE | 89 DAE | | |

| Trt No. | Treatment Name | Rate | Unit | Rate | Unit | Yield | SE | Yield | SE | Yield | SE | Yield | SE |
|---------|-----------------------|------|--------|------|------|-------|-----|-------|-----|-------|-----|-------|------------|
| 1 | UNTREATED CHECK | | | 0 | | 0 | g | 13.6 | e | 0.5 | g | 0.2 | a 14.1 g |
| 2 | TRIFLURALIN | 1105 | G A/HA | 100 | | 25 | ef | 25.3 | cde | 1.6 | fg | 0.6 | a 26.9 efg |
| 3 | S-METOLACHLOR | 1600 | G A/HA | 100 | | 70 | f | 20.7 | de | 1.8 | efg | 0.2 | a 22.5 fg |
| 4 | METRIBUZIN | 700 | G A/HA | 70 | | 55 | c-f | 50.5 | ab | 5.0 | a-f | 0.4 | a 55.6 abc |
| 5 | TRIFLURALIN | 1105 | G A/HA | 100 | | 90 | def | 34.2 | bcd | 3.4 | c-g | 0.5 | a 37.7 c-f |
| 6 | S-METOLACHLOR | 1600 | G A/HA | | | | | | | | | | |
| 6 | TRIFLURALIN | 1105 | G A/HA | 100 | | 90 | ef | 25.9 | cde | 2.1 | d-g | 0.6 | a 28.0 d-g |
| | METRIBUZIN | 700 | G A/HA | | | | | | | | | | |
| 7 | S-METOLACHLOR | 1600 | G A/HA | 55 | | 85 | b-e | 43.9 | ab | 4.0 | b-g | 0.2 | a 47.9 abc |
| | METRIBUZIN | 700 | G A/HA | | | | | | | | | | |
| 8 | TRIFLURALIN | 1105 | G A/HA | 100 | | 60 | c-f | 39.7 | abc | 3.6 | b-g | 0.3 | a 43.3 b-e |
| | S-METOLACHLOR | 1600 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 700 | G A/HA | | | | | | | | | | |
| 9 | S-METOLACHLOR | 1600 | G A/HA | 100 | | 100 | a | 47.5 | ab | 6.8 | abc | 0.5 | a 54.4 abc |
| | METRIBUZIN | 250 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 150 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 150 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 150 | G A/HA | | | | | | | | | | |
| 10 | S-METOLACHLOR | 1600 | G A/HA | 88 | | 100 | abc | 55.9 | a | 6.5 | abc | 0.2 | a 62.4 a |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| 11 | S-METOLACHLOR | 1600 | G A/HA | 100 | | 100 | a-d | 51.6 | a | 7.1 | ab | 0.3 | a 58.7 ab |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | THIFENSULFURON-METHYL | 6 | G A/HA | | | | | | | | | | |
| | AGRAL 90 | 0.2 | % V/V | | | | | | | | | | |
| 12 | S-METOLACHLOR | 1600 | G A/HA | 100 | | 100 | abc | 44.1 | ab | 8.5 | a | 0.3 | a 52.6 abc |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | RIMSULFURON | 15 | G A/HA | | | | | | | | | | |
| | AGRAL 90 | 0.2 | % V/V | | | | | | | | | | |
| 13 | S-METOLACHLOR | 1600 | G A/HA | 100 | | 100 | a-e | 47.4 | ab | 5.6 | a-d | 0.2 | a 53.0 abc |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | FENOXAPROP-P-ETHYL | 540 | G A/HA | | | | | | | | | | |
| 14 | S-METOLACHLOR | 1600 | G A/HA | 100 | | 80 | abc | 40.7 | abc | 5.2 | a-e | 0.3 | a 45.9 a-d |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | FLUAZIFOP-P-BUTYL | 75 | G A/HA | | | | | | | | | | |
| 15 | S-METOLACHLOR | 1600 | G A/HA | 80 | | 100 | ab | 52.1 | a | 5.7 | a-d | 0.2 | a 57.8 ab |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | SETHOXYDIM | 150 | G A/HA | | | | | | | | | | |
| | MERGE | 1 | L/HA | | | | | | | | | | |

| | | | | | | | |
|--------------------|---|---|-------|-------|-------|--------|-------|
| LSD (P=.05) | . | . | 29.0 | 16.71 | 3.61 | 0.61 | 18.43 |
| Standard Deviation | . | . | 20.3 | 11.69 | 2.52 | 0.42 | 12.90 |
| CV | . | . | 31.96 | 29.57 | 55.91 | 128.95 | 29.28 |

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

THE EFFECT OF WEED MANAGEMENT PROGRAMS ON TOMATO ESTABLISHMENT AND YIELD

KRISTEN MCNAUGHTON, DARREN ROBINSON

Experiment ID: T006M1

| Crop Code | | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | | | | |
|--------------------|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|-------|------|-----|-----|
| Part Rated | | RED | GREEN | ROTS | RD+GRN | RED | GREEN | ROTS | | | | | |
| Rating Data Type | | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | | | | | |
| Rating Unit | | T/AC | T/AC | T/AC | T/AC | T/HA | T/HA | T/HA | | | | | |
| Rating Date | | Aug-22-06 | Aug-22-06 | Aug-22-06 | Aug-22-06 | Aug-22-06 | Aug-22-06 | Aug-22-06 | | | | | |
| Assessed By | | WEEDY | WEEDY | WEEDY | WEEDY | WEEDFREE | WEEDFREE | WEEDFREE | | | | | |
| Trt-Eval Interval | | 89 DAE | 89 DAE | 89 DAE | 89 DAE | 89 DAE | 89 DAE | 89 DAE | | | | | |
| Trt No. | Treatment Name | Rate | Rate | Unit | | | | | | | | | |
| 1 | UNTREATED CHECK | | 6.1 | e | 0.2 | g | 0.1 | a | 6.3 | g | 47.9 | 4.9 | 0.2 |
| 2 | TRIFLURALIN | 1105 | G A/HA | 11.3 | cde | 0.7 | fg | 0.3 | a | 12.0 | efg | | |
| 3 | S-METOLACHLOR | 1600 | G A/HA | 9.2 | de | 0.8 | efg | 0.1 | a | 10.0 | fg | | |
| 4 | METRIBUZIN | 700 | G A/HA | 22.5 | ab | 2.3 | a-f | 0.2 | a | 24.8 | abc | | |
| 5 | TRIFLURALIN | 1105 | G A/HA | 15.3 | bcd | 1.5 | c-g | 0.2 | a | 16.8 | c-f | | |
| | S-METOLACHLOR | 1600 | G A/HA | | | | | | | | | | |
| 6 | TRIFLURALIN | 1105 | G A/HA | 11.6 | cde | 0.9 | d-g | 0.3 | a | 12.5 | d-g | | |
| | METRIBUZIN | 700 | G A/HA | | | | | | | | | | |
| 7 | S-METOLACHLOR | 1600 | G A/HA | 19.6 | ab | 1.8 | b-g | 0.1 | a | 21.4 | abc | | |
| | METRIBUZIN | 700 | G A/HA | | | | | | | | | | |
| 8 | TRIFLURALIN | 1105 | G A/HA | 17.7 | abc | 1.6 | b-g | 0.1 | a | 19.3 | b-e | | |
| | S-METOLACHLOR | 1600 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 700 | G A/HA | | | | | | | | | | |
| 9 | S-METOLACHLOR | 1600 | G A/HA | 21.2 | ab | 3.0 | abc | 0.2 | a | 24.3 | abc | | |
| | METRIBUZIN | 250 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 150 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 150 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 150 | G A/HA | | | | | | | | | | |
| 10 | S-METOLACHLOR | 1600 | G A/HA | 24.9 | a | 2.9 | abc | 0.1 | a | 27.8 | a | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| 11 | S-METOLACHLOR | 1600 | G A/HA | 23.0 | a | 3.2 | ab | 0.1 | a | 26.2 | ab | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | THIFENSULFURON-METHYL | 6 | G A/HA | | | | | | | | | | |
| | AGRAL 90 | 0.2 | % V/V | | | | | | | | | | |
| 12 | S-METOLACHLOR | 1600 | G A/HA | 19.7 | ab | 3.8 | a | 0.1 | a | 23.5 | abc | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | RIMSULFURON | 15 | G A/HA | | | | | | | | | | |
| | AGRAL 90 | 0.2 | % V/V | | | | | | | | | | |
| 13 | S-METOLACHLOR | 1600 | G A/HA | 21.1 | ab | 2.5 | a-d | 0.1 | a | 23.6 | abc | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | FENOXAPROP-P-ETHYL | 540 | G A/HA | | | | | | | | | | |
| 14 | S-METOLACHLOR | 1600 | G A/HA | 18.2 | abc | 2.3 | a-e | 0.2 | a | 20.5 | a-d | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | FLUAZIFOP-P-BUTYL | 75 | G A/HA | | | | | | | | | | |
| 15 | S-METOLACHLOR | 1600 | G A/HA | 23.2 | a | 2.5 | a-d | 0.1 | a | 25.8 | ab | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | | | | | | | |
| | SETHOXYDIM | 150 | G A/HA | | | | | | | | | | |
| | MERGE | 1 | L/HA | | | | | | | | | | |
| LSD (P=.05) | | | | 7.45 | | 1.61 | | 0.27 | | 8.22 | | . | . |
| Standard Deviation | | | | 5.22 | | 1.13 | | 0.19 | | 5.75 | | . | . |
| CV | | | | 29.57 | | 55.91 | | 128.95 | | 29.28 | | . | . |

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

THE EFFECT OF WEED MANAGEMENT PROGRAMS ON TOMATO ESTABLISHMENT AND YIELD

KRISTEN MCNAUGHTON, DARREN ROBINSON

Experiment ID: T006M1

| | | | | | |
|-------------------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | LYPES | LYPES | LYPES | LYPES | LYPES |
| Part Rated | RD+GRN | RED | GREEN | ROTS | RD+GRN |
| Rating Data Type | YIELD | YIELD | YIELD | YIELD | YIELD |
| Rating Unit | T/HA | T/AC | T/AC | T/AC | T/AC |
| Rating Date | Aug-22-06 | Aug-22-06 | Aug-22-06 | Aug-22-06 | Aug-22-06 |
| Assessed By | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE |
| Trt-Eval Interval | 89 DAE | 89 DAE | 89 DAE | 89 DAE | 89 DAE |

| Trt No. | Treatment Name | Rate | Unit | | | | |
|---------|-----------------------|------|--------|------|-----|-----|------|
| 1 | UNTREATED CHECK | 52.8 | | 21.4 | 2.2 | 0.1 | 23.6 |
| 2 | TRIFLURALIN | 1105 | G A/HA | | | | |
| 3 | S-METOLACHLOR | 1600 | G A/HA | | | | |
| 4 | METRIBUZIN | 700 | G A/HA | | | | |
| 5 | TRIFLURALIN | 1105 | G A/HA | | | | |
| | S-METOLACHLOR | 1600 | G A/HA | | | | |
| 6 | TRIFLURALIN | 1105 | G A/HA | | | | |
| | METRIBUZIN | 700 | G A/HA | | | | |
| 7 | S-METOLACHLOR | 1600 | G A/HA | | | | |
| | METRIBUZIN | 700 | G A/HA | | | | |
| 8 | TRIFLURALIN | 1105 | G A/HA | | | | |
| | S-METOLACHLOR | 1600 | G A/HA | | | | |
| | METRIBUZIN | 700 | G A/HA | | | | |
| 9 | S-METOLACHLOR | 1600 | G A/HA | | | | |
| | METRIBUZIN | 250 | G A/HA | | | | |
| | METRIBUZIN | 150 | G A/HA | | | | |
| | METRIBUZIN | 150 | G A/HA | | | | |
| | METRIBUZIN | 150 | G A/HA | | | | |
| 10 | S-METOLACHLOR | 1600 | G A/HA | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | |
| 11 | S-METOLACHLOR | 1600 | G A/HA | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | |
| | THIFENSULFURON-METHYL | 6 | G A/HA | | | | |
| | AGRAL 90 | 0.2 | % V/V | | | | |
| 12 | S-METOLACHLOR | 1600 | G A/HA | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | |
| | RIMSULFURON | 15 | G A/HA | | | | |
| | AGRAL 90 | 0.2 | % V/V | | | | |
| 13 | S-METOLACHLOR | 1600 | G A/HA | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | |
| | FENOXAPROP-P-ETHYL | 540 | G A/HA | | | | |
| 14 | S-METOLACHLOR | 1600 | G A/HA | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | |
| | FLUAZIFOP-P-BUTYL | 75 | G A/HA | | | | |
| 15 | S-METOLACHLOR | 1600 | G A/HA | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | |
| | METRIBUZIN | 350 | G A/HA | | | | |
| | SETHOXYDIM | 150 | G A/HA | | | | |
| | MERGE | 1 | L/HA | | | | |

LSD (P=.05)

Standard Deviation

CV

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

Trial Comments

CONCLUSIONS: None of the treatments caused significant visual injury.

Trifluralin, s-metolachlor, trifluralin+s-metolachlor and trifluralin+metribuzin treatments did not provide acceptable control of common lamb's-quarters. Mean lamb's-quarters density was 19 plants m⁻². Excellent control of redroot pigweed and common lamb's-quarters was obtained where micro-rates of metribuzin were used after a PPI application of s-metolachlor+metribuzin. The addition of rimsulfuron, fenoxaprop-p-ethyl, fluzifop-p-butyl or sethoxydim to micro-rates of metribuzin micro-rates did not reduce broadleaf control and improved control of green foxtail.

Total yield was less than the untreated, weed-free check in the trifluralin, s-metolachlor, trifluralin+s-metolachlor and trifluralin+metribuzin, as a result of poor control of common lamb's-quarters, the dominant weed on the site. All of the treatments that included micro-rates of metribuzin had comparable yields to the untreated, weed-free check, and green yield was not greater in any of the treatments, indicating that maturity was not affected. The addition of rimsulfuron, fenoxaprop-p-ethyl, fluzifop-p-butyl or sethoxydim to micro-rates of metribuzin micro-rates did not reduce tomato yield.

WEED CONTROL AND TOLERANCE OF TOMATOES TO TANK MIXES OF THIFENSULFURON-METHYL, RIMSULFURON,
OR METRIBUZIN WITH AZOXYSTROBIN OR CHLOROTHALONIL

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: TO06T1

CROP: LYPES, TOMATO (H 9478). Planted: May-25-06, 29167 PLANTS/HA, 5 CM Deep, 1.5 M Row Width.
Planting Method: TRANSPLANT. Emerged On: May-25-06.
FIELD Site. Expt.Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RCAT-C1&2.
Site Description: Soil Texture: LOAM. %OM: 5.8 %Sand: 45.7 %Silt: 30.9 %Clay: 23.3 pH: 6.5 CEC: 12.0.

| APPLICATION DESCRIPTION | | | STAGE AT APPLICATION | | | | | |
|-------------------------|-----------|-----------|----------------------|--------------|-----------|------------|------------|---------|
| Application: | A | B | C | Application: | A | B | C | |
| Date | Jun-08-06 | Jun-22-06 | Jul-05-06 | Crop 1 LYPES | Height | 20.3 CM | 22.0 CM | 44.0 CM |
| Time of Day | 7:00 AM | 8:00 PM | 6:50 AM | Weed 1 ABUTH | 1.9 CM | 6.4 CM | 30.1 CM | |
| Method | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY | Stg.Scale: | COT-3 LF | 2-6 LF | 3-9 LF | |
| Timing | 14 DAE | 28 DAE | 42 DAE | Density | 20 SQ.M. | 9.5 SQ.M. | 7.0 SQ.M. | |
| Placement | FOLIAR | FOLIAR | FOLIAR | Weed 2 AMARE | 1.2 CM | 10 CM | 31.0 CM | |
| Air Temp. | 18.4 C | 20.5 C | 15.4 C | Stg.Scale: | COT-2 LF | 4-6 LF | 8-12 LF | |
| % Humidity | 85 | 92 | 88 | Density | 1.5 SQ.M. | 2.0 SQ.M. | 1.0 SQ.M. | |
| Wind Speed | 3.1 KPH | 3.4 KPH | 2.3 KPH | Weed 3 CHEAL | 3.8 CM | 12.7 CM | 39.5 CM | |
| Dew Present | Y | N | Y | Stg.Scale: | 1-8 LF | 2-14 LF | 8-18 LF | |
| Soil Moist.: | MOIST | WET | MOIST | Density | 21 SQ.M. | 22.5 SQ.M. | 19.5 SQ.M. | |
| Cloud Cover: | 10% | 95% | 10% | Weed 4 SOLPT | 1.8 CM | | | |
| Equipment | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY | Stg.Scale: | 1-3 LF | | | |
| Pressure | 207 kPa | 207 kPa | 207 kPa | Density | 3.0 SQ.M. | | | |
| Nozzle Type | AIR INDUC | AIR INDUC | AIR INDUC | Weed 5 SETVI | 1.8 CM | 4.6 CM | 28.5 CM | |
| Nozzle Size | ULD120-02 | ULD120-02 | ULD120-02 | Stg.Scale: | 1-3 LF | 2-5 LF | 3-12 LF | |
| Noz.Spacing | 50 CM | 50 CM | 50 CM | Density | 3.0 SQ.M. | 17.5 SQ.M. | 18.5 SQ.M. | |
| Boom Length | 1.5 M | 1.5 M | 1.5 M | | | | | |
| Boom Height | 50 CM | 50 CM | 50 CM | | | | | |
| Carrier | WATER | WATER | WATER | | | | | |
| Appl.Volume | 200 L/HA | 200 L/HA | 200 L/HA | | | | | |
| Propellant | CO2 | CO2 | CO2 | | | | | |

| Crop Code | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Rating Data Type | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY |
| Rating Unit | % | % | % | % | % | % | % | % |
| Rating Date | Jun-15-06 | Jun-22-06 | Jul-05-06 | Jun-28-06 | Jul-05-06 | Jul-21-06 | Jul-11-06 | Jul-21-06 |
| Crop Stage | 9-11 LF | 9-12 LF | FLWR-FRT | FLOWER | FLWR-FRT | FRUIT | FRUIT | FRUIT |
| Crop Stage Scale | 20-25 CM | 15-30 CM | 25-35 CM | 25-35 CM | 25-35 CM | 25-35 CM | 25-40 CM | 25-35 CM |
| Trt-Eval Interval | 7 DAT-A | 14 DAT-A | 28 DAT-A | 7 DAT-B | 14 DAT-B | 28 DAT-B | 7 DAT-C | 14 DAT-C |

| Trt No. | Treatment Name | Rate | Unit | | | | | | | | | |
|---------|-----------------------|------|--------|-----|------|------|-----|-----|-----|------|------|----|
| 1 | untreated check | 0 | | b 0 | b 0 | a 0 | a 0 | a 0 | b 0 | b 0 | b | |
| 2 | thifensulfuron-methyl | 6 | G A/HA | 0 | b 2 | ab 3 | a 3 | a 3 | a 1 | ab 2 | ab 1 | ab |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | |
| 3 | rimsulfuron | 15 | G A/HA | 1 | ab 1 | ab 1 | a 2 | a 1 | a 1 | ab 2 | ab 1 | ab |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | |
| 4 | metribuzin | 150 | G A/HA | 1 | ab 1 | b 0 | a 1 | a 0 | a 1 | b 1 | ab 1 | b |
| | metribuzin | 150 | G A/HA | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | |
| 5 | metribuzin | 350 | G A/HA | 1 | ab 2 | ab 3 | a 3 | a 3 | a 0 | b 4 | ab 0 | b |
| | metribuzin | 350 | G A/HA | | | | | | | | | |
| 6 | metribuzin | 700 | G A/HA | 1 | ab 2 | ab 4 | a 5 | a 4 | a 5 | a 6 | a 5 | a |
| 7 | thifensulfuron-methyl | 6 | G A/HA | 1 | ab 1 | ab 3 | a 5 | a 3 | a 1 | b 4 | ab 1 | b |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | |
| 8 | rimsulfuron | 15 | G A/HA | 2 | ab 1 | ab 3 | a 4 | a 3 | a 3 | ab 5 | ab 3 | ab |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | |
| 9 | metribuzin | 150 | G A/HA | 1 | ab 1 | b 1 | a 1 | a 1 | a 3 | ab 3 | ab 3 | ab |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | |
| 10 | metribuzin | 350 | G A/HA | 2 | ab 1 | ab 0 | a 1 | a 0 | a 0 | b 0 | b 0 | b |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | |
| | metribuzin | 350 | G A/HA | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | |

**WEED CONTROL AND TOLERANCE OF TOMATOES TO TANK MIXES OF THIFENSULFURON-METHYL, RIMSULFURON,
OR METRIBUZIN WITH AZOXYSTROBIN OR CHLOROTHALONIL**

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: T006T1

| Crop Code | LYPES | | LYPES | | LYPES | | LYPES | | LYPES | | LYPES | | | | | | | | |
|--------------------|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|-----------|---|---|---|----|---|----|---|----|
| Rating Data Type | INJURY | | INJURY | | INJURY | | INJURY | | INJURY | | INJURY | | | | | | | | |
| Rating Unit | % | | % | | % | | % | | % | | % | | | | | | | | |
| Rating Date | Jun-15-06 | Jun-22-06 | Jul-05-06 | Jun-28-06 | Jul-05-06 | Jul-21-06 | Jul-11-06 | Jul-21-06 | | | | | | | | | | | |
| Crop Stage | 9-11 LF | 9-12 LF | FLWR-FRT | FLOWER | FLWR-FRT | FRUIT | FRUIT | FRUIT | | | | | | | | | | | |
| Crop Stage Scale | 20-25 CM | 15-30 CM | 25-35 CM | 25-35 CM | 25-35 CM | 25-35 CM | 25-40 CM | 25-35 CM | | | | | | | | | | | |
| Trt-Eval Interval | 7 DAT-A | 14 DAT-A | 28 DAT-A | 7 DAT-B | 14 DAT-B | 28 DAT-B | 7 DAT-C | 14 DAT-C | | | | | | | | | | | |
| Trt No. | Treatment Name | Rate | Rate Unit | | Rate Unit | | Rate Unit | | Rate Unit | | Rate Unit | | | | | | | | |
| 11 | metribuzin | 700 | G A/HA | 1 | ab | 1 | b | 2 | a | 4 | a | 2 | a | 4 | ab | 4 | ab | 4 | ab |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | | | | | | | |
| 12 | thifensulfuron-methyl | 6 | G A/HA | 1 | ab | 1 | b | 2 | a | 4 | a | 2 | a | 2 | ab | 2 | ab | 2 | ab |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | | | |
| 13 | rimsulfuron | 15 | G A/HA | 3 | a | 3 | a | 3 | a | 5 | a | 3 | a | 2 | ab | 4 | ab | 2 | ab |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | | | |
| 14 | metribuzin | 150 | G A/HA | 0 | b | 2 | ab | 4 | a | 4 | a | 4 | a | 3 | ab | 3 | ab | 3 | ab |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | | | |
| 15 | metribuzin | 350 | G A/HA | 1 | ab | 1 | b | 0 | a | 1 | a | 0 | a | 0 | b | 1 | ab | 0 | b |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | | | |
| | metribuzin | 350 | G A/HA | | | | | | | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | | | |
| 16 | metribuzin | 700 | G A/HA | 1 | ab | 0 | b | 4 | a | 5 | a | 4 | a | 5 | a | 6 | a | 5 | a |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | | | |
| LSD (P=.05) | | | | 2.3 | 2.4 | 4.3 | 4.9 | 4.3 | 4.4 | 5.4 | 4.4 | | | | | | | | |
| Standard Deviation | | | | 1.6 | 1.6 | 3.0 | 3.4 | 3.0 | 3.1 | 3.8 | 3.1 | | | | | | | | |
| CV | | | | 161.39 | 155.21 | 155.29 | 123.62 | 155.29 | 168.81 | 132.66 | 168.81 | | | | | | | | |

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

| Weed Code | ABUTH | | AMARE | | CHEAL | | SETVI | | ABUTH | | AMARE | | CHEAL | | | | | | |
|--------------------|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------|-----------|-------|-----|-------|-----|------|-----|
| Crop Code | LYPES | | LYPES | | LYPES | | LYPES | | LYPES | | LYPES | | LYPES | | | | | | |
| Rating Data Type | INJURY | | CONTROL | | CONTROL | | CONTROL | | CONTROL | | CONTROL | | CONTROL | | | | | | |
| Rating Unit | % | | % | | % | | % | | % | | % | | % | | | | | | |
| Rating Date | Aug-02-06 | Jul-21-06 | Jul-21-06 | Jul-21-06 | Jul-21-06 | Jul-21-06 | Jul-21-06 | Aug-17-06 | Aug-17-06 | Aug-17-06 | | | | | | | | | |
| Crop Stage | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT | | | | | | | | | |
| Crop Stage Scale | 25-35 CM | 25-35 CM | 25-35 CM | 25-35 CM | 25-35 CM | 25-35 CM | 25-35 CM | 20-35 CM | 20-35 CM | 20-35 CM | | | | | | | | | |
| Weed Stage | | 6-10 LF | 12-22 LF | 6-20 LF | 2-7 LF | 7-20+ LF | 12-22 LF | 6-20+ LF | | | | | | | | | | | |
| Weed Density, Unit | | 11.5SQ.M. | 1.5 SQ.M. | 22.0SQ.M. | 9.5 SQ.M. | 8.8 SQ.M. | 0.5 SQ.M. | 15.0SQ.M. | | | | | | | | | | | |
| Trt-Eval Interval | 28 DAT-C | 28 DAT-B | 28 DAT-B | 28 DAT-B | 28 DAT-B | 28 DAT-B | 56 DAT-B | 56 DAT-B | 56 DAT-B | | | | | | | | | | |
| Trt No. | Treatment Name | Rate | Rate Unit | | Rate Unit | | Rate Unit | | Rate Unit | | Rate Unit | | Rate Unit | | | | | | |
| 1 | untreated check | | 0 | b | 0.0 | f | 0.0 | c | 0.0 | e | 0.0 | f | 0.0 | d | 0.0 | b | 0.0 | e | |
| 2 | thifensulfuron-methyl | 6 | G A/HA | 2 | ab | 78.8 | abc | 100.0 | a | 97.5 | a | 28.8 | ef | 78.3 | ab | 90.0 | a | 92.5 | a |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | | | | | | | |
| 3 | rimsulfuron | 15 | G A/HA | 3 | a | 67.5 | b-e | 100.0 | a | 71.3 | a-d | 90.0 | ab | 78.8 | ab | 98.0 | a | 63.8 | bcd |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | | | | | | | |
| 4 | metribuzin | 150 | G A/HA | 0 | b | 100.0 | a | 97.5 | ab | 68.7 | bcd | 70.0 | abc | 100.0 | a | 100.0 | a | 76.3 | a-d |
| | metribuzin | 150 | G A/HA | | | | | | | | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | | | | | | | |
| 5 | metribuzin | 350 | G A/HA | 1 | ab | 95.0 | ab | 100.0 | a | 67.0 | cd | 60.0 | a-e | 93.0 | a | 100.0 | a | 68.8 | a-d |
| | metribuzin | 350 | G A/HA | | | | | | | | | | | | | | | | |
| 6 | metribuzin | 700 | G A/HA | 3 | ab | 47.5 | de | 97.5 | ab | 93.8 | abc | 37.5 | de | 47.5 | c | 100.0 | a | 90.0 | ab |
| 7 | thifensulfuron-methyl | 6 | G A/HA | 0 | b | 67.5 | b-e | 100.0 | a | 93.8 | abc | 36.3 | de | 58.8 | bc | 97.5 | a | 92.8 | a |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | | | | | | | |
| 8 | rimsulfuron | 15 | G A/HA | 2 | ab | 90.0 | abc | 100.0 | a | 71.3 | a-d | 91.3 | a | 81.3 | ab | 100.0 | a | 56.3 | cd |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | | | | | | | |
| 9 | metribuzin | 150 | G A/HA | 1 | ab | 75.0 | a-d | 95.0 | ab | 83.8 | a-d | 46.3 | cde | 99.5 | a | 100.0 | a | 81.3 | a-d |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | | | | | | | |

**WEED CONTROL AND TOLERANCE OF TOMATOES TO TANK MIXES OF THIFENSULFURON-METHYL, RIMSULFURON,
OR METRIBUZIN WITH AZOXYSTROBIN OR CHLOROTHALONIL**

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: T006T1

| Weed Code | | | | ABUTH | AMARE | CHEAL | SETVI | ABUTH | AMARE | CHEAL | | | | | | | | | | |
|--------------------|-----------------------|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|-------|-----|-------|----|-------|---|-------|-----|-------|
| Crop Code | | | | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | | | | | | | | | | |
| Rating Data Type | | | | INJURY | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | | | | | | | | | | |
| Rating Unit | | | | % | % | % | % | % | % | % | | | | | | | | | | |
| Rating Date | | | | Aug-02-06 | Jul-21-06 | Jul-21-06 | Jul-21-06 | Jul-21-06 | Aug-17-06 | Aug-17-06 | | | | | | | | | | |
| Crop Stage | | | | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT | | | | | | | | | | |
| Crop Stage Scale | | | | 25-35 CM | 25-35 CM | 25-35 CM | 25-35 CM | 25-35 CM | 20-35 CM | 20-35 CM | | | | | | | | | | |
| Weed Stage | | | | | 6-10 LF | 12-22 LF | 6-20 LF | 2-7 LF | 7-20+ LF | 12-22 LF | | | | | | | | | | |
| Weed Density, Unit | | | | | 11.5SQ.M. | 1.5 SQ.M. | 22.0SQ.M. | 9.5 SQ.M. | 8.8 SQ.M. | 0.5 SQ.M. | | | | | | | | | | |
| Trt-Eval Interval | | | | 28 DAT-C | 28 DAT-B | 28 DAT-B | 28 DAT-B | 28 DAT-B | 56 DAT-B | 56 DAT-B | | | | | | | | | | |
| Trt No. | Treatment Name | Rate | Rate Unit | | | | | | | | | | | | | | | | | |
| 10 | metribuzin | 350 | G A/HA | 0 | b | 100.0 | a | 100.0 | a | 78.8 | a-d | 62.5 | a-d | 100.0 | a | 100.0 | a | 88.8 | ab | |
| | metribuzin | 350 | G A/HA | | | | | | | | | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | | | | | | | | |
| 11 | metribuzin | 700 | G A/HA | 2 | ab | 42.5 | e | 100.0 | a | 83.8 | a-d | 58.8 | b-e | 45.0 | c | 100.0 | a | 81.3 | a-d | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | | | | | | | | |
| 12 | thifensulfuron-methyl | 6 | G A/HA | 0 | b | 85.0 | abc | 100.0 | a | 95.5 | ab | 47.5 | cde | 79.5 | ab | 100.0 | a | 94.5 | a | |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | | | | |
| 13 | rimsulfuron | 15 | G A/HA | 0 | b | 63.8 | cde | 100.0 | a | 59.5 | d | 85.0 | ab | 48.8 | c | 100.0 | a | 55.0 | d | |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | | | | |
| 14 | metribuzin | 150 | G A/HA | 1 | ab | 100.0 | a | 100.0 | a | 85.6 | a-d | 33.8 | de | 100.0 | a | 95.0 | a | 83.8 | abc | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | | | | |
| 15 | metribuzin | 350 | G A/HA | 1 | ab | 100.0 | a | 100.0 | a | 75.6 | a-d | 41.3 | cde | 99.5 | a | 98.0 | a | 73.8 | a-d | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | | | | |
| | metribuzin | 350 | G A/HA | | | | | | | | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | | | | |
| 16 | metribuzin | 700 | G A/HA | 1 | ab | 68.8 | b-e | 92.5 | b | 85.6 | a-d | 45.0 | cde | 62.5 | bc | 70.0 | a | 82.5 | a-d | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | | | | |
| LSD (P=.05) | | | | | | 2.6 | | 31.04 | | 6.72 | | 27.65 | | 32.32 | | 27.60 | | 45.56 | | 28.50 |
| Standard Deviation | | | | | | 1.8 | | 21.72 | | 3.15 | | 19.15 | | 22.61 | | 19.31 | | 10.59 | | 19.94 |
| CV | | | | | | 190.96 | | 29.42 | | 3.4 | | 25.29 | | 43.4 | | 26.36 | | 11.7 | | 27.02 |

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

| Weed Code | | | | SETVI | | | | | | | | | | | | | | | |
|--------------------|-----------------------|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | | | | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES |
| Part Rated | | | | RED | GREEN | GREEN | ROTS | RD+GRN | RED | GREEN | GREEN | GREEN | GREEN | GREEN | GREEN | GREEN | GREEN | GREEN | GREEN |
| Rating Data Type | | | | CONTROL | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD |
| Rating Unit | | | | % | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA |
| Rating Date | | | | Aug-17-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 |
| Crop Stage | | | | FRUIT | | | | | | | | | | | | | | | |
| Crop Stage Scale | | | | 20-35 CM | | | | | | | | | | | | | | | |
| Weed Stage | | | | 7-20+ LF | | | | | | | | | | | | | | | |
| Weed Density, Unit | | | | 18.0SQ.M. | | | | | | | | | | | | | | | |
| Assessed By | | | | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE |
| Trt-Eval Interval | | | | 56 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B |
| Trt No. | Treatment Name | Rate | Rate Unit | | | | | | | | | | | | | | | | |
| 1 | untreated check | | | 0.0 | e | 46.3 | c | 9.0 | bcd | 0.4 | abc | 89.0 | bcd | 20.7 | c | 4.0 | bcd | bcd | bcd |
| 2 | thifensulfuron-methyl | 6 | G A/HA | 20.0 | de | 52.3 | abc | 7.6 | cd | 0.2 | bc | 87.6 | cd | 23.3 | abc | 3.4 | cd | cd | cd |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | | | | | | | |
| 3 | rimsulfuron | 15 | G A/HA | 84.5 | a | 51.3 | abc | 9.2 | a-d | 0.2 | bc | 89.2 | a-d | 22.9 | abc | 4.1 | a-d | a-d | a-d |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | | | | | | | |
| 4 | metribuzin | 150 | G A/HA | 77.5 | ab | 52.0 | abc | 11.4 | a-d | 0.1 | c | 91.4 | a-d | 23.2 | abc | 5.1 | a-d | a-d | a-d |
| | metribuzin | 150 | G A/HA | | | | | | | | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | | | | | | | |
| 5 | metribuzin | 350 | G A/HA | 51.3 | a-d | 53.2 | abc | 7.4 | cd | 0.3 | abc | 87.5 | cd | 23.7 | abc | 3.3 | cd | cd | cd |
| | metribuzin | 350 | G A/HA | | | | | | | | | | | | | | | | |
| 6 | metribuzin | 700 | G A/HA | 30.0 | cde | 59.2 | a | 7.0 | d | 0.2 | bc | 87.0 | d | 26.4 | a | 3.1 | d | d | d |
| 7 | thifensulfuron-methyl | 6 | G A/HA | 16.3 | de | 54.0 | abc | 11.9 | a-d | 0.2 | bc | 91.9 | a-d | 24.1 | abc | 5.3 | a-d | a-d | a-d |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | | | | | | | |

**WEED CONTROL AND TOLERANCE OF TOMATOES TO TANK MIXES OF THIFENSULFURON-METHYL, RIMSULFURON,
OR METRIBUZIN WITH AZOXYSTROBIN OR CHLOROTHALONIL**

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: TO06T1

| | | | | | | | | | | | | | | | | | |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Weed Code | SETVI | | | | | | | | | | | | | | | | |
| Crop Code | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES |
| Part Rated | | RED | GREEN | ROTS | RD+GRN | RED | GREEN | | | | | | | | | | |
| Rating Data Type | CONTROL | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD |
| Rating Unit | % | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA | T/HA |
| Rating Date | Aug-17-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 |
| Crop Stage | FRUIT | | | | | | | | | | | | | | | | |
| Crop Stage Scale | 20-35 CM | | | | | | | | | | | | | | | | |
| Weed Stage | 7-20+ LF | | | | | | | | | | | | | | | | |
| Weed Density, Unit | 18.0SQ.M. | | | | | | | | | | | | | | | | |
| Assessed By | | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE | WEEDFREE |
| Trt-Eval Interval | 56 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B |

| Trt No. | Treatment Name | Rate | Rate Unit | 81.8 | ab | 47.0 | bc | 10.1 | a-d | 0.2 | bc | 90.1 | a-d | 21.0 | bc | 4.5 | a-d |
|---------|-----------------------|------|-----------|------|-----|------|-----|------|-----|-----|-----|------|-----|------|-----|-----|-----|
| 8 | rimsulfuron | 15 | G A/HA | 81.8 | ab | 47.0 | bc | 10.1 | a-d | 0.2 | bc | 90.1 | a-d | 21.0 | bc | 4.5 | a-d |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | | | | | |
| 9 | metribuzin | 150 | G A/HA | 32.5 | cde | 54.8 | abc | 10.0 | a-d | 0.3 | abc | 90.0 | a-d | 24.4 | abc | 4.5 | a-d |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | | | | | |
| 10 | metribuzin | 350 | G A/HA | 47.5 | bcd | 60.7 | a | 14.1 | a | 0.6 | a | 94.1 | a | 27.1 | a | 6.3 | a |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | | | | | |
| | metribuzin | 350 | G A/HA | | | | | | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | | | | | |
| 11 | metribuzin | 700 | G A/HA | 35.0 | cde | 54.9 | abc | 9.4 | a-d | 0.1 | bc | 89.3 | a-d | 24.5 | abc | 4.2 | a-d |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | | | | | |
| 12 | thifensulfuron-methyl | 6 | G A/HA | 42.0 | cd | 57.0 | a | 11.1 | a-d | 0.2 | bc | 91.1 | a-d | 25.4 | a | 4.9 | a-d |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | |
| 13 | rimsulfuron | 15 | G A/HA | 63.8 | abc | 56.1 | ab | 12.2 | abc | 0.2 | bc | 92.2 | abc | 25.0 | ab | 5.4 | abc |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | |
| 14 | metribuzin | 150 | G A/HA | 18.8 | de | 59.8 | a | 9.6 | a-d | 0.4 | ab | 89.6 | a-d | 26.7 | a | 4.3 | a-d |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | |
| 15 | metribuzin | 350 | G A/HA | 47.5 | bcd | 57.3 | a | 12.9 | ab | 0.3 | abc | 92.9 | ab | 25.6 | a | 5.8 | ab |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | |
| | metribuzin | 350 | G A/HA | | | | | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | |
| 16 | metribuzin | 700 | G A/HA | 21.3 | de | 59.9 | a | 7.4 | cd | 0.1 | bc | 87.4 | cd | 26.7 | a | 3.3 | cd |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | | | | | |

| | | | | | | | |
|--------------------|-------|-------|-------|-------|------|-------|-------|
| LSD (P=.05) | 35.20 | 9.67 | 4.98 | 0.33 | 4.98 | 4.31 | 2.22 |
| Standard Deviation | 24.63 | 6.77 | 3.48 | 0.23 | 3.48 | 3.02 | 1.55 |
| CV | 58.87 | 12.36 | 34.73 | 94.11 | 3.87 | 12.36 | 34.73 |

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

WEED CONTROL AND TOLERANCE OF TOMATOES TO TANK MIXES OF THIFENSULFURON-METHYL, RIMSULFURON,
OR METRIBUZIN WITH AZOXYSTROBIN OR CHLOROTHALONIL

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: T006T1

| | | | | | | | | | |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES |
| Part Rated | ROTS | RD+GRN | RED | GREEN | ROTS | RD+GRN | RED | GREEN | GREEN |
| Rating Data Type | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD |
| Rating Unit | T/AC | T/AC | T/HA | T/HA | T/HA | T/HA | T/AC | T/AC | T/AC |
| Rating Date | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 | Aug-21-06 |
| Assessed By | WEEDFREE | WEEDFREE | WEEDY | WEEDY | WEEDY | WEEDY | WEEDY | WEEDY | WEEDY |
| Trt-Eval Interval | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B | 60 DAT-B |

| Trt No. | Treatment Name | Rate | Rate Unit | | | | | | | | | | |
|--------------------|-----------------------|------|-----------|-------|-----|------|-----|------|-----|-----|------|------|-----|
| 1 | untreated check | | | 0.2 | abc | 39.7 | bcd | 24.4 | 2.2 | 0.6 | 26.6 | 10.9 | 1.0 |
| 2 | thifensulfuron-methyl | 6 | G A/HA | 0.1 | bc | 39.1 | cd | | | | | | |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | |
| 3 | rimsulfuron | 15 | G A/HA | 0.1 | bc | 39.8 | a-d | | | | | | |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | |
| 4 | metribuzin | 150 | G A/HA | 0.0 | c | 40.8 | a-d | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | |
| 5 | metribuzin | 350 | G A/HA | 0.2 | abc | 39.0 | cd | | | | | | |
| | metribuzin | 350 | G A/HA | | | | | | | | | | |
| 6 | metribuzin | 700 | G A/HA | 0.1 | bc | 38.8 | d | | | | | | |
| 7 | thifensulfuron-methyl | 6 | G A/HA | 0.1 | bc | 41.0 | a-d | | | | | | |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | |
| 8 | rimsulfuron | 15 | G A/HA | 0.1 | bc | 40.2 | a-d | | | | | | |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | |
| 9 | metribuzin | 150 | G A/HA | 0.1 | abc | 40.1 | a-d | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | |
| 10 | metribuzin | 350 | G A/HA | 0.3 | a | 42.0 | a | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | |
| | metribuzin | 350 | G A/HA | | | | | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | |
| 11 | metribuzin | 700 | G A/HA | 0.1 | bc | 39.9 | a-d | | | | | | |
| | azoxystrobin | 75 | G A/HA | | | | | | | | | | |
| 12 | thifensulfuron-methyl | 6 | G A/HA | 0.1 | bc | 40.6 | a-d | | | | | | |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | |
| 13 | rimsulfuron | 15 | G A/HA | 0.1 | bc | 41.1 | abc | | | | | | |
| | Agral 90 | 0.2 | % V/V | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | |
| 14 | metribuzin | 150 | G A/HA | 0.2 | ab | 40.0 | a-d | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | |
| | metribuzin | 150 | G A/HA | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | |
| 15 | metribuzin | 350 | G A/HA | 0.1 | abc | 41.4 | ab | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | |
| | metribuzin | 350 | G A/HA | | | | | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | |
| 16 | metribuzin | 700 | G A/HA | 0.1 | bc | 39.0 | cd | | | | | | |
| | pyraclostrobin | 110 | G A/HA | | | | | | | | | | |
| LSD (P=.05) | | | | 0.15 | | 2.22 | | | | | | | |
| Standard Deviation | | | | 0.10 | | 1.55 | | | | | | | |
| CV | | | | 94.11 | | 3.87 | | | | | | | |

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

WEED CONTROL AND TOLERANCE OF TOMATOES TO TANK MIXES OF THIFENSULFURON-METHYL, RIMSULFURON,
OR METRIBUZIN WITH AZOXYSTROBIN OR CHLOROTHALONIL

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: T006T1

| | | |
|-------------------|-----------|-----------|
| Crop Code | LYPES | LYPES |
| Part Rated | ROTS | RD+GRN |
| Rating Data Type | YIELD | YIELD |
| Rating Unit | T/AC | T/AC |
| Rating Date | Aug-21-06 | Aug-21-06 |
| Assessed By | WEEDY | WEEDY |
| Trt-Eval Interval | 60 DAT-B | 60 DAT-B |

| Trt No. | Treatment Name | Rate | Rate Unit | | |
|---------|-----------------------|------|-----------|-----|------|
| 1 | untreated check | | | 0.3 | 11.9 |
| 2 | thifensulfuron-methyl | 6 | G A/HA | | |
| | Agral 90 | 0.2 | % V/V | | |
| 3 | rimsulfuron | 15 | G A/HA | | |
| | Agral 90 | 0.2 | % V/V | | |
| 4 | metribuzin | 150 | G A/HA | | |
| | metribuzin | 150 | G A/HA | | |
| | metribuzin | 150 | G A/HA | | |
| 5 | metribuzin | 350 | G A/HA | | |
| | metribuzin | 350 | G A/HA | | |
| 6 | metribuzin | 700 | G A/HA | | |
| 7 | thifensulfuron-methyl | 6 | G A/HA | | |
| | Agral 90 | 0.2 | % V/V | | |
| | azoxystrobin | 75 | G A/HA | | |
| 8 | rimsulfuron | 15 | G A/HA | | |
| | Agral 90 | 0.2 | % V/V | | |
| | azoxystrobin | 75 | G A/HA | | |
| 9 | metribuzin | 150 | G A/HA | | |
| | azoxystrobin | 75 | G A/HA | | |
| | metribuzin | 150 | G A/HA | | |
| | azoxystrobin | 75 | G A/HA | | |
| | metribuzin | 150 | G A/HA | | |
| | azoxystrobin | 75 | G A/HA | | |
| 10 | metribuzin | 350 | G A/HA | | |
| | azoxystrobin | 75 | G A/HA | | |
| | metribuzin | 350 | G A/HA | | |
| | azoxystrobin | 75 | G A/HA | | |
| 11 | metribuzin | 700 | G A/HA | | |
| | azoxystrobin | 75 | G A/HA | | |
| 12 | thifensulfuron-methyl | 6 | G A/HA | | |
| | Agral 90 | 0.2 | % V/V | | |
| | pyraclostrobin | 110 | G A/HA | | |
| 13 | rimsulfuron | 15 | G A/HA | | |
| | Agral 90 | 0.2 | % V/V | | |
| | pyraclostrobin | 110 | G A/HA | | |
| 14 | metribuzin | 150 | G A/HA | | |
| | pyraclostrobin | 110 | G A/HA | | |
| | metribuzin | 150 | G A/HA | | |
| | pyraclostrobin | 110 | G A/HA | | |
| | metribuzin | 150 | G A/HA | | |
| | pyraclostrobin | 110 | G A/HA | | |
| 15 | metribuzin | 350 | G A/HA | | |
| | pyraclostrobin | 110 | G A/HA | | |
| | metribuzin | 350 | G A/HA | | |
| | pyraclostrobin | 110 | G A/HA | | |
| 16 | metribuzin | 700 | G A/HA | | |
| | pyraclostrobin | 110 | G A/HA | | |

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

Trial Comments

CONCLUSIONS: There was a slight increase in visual injury when azoxystrobin was added to thifensulfuron-methyl, however this increase in injury did not correspond to a significant yield reduction. The addition of azoxystrobin or pyraclostrobin to metribuzin or rimsulfuron also did not result in significant visual injury or yield loss, compared to when metribuzin or rimsulfuron were applied alone. There were no reductions in weed control when thifensulfuron-methyl, rimsulfuron or metribuzin were tank-mixed with either azoxystrobin or pyraclostrobin.

TOLERANCE OF PROCESSING TOMATOES TO THIFENSULFURON-METHYL APPLIED AT VARIOUS TIMES THROUGH THE DAY

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: TO06T2

CROP: LYPES, TOMATO (H 9478). Planted: May-25-06, 29167 PLANTS/HA, 5 CM Deep, 1.5 M Row Width.

Planting Method: TRANSPLANT. Emerged On: May-25-06.

FIELD Site. Expt.Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RCAT-C1&2. Site Description: Soil Texture: LOAM. %OM: 5.8 %Sand: 45.7 %Silt: 30.9 %Clay: 23.3 pH: 6.5 CEC: 12.0.

APPLICATION DESCRIPTION

| Application: | A | B | C | D | E |
|--------------|-----------|-----------|-----------|-----------|-----------|
| Date | Jun-14-06 | Jun-14-06 | Jun-14-06 | Jun-14-06 | Jun-14-06 |
| Time of Day | 6:00 AM | 10:00 AM | 1:00 PM | 4:30 PM | 9:00 PM |
| Method | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY |
| Timing | 21 DAE | 21 DAE | 21 DAE | 21 DAE | 21 DAE |
| Placement | FOLIAR | FOLIAR | FOLIAR | FOLIAR | FOLIAR |
| Air Temp. | 12.2 C | 21.3 C | 26.0 C | 26.5 C | 15.3 C |
| % Humidity | 85 | 55 | 32 | 30 | 61 |
| Wind Speed | 0.0 KPH | 4.5 KPH | 6.8 KPH | 7.2 KPH | 6.2 KPH |
| Dew Present | Y | N | N | N | N |
| Soil Moist.: | DRY | DRY | DRY | DRY | DRY |
| Cloud Cover | 0% | 0% | 30% | 20% | 5% |
| Equipment | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY | CO2 SPRAY |
| Pressure | 207 kPa | 207 kPa | 207 kPa | 207 kPa | 207 kPa |
| Nozzle Type | AIR INDUC | AIR INDUC | AIR INDUC | AIR INDUC | AIR INDUC |
| Nozzle Size | ULD120-02 | ULD120-02 | ULD120-02 | ULD120-02 | ULD120-02 |
| Noz.Spacing | 50 CM | 50 CM | 50 CM | 50 CM | 50 CM |
| Boom Length | 1.5 M | 1.5 M | 1.5 M | 1.5 M | 1.5 M |
| Boom Height | 50 CM | 50 CM | 50 CM | 50 CM | 50 CM |
| Carrier | WATER | WATER | WATER | WATER | WATER |
| Appl.Volume | 200 L/HA | 200 L/HA | 200 L/HA | 200 L/HA | 200 L/HA |
| Propellant | CO2 | CO2 | CO2 | CO2 | CO2 |

STAGE AT APPLICATION

Crop 1 LYPES

| | A | B | C | D | E |
|--------------|-----------|-----------|-----------|-----------|-----------|
| Height | 13.6 CM | 13.6 CM | 13.6 CM | 13.6 CM | 13.6 CM |
| Weed 1 ABUTH | 2.8 CM | 2.8 CM | 2.8 CM | 2.8 CM | 2.8 CM |
| Stg.Scale: | 2-3 LEAF | 2-3 LEAF | 2-3 LEAF | 2-3 LEAF | 2-3 LEAF |
| Density | 5.0 SQ.M. | 5.0 SQ.M. | 5.0 SQ.M. | 5.0 SQ.M. | 5.0 SQ.M. |
| Weed 2 SETVI | 1.8 CM | 1.8 CM | 1.8 CM | 1.8 CM | 1.8 CM |
| Stg.Scale: | 1-2 LEAF | 1-2 LEAF | 1-2 LEAF | 1-2 LEAF | 1-2 LEAF |
| Density | 2.5 SQ.M. | 2.5 SQ.M. | 2.5 SQ.M. | 2.5 SQ.M. | 2.5 SQ.M. |

| Crop Code | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| Part Rated | | | | | RED | GREEN | ROT | RD+GRN | |
| Rating Data Type | INJURY | INJURY | INJURY | INJURY | YIELD | YIELD | YIELD | YIELD | |
| Rating Unit | % | % | % | % | T/HA | T/HA | T/HA | T/HA | |
| Rating Date | Jun-15-06 | Jun-21-06 | Jun-27-06 | Jul-11-06 | Aug-22-06 | Aug-22-06 | Aug-22-06 | Aug-22-06 | |
| Crop Stage | 8-10 LF | 10-12 LF | FLOWER | FRUIT | | | | | |
| Crop Stage Scale | 16-22 CM | 20-27 CM | 25-33 CM | 25-40 CM | | | | | |
| Trt-Eval Interval | 1 DAT | 7 DAT | 14 DAT | 28 DAT | 69 DAT | 69 DAT | 69 DAT | 69 DAT | |

| Trt No. | Treatment Name | Rate | Rate Unit | | | | | | | | | |
|---------|---|------|--------------|---|------|------|------|---------|-------|-------|--------|---|
| 1 | Untreated Check | | | 0 | d 0 | b 0 | b 0 | b 53.9 | a 5.4 | a 0.2 | a 59.3 | a |
| 2 | Thifensulfuron-methyl Agral 90 6:00 AM | 12 | G A/HA % V/V | 4 | ab 1 | b 1 | ab 0 | b 60.0 | a 4.8 | a 0.1 | a 64.7 | a |
| 3 | Thifensulfuron-methyl Agral 90 10:00 AM | 12 | G A/HA % V/V | 5 | a 1 | ab 1 | ab 1 | ab 61.7 | a 6.4 | a 0.1 | a 68.1 | a |
| 4 | Thifensulfuron-methyl Agral 90 1:00 PM | 12 | G A/HA % V/V | 4 | b 2 | ab 2 | a 1 | ab 57.9 | a 5.9 | a 0.1 | a 63.8 | a |
| 5 | Thifensulfuron-methyl Agral 90 4:30 PM | 12 | G A/HA % V/V | 4 | ab 3 | a 1 | ab 1 | ab 59.4 | a 6.6 | a 0.1 | a 66.0 | a |
| 6 | Thifensulfuron-methyl Agral 90 9:00 PM | 12 | G A/HA % V/V | 2 | c 2 | ab 2 | a 2 | a 50.8 | a 6.2 | a 0.2 | a 57.0 | a |

| | | | | | | | | |
|--------------------|-------|-------|--------|--------|-------|-------|--------|-------|
| LSD (P=.05) | 1.7 | 2.1 | 1.7 | 2.1 | 18.21 | 3.38 | 0.18 | 17.82 |
| Standard Deviation | 1.1 | 1.4 | 1.1 | 1.4 | 12.08 | 2.24 | 0.12 | 11.82 |
| CV | 36.47 | 97.01 | 101.24 | 163.95 | 21.1 | 38.22 | 100.21 | 18.73 |

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

TOLERANCE OF PROCESSING TOMATOES TO THIFENSULFURON-METHYL APPLIED AT VARIOUS TIMES THROUGH THE DAY

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: TO06T2

| | | | | |
|-------------------|-----------|-----------|-----------|-----------|
| Crop Code | LYPES | LYPES | LYPES | LYPES |
| Part Rated | RED | GREEN | ROT | RD+GRN |
| Rating Data Type | YIELD | YIELD | YIELD | YIELD |
| Rating Unit | T/AC | T/HA | T/HA | T/HA |
| Rating Date | Aug-22-06 | Aug-22-06 | Aug-22-06 | Aug-22-06 |
| Trt-Eval Interval | 69 DAT | 69 DAT | 69 DAT | 69 DAT |

| Trt No. | Treatment Name | Rate | Rate Unit | | | | | | | | |
|--------------------|---|-------------|-----------------|------|-------|--------|-------|-----|---|------|---|
| 1 | Untreated Check | | | 24.0 | a | 2.4 | a | 0.1 | a | 26.5 | a |
| 2 | Thifensulfuron-methyl Agral 90 6:00 AM | 12 0.200 | G A/HA % V/V | 26.8 | a | 2.1 | a | 0.0 | a | 28.9 | a |
| 3 | Thifensulfuron-methyl Agral 90 10:00 AM | 12 0.200 | G A/HA % V/V | 27.5 | a | 2.8 | a | 0.0 | a | 30.4 | a |
| 4 | Thifensulfuron-methyl Agral 90 1:00 PM | 12 0.200 | G A/HA % V/V | 25.8 | a | 2.6 | a | 0.0 | a | 28.5 | a |
| 5 | Thifensulfuron-methyl Agral 90 4:30 PM | 12 0.200 | G A/HA % V/V | 26.5 | a | 2.9 | a | 0.0 | a | 29.4 | a |
| 6 | Thifensulfuron-methyl Agral 90 9:00 PM | 12 0.200 | G A/HA % V/V | 22.7 | a | 2.8 | a | 0.1 | a | 25.4 | a |
| LSD (P=.05) | | | | 8.12 | 1.51 | 0.08 | 7.95 | | | | |
| Standard Deviation | | | | 5.39 | 1.00 | 0.05 | 5.27 | | | | |
| CV | | | | 21.1 | 38.22 | 100.21 | 18.73 | | | | |

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

Trial Comments

CONCLUSIONS: Thifensulfuron-methyl was applied to H9478 (a thifensulfuron-methyl-tolerant tomato variety) at 6:00AM, 10:00AM, 1:00PM, 4:30PM and 9:00PM to determine the effect of time of day of application on tolerance in tomato. Injury was greatest when thifensulfuron-methyl was applied at 1:00PM. The 6:00AM and 9:00PM treatments caused little or no injury. The injury observed at 1:00pm resulted in slightly lower yields than in the morning or evening treatments, but the differences were not significant as they have been in previous year's studies.

TOLERANCE OF TOMATOES TO NEW HERBICIDES

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: T006T3

CROP: LYPES, TOMATO (H 9478). Planted: May-25-06, 29167 PLANTS/HA, 5 CM Deep, 1.5 M Row Width.

Planting Method: TRANSPLANT. Emerged On: May-25-06.

FIELD Site. Expt.Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 1.5 M x 40 M. Expt. Location: RCAT-C1&2.

Site Description: Soil Texture: LOAM. %OM: 5.8 %Sand: 45.7 %Silt: 30.9 %Clay: 23.3 pH: 6.5 CEC: 12.0.

APPLICATION DESCRIPTION

Application: A
 Date : May-24-06
 Time of Day: 7:20 PM
 Method : CO2 SPRAY
 Timing : PPI
 Placement : SOIL
 Air Temp. : 18.5 C
 % Humidity : 63
 Wind Speed : 4.2 KPH
 Dew Present: N
 Soil Moist.: MOIST
 Cloud Cover: 90%
 Equipment : CO2 SPRAY
 Pressure : 207 kPa
 Nozzle Type: AIR INDUC
 Nozzle Size: ULD120-02
 Noz.Spacing: 50 CM
 Boom Length: 1.5 M
 Boom Height: 50 CM
 Carrier : WATER
 Appl.Volume: 200 L/HA
 Propellant : CO2

| Crop Code | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | |
|--------------------|-----------------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|-----|
| Part Rated | | | | | | | | | | RED | GREEN | | |
| Rating Data Type | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | DRY WTS | DRY WTS | YIELD | YIELD | | |
| Rating Unit | % | % | % | % | % | % | % | G | G | T/HA | T/HA | | |
| Rating Date | Jun-01-06 | Jun-08-06 | Jun-15-06 | Jun-28-06 | Jul-12-06 | Jul-25-06 | Jul-25-06 | Jun-22-06 | Jun-22-06 | Aug-22-06 | Aug-22-06 | | |
| Crop Stage | 4-5 LEAF | 6-9 LEAF | 9-10 LF | FLOWER | FRUIT | FRUIT | FRUIT | 10-12 LF | 10-12 LF | | | | |
| Crop Stage Scale | 12-16 CM | 12-19 CM | 19-25 CM | 25-35 CM | 30-40 CM | 30-40 CM | 30-40 CM | 20-25 CM | 20-25 CM | | | | |
| Trt-Eval Interval | 7 DAE | 14 DAE | 21 DAE | 35 DAE | 49 DAE | 63 DAE | 63 DAE | 28 DAE | 28 DAE | 89 DAE | 89 DAE | | |
| Trt No. | Treatment Name | Rate | Unit | | | | | | | | | | |
| 1 | untreated check | | | 0 | a 0 | b 0 | b 0 | b 0 | b 0 | b 37.3 | ab 57.5 | a 3.6 | c |
| 2 | s-metolachlor metribuzin | 1200 700 | G A/HA | 0 | a 0 | b 1 | b 5 | b 3 | b 2 | b 29.5 | ab 56.0 | a 9.3 | ab |
| 3 | sulfentrazone | 125 | G A/HA | 1 | a 0 | b 2 | b 3 | b 2 | b 3 | b 37.3 | ab 59.1 | a 6.8 | abc |
| 4 | sulfentrazone | 250 | G A/HA | 0 | a 0 | b 1 | b 4 | b 4 | b 6 | b 32.1 | ab 51.6 | a 3.8 | c |
| 5 | KIH-485 | 209 | G A/HA | 0 | a 1 | b 6 | b 11 | b 5 | b 3 | b 37.0 | ab 61.1 | a 10.3 | a |
| 6 | KIH-485 | 418 | G A/HA | 0 | a 6 | a 23 | a 30 | a 26 | a 23 | a 24.5 | b 48.6 | a 7.4 | abc |
| 7 | BAS-670 | 18.75 | G A/HA | 0 | a 0 | b 0 | b 0 | b 0 | b 0 | b 39.8 | ab 54.6 | a 5.6 | bc |
| 8 | BAS-670 | 37.5 | G A/HA | 0 | a 0 | b 0 | b 0 | b 1 | b 1 | b 47.0 | a 56.4 | a 6.4 | bc |
| LSD (P=.05) | | | | 0.5 | 2.6 | 8.7 | 13.3 | 11.8 | 14.1 | 19.16 | 13.47 | 3.86 | |
| Standard Deviation | | | | 0.4 | 1.8 | 5.9 | 9.0 | 8.0 | 9.6 | 13.03 | 9.16 | 2.63 | |
| CV | | | | 565.69 | 194.74 | 145.32 | 141.24 | 161.05 | 206.43 | 36.63 | 16.47 | 39.54 | |

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

TOLERANCE OF TOMATOES TO NEW HERBICIDES

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: T006T3

| | | | | | | |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES |
| Part Rated | ROTS | RD+GRN | RED | GREEN | ROTS | RD+GRN |
| Rating Data Type | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD |
| Rating Unit | T/HA | T/HA | T/AC | T/AC | T/AC | T/AC |
| Rating Date | Aug-22-06 | Aug-22-06 | Aug-22-06 | Aug-22-06 | Aug-22-06 | Aug-22-06 |
| Trt-Eval Interval | 89 DAE | 89 DAE | 89 DAE | 89 DAE | 89 DAE | 89 DAE |

| Trt No. | Treatment Name | Rate | Rate Unit | | | | | | | | | | |
|--------------------|-----------------------------|-------------|------------------|-------|----|-------|----|-------|---|-------|-----|-------|------------|
| 1 | untreated check | | | 0.2 | bc | 61.1 | ab | 25.7 | a | 1.6 | c | 0.1 | bc 27.3 ab |
| 2 | s-metolachlor metribuzin | 1200 700 | G A/HA G A/HA | 0.1 | c | 65.2 | ab | 25.0 | a | 4.1 | ab | 0.0 | c 29.1 ab |
| 3 | sulfentrazone | 125 | G A/HA | 0.2 | bc | 65.9 | ab | 26.4 | a | 3.0 | abc | 0.1 | bc 29.4 ab |
| 4 | sulfentrazone | 250 | G A/HA | 0.5 | a | 55.4 | b | 23.0 | a | 1.7 | c | 0.2 | a 24.7 b |
| 5 | KIH-485 | 209 | G A/HA | 0.0 | c | 71.4 | a | 27.3 | a | 4.6 | a | 0.0 | c 31.8 a |
| 6 | KIH-485 | 418 | G A/HA | 0.0 | c | 56.0 | ab | 21.7 | a | 3.3 | abc | 0.0 | c 25.0 ab |
| 7 | BAS-670 | 18.75 | G A/HA | 0.3 | b | 60.2 | ab | 24.3 | a | 2.5 | bc | 0.1 | b 26.9 ab |
| 8 | BAS-670 | 37.5 | G A/HA | 0.1 | c | 62.8 | ab | 25.2 | a | 2.8 | bc | 0.0 | c 28.0 ab |
| LSD (P=.05) | | | | 0.21 | | 15.40 | | 6.01 | | 1.72 | | 0.09 | 6.87 |
| Standard Deviation | | | | 0.14 | | 10.47 | | 4.09 | | 1.17 | | 0.06 | 4.67 |
| CV | | | | 83.42 | | 16.82 | | 16.47 | | 39.54 | | 83.42 | 16.82 |

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

Trial Comments

CONCLUSIONS: This trial was kept weed-free to test for tomato tolerance to sulfentrazone, KIH-485 and topramezone (BAS 670) herbicides. Sulfentrazone and topramezone applied preemergence did not cause commercially unacceptable visual injury to tomato, nor did they reduce plant dry weight, reduce yield or delay maturity.

Preemergence applications of KIH-485 caused stunting and leaf distortion in tomato, and also reduce tomato dry weight at the 2X rate. Despite the visual injury and growth reduction, KIH-485 did not cause a significant reduction in yield, nor did it delay tomato maturity.

Sulfentrazone has excellent tolerance in tomato, and the parent company (FMC) has initiated labeling of this herbicide for other crops in Canada. There is potential to add tomato to the label once it is registered in Canada as an URMULE registration. Future research should focus on determining variety tolerance to sulfentrazone.

TOLERANCE OF PROCESSING TOMATO VARIETIES TO THIFENSULFURON-METHYL

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: T006T4

Objective: Determine the tolerance of fourteen processing tomato varieties to Pinnacle (thifensulfuron-methyl).

Crop 1: LYPES TOMATO, PROCESSING **Variety:** 12 VARIOUS **Location:** RCAT-C1&C2
Planting Date: May-30-06 **Planting Method:** TRANSPLANT **Rate:** 29167 PLANTS/HA **Depth:** 5 CM
Row Spacing: 1.5 M **Spacing Within Row:** 45 CM **Seed Bed:** MEDIUM **Soil Temperature:** 31.0 C
Soil Moisture: MOIST **Emergence Date:** May-30-06

SITE AND DESIGN

Plot Width, Unit: 1.5 M **Plot Length, Unit:** 40 M **Reps:** 2
Site Type: FIELD
Tillage Type: CONVENTIONAL **Study Design:** FACTORIAL

MAINTENANCE

Field Prep./Maintenance: LEVELED LAND WITH S-TINE CULTIVATOR MAY 4/06. SPREAD 421 KG/HA OF 18-19-19 AND 98 KG/HA OF 46-0-0 AND WORKED FERTILIZER IN WITH S-TINE CULTIVATOR MAY 4/06. S-METOLACHLOR 915EC AT 1600 G AI/HA AND METRIBUZIN 75DF AT 375 G AI/HA WERE SPRAYED MAY 24/06 (PPI) AND CULTIVATED IN AFTER APPROX. 1.5 HOUR.

SOIL DESCRIPTION

% Sand: 47.7 **% OM:** 5.8 **Texture:** LOAM
% Silt: 30.9 **pH:** 6.5 **Soil Name:** WATFORD/BRADY SERIES
% Clay: 23.3 **CEC:** 12.0

APPLICATION DESCRIPTION

| | A | B |
|-----------------------------|-----------|-----------|
| Application Date: | Jun-20-06 | Jul-05-06 |
| Time of Day: | 6:15 AM | 7:15 AM |
| Application Method: | CO2 SPRAY | CO2 SPRAY |
| Application Timing: | 21 DAE | 35 DAE |
| Applic. Placement: | FOLIAR | FOLIAR |
| Air Temp., Unit: | 17.3 C | 15.4 C |
| % Relative Humidity: | 96 | 88 |
| Wind Velocity, Unit: | 4.0 KPH | 2.3 KPH |
| Dew Presence (Y/N): | Y | Y |
| Soil Temp., Unit: | 19.0 C | 20.0 C |
| Soil Moisture: | MOIST | MOIST |
| % Cloud Cover: | 25 | 10 |

CROP STAGE AT EACH APPLICATION

| | A | B |
|----------------------------|----------|----------|
| Crop 1 Code, Stage: | LYPES | LYPES |

APPLICATION EQUIPMENT

| | A | B |
|------------------------------|-----------|-----------|
| Appl. Equipment: | CO2 SPRAY | CO2 SPRAY |
| Operating Pressure: | 207 kPa | 207 kPa |
| Nozzle Type: | AIR INDUC | AIR INDUC |
| Nozzle Size: | ULD120-02 | ULD120-02 |
| Nozzle Spacing, Unit: | 50 CM | 50 CM |
| Boom Length, Unit: | 1.5 M | 1.5 M |
| Boom Height, Unit: | 50 CM | 50 CM |
| Carrier: | WATER | WATER |
| Spray Volume, Unit: | 200 L/HA | 200 L/HA |
| Propellant: | CO2 | CO2 |

TOLERANCE OF PROCESSING TOMATO VARIETIES TO THIFENSULFURON-METHYL

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: TO06T4

| Crop Code | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| Part Rated | | | | | | | | | | RED |
| Rating Data Type | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | YIELD |
| Rating Unit | % | % | % | % | % | % | % | % | % | T/HA |
| Rating Date | Jun-23-06 | Jun-27-06 | Jul-03-06 | Jul-18-06 | Jul-07-06 | Jul-11-06 | Jul-18-06 | Jul-18-06 | Aug-02-06 | |
| Crop Stage | 8-11 LF | 9-11 LF | FLOWER | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT | |
| Crop Stage Scale | 22-35 CM | 25-35 CM | 25-40 CM | 30-40 CM | 30-40 CM | 30-40 CM | 30-40 CM | 30-40 CM | 30-40 CM | |
| Trt-Eval Interval | 3 DAT-A | 7 DAT-A | 14 DAT-A | 28 DAT-A | 2 DAT-B | 7 DAT-B | 14 DAT-B | 28 DAT-B | | |

| Trt No. | Treatment Name | Rate | Unit | | | | | | | |
|---------|----------------|------|------|--|--|--|--|--|--|--|
|---------|----------------|------|------|--|--|--|--|--|--|--|

TABLE OF R MEANS

| | | | | | | | | | | |
|-------------|--|----|----|----|---|---|---|---|---|------|
| Replicate 1 | | 10 | 12 | 12 | 2 | 4 | 5 | 3 | 3 | 42.8 |
| Replicate 2 | | 10 | 13 | 13 | 2 | 3 | 5 | 2 | 1 | 58.1 |

TABLE OF A MEANS

| | | | | | | | | | | |
|---|-----------------------|-------|------------|-----|-----|----|----|-----|-----|------|
| 1 | untreated | | 0a | 0a | 0a | 0a | 0a | 0a | 0 | 52.0 |
| 2 | Thifensulfuron-methyl | 12 | G A/HA 19b | 24b | 24b | 4b | . | . | . | 52.2 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA . | . | . | . | 7b | 10b | 6b | 47.0 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | |
| | LSD= | 0 | 5 | 4 | 0 | 2 | 1 | 4 | NS | NS |
| | CV= | 0 | 46 | 37 | 0 | 57 | 9 | 113 | 183 | 44 |

TABLE OF B MEANS

| | | | | | | | | | | | |
|----|--------|--|----|----|----|---|----|----|---|----|------|
| 1 | H 9909 | | 9 | 3 | 3 | 0 | 2 | 3 | 0 | 0 | 58.9 |
| 2 | H 3006 | | 3 | 3 | 0 | 0 | 4 | 3 | 0 | 0 | 65.0 |
| 3 | H 2401 | | 9 | 21 | 24 | 0 | 2 | 11 | 6 | 0 | 38.5 |
| 4 | H 9205 | | 10 | 21 | 24 | 3 | 2 | 10 | 8 | 3 | 50.7 |
| 5 | H 9553 | | 5 | 3 | 1 | 0 | 3 | 2 | 0 | 0 | 63.8 |
| 6 | H 3406 | | 8 | 6 | 4 | 0 | 3 | 3 | 0 | 0 | 68.0 |
| 7 | H 1105 | | 8 | 6 | 6 | 0 | 1 | 3 | 0 | 0 | 47.5 |
| 8 | H 2206 | | 23 | 29 | 25 | 5 | 10 | 10 | 9 | 10 | 21.0 |
| 9 | H 1905 | | 11 | 16 | 16 | 5 | 5 | 4 | 3 | 0 | 42.8 |
| 10 | H 3506 | | 14 | 20 | 20 | 8 | 8 | 8 | 5 | 6 | 50.7 |
| 11 | H 2906 | | 14 | 16 | 20 | 6 | 3 | 4 | 4 | 4 | 40.1 |
| 12 | H 9478 | | 3 | 1 | 3 | 0 | 2 | 1 | 0 | 0 | 58.2 |

TABLE OF AB MEANS

| | | | | | | | | | | | |
|---|-----------------------|-------|------------|-----|-----|----|----|-----|-----|----|------|
| 1 | untreated | | 0a | 0a | 0a | 0a | 0a | 0a | 0a | 0a | 57.4 |
| 1 | H 9909 | | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA 18b | 6b | 7a | 0a | . | . | . | . | 59.4 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 1 | H 9909 | | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA . | . | . | . | 4b | 7b | 0a | 0a | 59.8 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 1 | H 9909 | | | | | | | | | | |
| 1 | untreated | | 0a | 0a | 0a | 0a | 0a | 0a | 0a | 0a | 62.3 |
| 2 | H 3006 | | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA 7b | 7b | 0a | 0a | . | . | . | . | 71.0 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 2 | H 3006 | | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA . | . | . | . | 8b | 5b | 0a | 0a | 61.9 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 1 | untreated | | 0a | 0a | 0a | 0a | 0a | 0a | 0a | 0a | 42.2 |
| 3 | H 2401 | | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA 18b | 43b | 48b | 0a | . | . | . | . | 45.6 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 3 | H 2401 | | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA . | . | . | . | 4b | 23b | 12b | 0a | 27.7 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 3 | H 2401 | | | | | | | | | | |
| 1 | untreated | | 0a | 0a | 0a | 0a | 0a | 0a | 0a | 0a | 59.3 |
| 4 | H 9205 | | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA 20b | 43b | 48b | 6b | . | . | . | . | 49.2 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 4 | H 9205 | | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA . | . | . | . | 4b | 19b | 15b | 6b | 43.6 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 4 | H 9205 | | | | | | | | | | |
| 1 | untreated | | 0a | 0a | 0a | 0a | 0a | 0a | 0a | 0a | 61.9 |
| 5 | H 9553 | | | | | | | | | | |

TOLERANCE OF PROCESSING TOMATO VARIETIES TO THIFENSULFURON-METHYL

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: TO06T4

| Crop Code | | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | |
|-------------------|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|------|
| Part Rated | | | | | | | | | | RED | |
| Rating Data Type | | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | INJURY | YIELD | |
| Rating Unit | | % | % | % | % | % | % | % | % | T/HA | |
| Rating Date | | Jun-23-06 | Jun-27-06 | Jul-03-06 | Jul-18-06 | Jul-07-06 | Jul-11-06 | Jul-18-06 | Aug-02-06 | | |
| Crop Stage | | 8-11 LF | 9-11 LF | FLOWER | FRUIT | FRUIT | FRUIT | FRUIT | FRUIT | | |
| Crop Stage Scale | | 22-35 CM | 25-35 CM | 25-40 CM | 30-40 CM | 30-40 CM | 30-40 CM | 30-40 CM | 30-40 CM | | |
| Trt-Eval Interval | | 3 DAT-A | 7 DAT-A | 14 DAT-A | 28 DAT-A | 2 DAT-B | 7 DAT-B | 14 DAT-B | 28 DAT-B | | |
| Trt No. | Treatment Name | Rate | Rate Unit | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 9b | 7b | 2a | 0a | . | . | . | 66.2 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 5 | H 9553 | | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | . | . | . | . | 7b | 4b | 0a | 63.3 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 5 | H 9553 | | | | | | | | | | |
| 1 | untreated | | | 0a | 0a | 0a | 0a | 0a | 0a | 0a | 62.5 |
| 6 | H 3406 | | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 15b | 13b | 8b | 0a | . | . | . | 65.9 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 6 | H 3406 | | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | . | . | . | . | 5b | 5b | 0a | 75.8 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 6 | H 3406 | | | | | | | | | | |
| 1 | untreated | | | 0a | 0a | 0a | 0a | 0a | 0a | 0a | 44.4 |
| 7 | H 1105 | | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 15b | 12b | 12b | 0a | . | . | . | 50.5 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 7 | H 1105 | | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | . | . | . | . | 3b | 6b | 0a | 47.7 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 7 | H 1105 | | | | | | | | | | |
| 1 | untreated | | | 0a | 0a | 0a | 0a | 0a | 0a | 0a | 29.4 |
| 8 | H 2206 | | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 45b | 58b | 50b | 9b | . | . | . | 18.0 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 8 | H 2206 | | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | . | . | . | . | 20b | 21b | 18b | 15.6 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 8 | H 2206 | | | | | | | | | | |
| 1 | untreated | | | 0a | 0a | 0a | 0a | 0a | 0a | 0a | 48.9 |
| 9 | H 1905 | | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 23b | 33b | 33b | 9b | . | . | . | 40.1 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 9 | H 1905 | | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | . | . | . | . | 9b | 8b | 7b | 39.4 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 9 | H 1905 | | | | | | | | | | |
| 1 | untreated | | | 0a | 0a | 0a | 0a | 0a | 0a | 0a | 59.4 |
| 10 | H 3506 | | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 28b | 40b | 40b | 15b | . | . | . | 53.7 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 10 | H 3506 | | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | . | . | . | . | 17b | 15b | 9b | 38.9 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 10 | H 3506 | | | | | | | | | | |
| 1 | untreated | | | 0a | 0a | 0a | 0a | 0a | 0a | 0a | 42.8 |
| 11 | H 2906 | | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 28b | 33b | 40b | 13b | . | . | . | 46.5 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 11 | H 2906 | | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | . | . | . | . | 6b | 7b | 9b | 31.1 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 11 | H 2906 | | | | | | | | | | |
| 1 | untreated | | | 0a | 0a | 0a | 0a | 0a | 0a | 0a | 54.0 |
| 12 | H 9478 | | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 5a | 3a | 5a | 0a | . | . | . | 60.9 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 12 | H 9478 | | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | . | . | . | . | 3b | 2b | 0a | 59.8 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | | |
| 12 | H 9478 | | | | | | | | | | |
| | LSD= | 6 | | 6 | 8 | 1 | 1 | 2 | 2 | 4 | NS |
| | CV= | 46 | | 33 | 46 | 33 | 18 | 20 | 40 | 111 | 15 |

TOLERANCE OF PROCESSING TOMATO VARIETIES TO THIFENSULFURON-METHYL

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: TO06T4

| Crop Code | | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES | LYPES |
|------------------|--|-------|-------|--------|-------|-------|-------|--------|-------|
| Part Rated | | GREEN | ROTS | RD+GRN | RED | GREEN | ROTS | RD+GRN | |
| Rating Data Type | | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD | YIELD |
| Rating Unit | | T/HA | T/HA | T/HA | T/AC | T/AC | T/AC | T/AC | T/AC |

| Trt No. | Treatment Name | Rate | Unit | | | | | | |
|---------|----------------|------|------|--|--|--|--|--|--|
|---------|----------------|------|------|--|--|--|--|--|--|

TABLE OF R MEANS

| | | | | | | | | | | |
|-------------|--|--|--|------|-----|------|------|-----|-----|------|
| Replicate 1 | | | | 11.4 | 0.4 | 54.2 | 19.1 | 5.1 | 0.2 | 24.2 |
| Replicate 2 | | | | 11.3 | 0.4 | 69.3 | 25.9 | 5.0 | 0.2 | 30.9 |

TABLE OF A MEANS

| | | | | | | | | | | |
|---|-----------------------|-------|--------|------|------|------|------|-----|------|------|
| 1 | untreated | | | 9.6 | 0.5a | 61.6 | 23.2 | 4.3 | 0.2a | 27.5 |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 9.8 | 0.4b | 62.0 | 23.3 | 4.4 | 0.2a | 27.7 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | 14.6 | 0.3c | 61.7 | 21.0 | 6.5 | 0.1b | 27.5 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | |
| | | LSD= | | NS | 0.1 | NS | NS | NS | 0 | NS |
| | | CV= | | 37 | 20 | 29 | 44 | 38 | 18 | 29 |

TABLE OF B MEANS

| | | | | | | | | | | |
|----|--------|--|--|------|-----|------|------|-----|-----|------|
| 1 | H 9909 | | | 5.2 | 0.1 | 64.0 | 26.3 | 2.3 | 0.1 | 28.6 |
| 2 | H 3006 | | | 6.7 | 0.3 | 71.7 | 29.0 | 3.0 | 0.1 | 32.0 |
| 3 | H 2401 | | | 18.7 | 0.6 | 57.1 | 17.2 | 8.3 | 0.3 | 25.5 |
| 4 | H 9205 | | | 13.5 | 0.4 | 64.2 | 22.6 | 6.0 | 0.2 | 28.7 |
| 5 | H 9553 | | | 11.6 | 0.1 | 75.4 | 28.5 | 5.2 | 0.1 | 33.7 |
| 6 | H 3406 | | | 10.0 | 0.4 | 78.1 | 30.4 | 4.5 | 0.2 | 34.8 |
| 7 | H 1105 | | | 7.7 | 0.1 | 55.2 | 21.2 | 3.4 | 0.1 | 24.6 |
| 8 | H 2206 | | | 5.4 | 0.1 | 26.4 | 9.4 | 2.4 | 0.0 | 11.8 |
| 9 | H 1905 | | | 15.5 | 0.6 | 58.3 | 19.1 | 6.9 | 0.3 | 26.0 |
| 10 | H 3506 | | | 18.9 | 1.4 | 69.6 | 22.6 | 8.4 | 0.6 | 31.1 |
| 11 | H 2906 | | | 13.5 | 0.6 | 53.6 | 17.9 | 6.0 | 0.3 | 23.9 |
| 12 | H 9478 | | | 9.0 | 0.0 | 67.3 | 26.0 | 4.0 | 0.0 | 30.0 |

TABLE OF AB MEANS

| | | | | | | | | | | |
|---|-----------------------|-------|--------|-------|-----|------|------|-------|-----|------|
| 1 | untreated | | | 6.2a | 0.1 | 63.6 | 25.6 | 2.8a | 0.0 | 28.4 |
| 1 | H 9909 | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 3.7a | 0.1 | 63.0 | 26.5 | 1.6a | 0.0 | 28.1 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 1 | H 9909 | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | 5.7a | 0.2 | 65.5 | 26.7 | 2.6a | 0.1 | 29.2 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 1 | H 9909 | | | | | | | | | |
| 1 | untreated | | | 5.8a | 0.2 | 68.1 | 27.8 | 2.6a | 0.1 | 30.4 |
| 2 | H 3006 | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 4.5a | 0.3 | 75.5 | 31.7 | 2.0a | 0.1 | 33.7 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 2 | H 3006 | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | 9.7a | 0.4 | 71.6 | 27.6 | 4.3a | 0.2 | 31.9 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 2 | H 3006 | | | | | | | | | |
| 1 | untreated | | | 9.3a | 1.0 | 51.5 | 18.8 | 4.2a | 0.4 | 23.0 |
| 3 | H 2401 | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 12.7a | 0.6 | 58.3 | 20.3 | 5.7a | 0.3 | 26.0 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 3 | H 2401 | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | 33.9b | 0.3 | 61.6 | 12.3 | 15.1b | 0.1 | 27.5 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 3 | H 2401 | | | | | | | | | |
| 1 | untreated | | | 12.0a | 0.6 | 71.3 | 26.5 | 5.4a | 0.3 | 31.8 |
| 4 | H 9205 | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 12.1a | 0.6 | 61.4 | 22.0 | 5.4a | 0.3 | 27.4 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 4 | H 9205 | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | 16.5a | 0.1 | 60.0 | 19.4 | 7.3a | 0.1 | 26.8 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 4 | H 9205 | | | | | | | | | |
| 1 | untreated | | | 13.2a | 0.1 | 75.1 | 27.6 | 5.9a | 0.0 | 33.5 |
| 5 | H 9553 | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 10.3a | 0.2 | 76.5 | 29.5 | 4.6a | 0.1 | 34.1 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 5 | H 9553 | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | 11.5a | 0.2 | 74.8 | 28.2 | 5.1a | 0.1 | 33.4 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 5 | H 9553 | | | | | | | | | |

TOLERANCE OF PROCESSING TOMATO VARIETIES TO THIFENSULFURON-METHYL

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: TO06T4

Crop Code LYPES LYPES LYPES LYPES LYPES LYPES LYPES
 Part Rated GREEN ROTS RD+GRN RED GREEN ROTS RD+GRN
 Rating Data Type YIELD YIELD YIELD YIELD YIELD YIELD YIELD
 Rating Unit T/HA T/HA T/HA T/AC T/AC T/AC T/AC

| Trt No. | Treatment Name | Rate | Rate Unit | LYPES GREEN YIELD T/HA | LYPES ROTS YIELD T/HA | LYPES RD+GRN YIELD T/HA | LYPES RED YIELD T/AC | LYPES GREEN YIELD T/AC | LYPES ROTS YIELD T/AC | LYPES RD+GRN YIELD T/AC |
|---------|-----------------------|-------|-----------|------------------------|-----------------------|-------------------------|----------------------|------------------------|-----------------------|-------------------------|
| 1 | untreated | | | 14.0a | 0.2 | 76.5 | 27.9 | 6.3a | 0.1 | 34.1 |
| 6 | H 3406 | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 7.5a | 0.7 | 73.4 | 29.4 | 3.4a | 0.3 | 32.7 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 6 | H 3406 | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | 8.5a | 0.3 | 84.3 | 33.8 | 3.8a | 0.1 | 37.6 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 6 | H 3406 | | | | | | | | | |
| 1 | untreated | | | 10.8a | 0.2 | 55.2 | 19.8 | 4.8a | 0.1 | 24.6 |
| 7 | H 1105 | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 7.2a | 0.1 | 57.7 | 22.5 | 3.2a | 0.0 | 25.7 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 7 | H 1105 | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | 5.1a | 0.1 | 52.8 | 21.3 | 2.3a | 0.0 | 23.6 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 7 | H 1105 | | | | | | | | | |
| 1 | untreated | | | 4.4a | 0.2 | 33.9 | 13.1 | 2.0a | 0.1 | 15.1 |
| 8 | H 2206 | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 5.6a | 0.0 | 23.6 | 8.0 | 2.5a | 0.0 | 10.5 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 8 | H 2206 | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | 6.0a | 0.2 | 21.6 | 6.9 | 2.7a | 0.1 | 9.6 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 8 | H 2206 | | | | | | | | | |
| 1 | untreated | | | 8.1a | 1.1 | 57.0 | 21.8 | 3.6a | 0.5 | 25.4 |
| 9 | H 1905 | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 23.2b | 0.4 | 63.2 | 17.9 | 10.3b | 0.2 | 28.2 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 9 | H 1905 | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | 15.4ab | 0.4 | 54.8 | 17.6 | 6.9ab | 0.2 | 24.4 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 9 | H 1905 | | | | | | | | | |
| 1 | untreated | | | 10.4a | 2.0 | 69.8 | 26.5 | 4.6a | 0.9 | 31.1 |
| 10 | H 3506 | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 14.3a | 1.2 | 68.0 | 24.0 | 6.4a | 0.6 | 30.3 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 10 | H 3506 | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | 32.1b | 0.9 | 71.0 | 17.4 | 14.3b | 0.4 | 31.7 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 10 | H 3506 | | | | | | | | | |
| 1 | untreated | | | 10.8a | 0.8 | 53.7 | 19.1 | 4.8a | 0.3 | 23.9 |
| 11 | H 2906 | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 6.4a | 0.9 | 52.9 | 20.7 | 2.9a | 0.4 | 23.6 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 11 | H 2906 | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | 23.3b | 0.2 | 54.3 | 13.9 | 10.4b | 0.1 | 24.2 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 11 | H 2906 | | | | | | | | | |
| 1 | untreated | | | 9.8a | 0.0 | 63.8 | 24.1 | 4.4a | 0.0 | 28.5 |
| 12 | H 9478 | | | | | | | | | |
| 2 | Thifensulfuron-methyl | 12 | G A/HA | 9.6a | 0.0 | 70.5 | 27.2 | 4.3a | 0.0 | 31.4 |
| 2 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 12 | H 9478 | | | | | | | | | |
| 3 | Thifensulfuron-methyl | 12 | G A/HA | 7.7a | 0.1 | 67.5 | 26.7 | 3.4a | 0.0 | 30.1 |
| 3 | Agral 90 | 0.200 | % V/V | | | | | | | |
| 12 | H 9478 | | | | | | | | | |
| | | LSD= | | 8 | NS | NS | NS | 3.5 | NS | NS |
| | | CV= | | 34 | 117 | 13 | 15 | 34 | 105 | 13 |

TOLERANCE OF PROCESSING TOMATO VARIETIES TO THIFENSULFURON-METHYL

KRISTEN McNAUGHTON, DARREN ROBINSON

Experiment ID: T006T4

Trial Comments

HARVEST DATES: AUGUST 22/06: H9909, H1105, AND H2206.
AUGUST 25/06: H 9205 AND H 9478.
AUGUST 28/06: H 9553 AND H 1905.
SEPTEMBER 1/06: H 3006, H 3406, AND H 2906.
SEPTEMBER 5/06: H 3506 AND H 2401.

CONCLUSIONS: The following varieties were significantly injured by thifensulfuron-methyl and showed delayed maturity: H2401, H1905, H3506, H2906, H9205, H2206. These will be marked as sensitive varieties.

The following varieties showed visual injury and a slight delay in maturity, but did produce acceptable yields at the same time as the untreated checks: H9909 and H3406.

The following varieties were temporarily injured by thifensulfuron-methyl but recovered and did not show delayed maturity: H3006, H9553, H1105, H9478. Injury was commercially acceptable in each of these varieties. These will be marked as tolerant varieties.

WEED MANAGEMENT PROGRAMS IN CUCUMBERS

DAVE BILYEY, DARREN ROBINSON

Experiment ID: VC06T1

CROP: CUMSA, CUCUMBER (VLASPIK M). Planted: May-29-06, 265684 SE/HA, 38 CM Row Width.

Planting Method: MONOSEM VACUUM PLANTER. Emerged On: Jun-05-06.

FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 2 M x 40 M.

Site Description: Soil Texture: LOAM. %OM: 5.1 %Sand: 51.0 %Silt: 28.5 %Clay: 20.5 pH: 7.1 CEC: 12.

APPLICATION DESCRIPTION

Application: A
 Date : May-31-06
 Time of Day: 10:00
 Method : SPRAY
 Timing : PRE
 Placement : SOIL
 Air Temp. : 34 C
 % Humidity : 40
 Wind Speed : 2 KPH
 Cloud Cover: 90%
 Equipment : CO2 SPRAY
 Pressure : 207
 Nozzle Type: AIR INDUC
 Nozzle Size: UDL120-02
 Noz.Spacing: 50 CM
 Boom Length: 2.0 M
 Boom Height: 50 CM
 Carrier : WATER
 Appl.Volume: 200 L/HA

| Weed Code | CUMSA | CUMSA | CUMSA | AMARE | ABUTH | CHEAL | SETVI | CUMSA |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | CUMSA | CUMSA | CUMSA | CUMSA | CUMSA | CUMSA | CUMSA | CUMSA |
| Rating Data Type | INJURY | INJURY | INJURY | CONTROL | CONTROL | CONTROL | CONTROL | YIELD |
| Rating Unit | % | % | % | % | % | % | % | T/HA |
| Rating Date | Jun-14-06 | Jun-20-06 | Jul-03-06 | Jul-03-06 | Jul-03-06 | Jul-03-06 | Jul-03-06 | Jul-18-06 |
| Crop Stage | COT-1L | 2 LF | 4-5 LF | 8-10 LF | 8-12 LF | 2-20+LF | 6-12 LF | |
| Crop Stage Scale | | | | 4-88 CM | 60-66 CM | 4-88 CM | 37-92 CM | |
| Weed Density, Unit | | | | 12 SQ.M. | 3 SQ.M. | 12 SQ.M. | 2.5 SQ.M. | |
| Trt-Eval Interval | 7 DAE | 14 DAE | 28 DAE | 33 DA-A | 33 DA-A | 33 DA-A | 33 DA-A | 48 DA-A |

| Trt No. | Treatment Name | Rate | Unit | | | | | | | | |
|---------|---------------------|------|--------|--------|-------|-------|---------|---------|---------|--------|-------------|
| 1 | UNTREATED CHECK | 0 | | a 0 | b 0 | b 0.0 | c 0.0 | c 0.0 | b 0.0 | e | 12.9ab |
| 2 | S-METOLACHLOR | 1200 | G A/HA | 0 | a 4 | a 1 | b 88.8 | ab 90.0 | ab 75.0 | a 85.0 | a-d 7.4b-e |
| 3 | S-METOLACHLOR | 2400 | G A/HA | 0 | a 1 | ab 3 | ab 90.0 | ab 91.3 | ab 80.0 | a 90.0 | abc 2.9e |
| 4 | CLOMAZONE | 420 | G A/HA | 0 | a 0 | b 0 | b 76.3 | ab 88.8 | ab 83.8 | a 86.3 | a-d 7.2b-e |
| 5 | CLOMAZONE | 840 | G A/HA | 0 | a 1 | ab 0 | b 88.8 | ab 93.5 | a 88.8 | a 93.8 | ab 11.5abc |
| 6 | HALOSULFURON-METHYL | 25 | G A/HA | 0 | a 0 | b 0 | b 90.0 | ab 92.5 | a 80.0 | a 73.8 | bcd 11.0a-d |
| 7 | HALOSULFURON-METHYL | 50 | G A/HA | 0 | a 1 | ab 0 | b 95.8 | a 96.0 | a 82.5 | a 70.0 | cd 13.5a |
| 8 | DIMETHENAMID-P | 750 | G A/HA | 0 | a 0 | b 0 | b 85.0 | ab 91.3 | ab 77.5 | a 95.8 | a 8.7a-e |
| 9 | DIMETHENAMID-P | 1500 | G A/HA | 0 | a 4 | a 5 | a 92.5 | ab 95.8 | a 85.0 | a 98.0 | a 5.7cde |
| 10 | CLOMAZONE | 420 | G A/HA | 0 | a 1 | ab 0 | b 93.8 | a 93.8 | a 85.0 | a 88.8 | a-d 10.1a-d |
| | HALOSULFURON-METHYL | 25 | G A/HA | | | | | | | | |
| 11 | S-METOLACHLOR | 1200 | G A/HA | 0 | a 0 | b 0 | b 91.3 | ab 93.5 | a 90.0 | a 88.8 | a-d 5.4de |
| | HALOSULFURON-METHYL | 25 | G A/HA | | | | | | | | |
| 12 | DIMETHENAMID-P | 750 | G A/HA | 0 | a 0 | b 0 | b 71.0 | b 71.3 | b 70.0 | a 67.5 | d 8.8a-e |
| | HALOSULFURON-METHYL | 25 | G A/HA | | | | | | | | |
| | LSD (P=.05) | 0.0 | | 2.5 | 3.2 | 21.61 | 20.69 | 22.99 | 21.87 | 5.91 | |
| | Standard Deviation | 0.0 | | 1.8 | 2.2 | 14.97 | 14.33 | 15.92 | 15.14 | 4.09 | |
| | CV | 0.0 | | 168.85 | 300.9 | 18.65 | 17.24 | 21.29 | 19.38 | 46.68 | |

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

Trial Comments

CONCLUSIONS: One half of each plot in this trial was maintained weed free to examine the effect of various preemergence herbicides on injury and yield of cucumbers. The remaining half of each plot was left weedy to collect weed control data. The dimethenamid-p (1500 g ai ha⁻¹) treatment caused slight puckering of the leaves at 7 and 14 days after emergence. However the crop outgrew this injury by 28 days after emergence. Marketable yield was not less than the untreated control in the clomazone or halosulfuron-methyl treatments, but was reduced by both s-metolachlor and dimethenamid-p.

The tank mix of clomazone+halosulfuron-methyl gave excellent seasonlong control of redroot pigweed, and velvetleaf, and good control of common lamb's-quarters. The tank mix of s-metolachlor+halosulfuron-methyl gave excellent control of all broadleaf weeds in the study. The dimethenamid-p+halosulfuron-methyl treatment only have fair control of redroot pigweed, velvetleaf and common lamb's-quarters.

TOLERANCE OF CUCUMBER TO KIH-485 AND BAS-670

DAVE BILYEA, DARREN ROBINSON

Experiment ID: VC06T2

CROP: CUMSA, CUCUMBER (VLASPIK M). Planted: May-29-06, 265684 SE/HA, 38 CM Row Width.

Planting Method: MONOSEM VACUUM PLANTER. Emerged On: Jun-05-06.

FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 2 M x 40 M.

Site Description: Soil Texture: LOAM. %OM: 5.1 %Sand: 51.0 %Silt: 28.5 %Clay: 20.5 pH: 7.1 CEC: 12.

APPLICATION DESCRIPTION

Application: A
 Date : May-31-06
 Time of Day: 10:00
 Method : SPRAY
 Timing : PRE
 Placement : SOIL
 Air Temp. : 34 C
 % Humidity : 40
 Wind Speed : 2 KPH
 Dew Present:
 Soil Moist.: 34
 Cloud Cover: 90%
 Equipment : CO2 SPRAY
 Pressure : 207
 Nozzle Type: AIR INDUC
 Nozzle Size: UDL120-02
 Noz.Spacing: 50 CM
 Boom Length: 2.0 M
 Boom Height: 50 CM
 Carrier : WATER
 Appl.Volume: 200 L/HA

| Crop Code | CUMSA | CUMSA | CUMSA | CUMSA |
|-------------------|-----------|-----------|-----------|-----------|
| Rating Data Type | INJURY | INJURY | INJURY | YIELD |
| Rating Unit | % | % | % | T/HA |
| Rating Date | Jun-14-06 | Jun-20-06 | Jul-03-06 | Jul-18-06 |
| Trt-Eval Interval | 7 DAE | 14 DAE | 28 DAE | 48 DA-A |

| Trt No. | Treatment Name | Rate | Rate Unit | | | | | |
|--------------------|----------------|-------|-----------|-------|-------|-------|-------|--------|
| 1 | UNTREATED | 0 | c | 0 | b | 0 | c | 15.5 a |
| 2 | KIH-485 | 209 | G A/HA | 8 | b | 10 | b | 4.7 b |
| 3 | BAS-670 | 18.75 | G A/HA | 1 | bc | 1 | b | 15.5 a |
| 4 | KIH-485 | 418 | G A/HA | 20 | a | 29 | a | 0.6 b |
| 5 | BAS-670 | 37.5 | G A/HA | 0 | c | 0 | b | 16.9 a |
| LSD (P=.05) | | | | 6.4 | 11.1 | 12.1 | 5.48 | |
| Standard Deviation | | | | 4.2 | 7.2 | 7.9 | 3.55 | |
| CV | | | | 72.75 | 89.67 | 44.87 | 33.42 | |

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

Trial Comments

CONCLUSIONS: This trial was kept weed-free to test for the effect of preemergence applications of topramezone and KIH-485 on visual injury, and cucumber yield. Topramezone is a new broadleaf corn herbicide with activity on pigweed, lambsquarters and other broadleaf weeds, while KIH-485 is a residual grass herbicide being developed in field corn.

No visual injury was noted in the topramezone treatments, and topramezone did not reduce yield. Some initial growth distortion was observed in the KIH-485 treatments, followed by a significant reduction in leaf area and stunting, which remained through much of the season. Fewer flowers were produced and significant reductions in yield were observed at both rates of KIH-485.

TOLERANCE OF PUMPKIN TO KIH-485 AND BAS-670

DAVE BILYEA, DARREN ROBINSON

Experiment ID: VC06T3

CROP: CUUPE, PUMPKIN (APPALACIAN). Planted: May-29-06, 11250 SE/HA, 2 CM Deep, 3 M Row Width.

Planting Method: MONOSEM VACUUM PLANTER. Emerged On: Jun-08-06.

FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 3 M x 40 M.

Site Description: Soil Texture: LOAM. %OM: 5.1 %Sand: 51.0 %Silt: 28.5 %Clay: 20.5 pH: 7.1 CEC: 12.

APPLICATION DESCRIPTION

Application: A
 Date : May-31-06
 Time of Day: 10:00
 Method : SPRAY
 Timing : PRE
 Placement : SOIL
 Air Temp. : 34 C
 % Humidity : 40
 Wind Speed : 2 KPH
 Dew Present:
 Soil Moist.: 34
 Cloud Cover: 90%
 Equipment : CO2 SPRAY
 Pressure : 207
 Nozzle Type: AIR INDUC
 Nozzle Size: UDL120-02
 Noz.Spacing: 50 CM
 Boom Length: 2.0 M
 Boom Height: 50 CM
 Carrier : WATER
 Appl.Volume: 200 L/HA

| Weed Code | CUUPE | CUUPE | CUUPE | ORANGE | GREEN | ORGE+GRN | ORANGE | GREEN | ORGE+GRN |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Crop Code | CUUPE | CUUPE | CUUPE | CUUPE | CUUPE | CUUPE | CUUPE | CUUPE | CUUPE |
| Rating Data Type | INJURY | INJURY | INJURY | # FRUIT | # FRUIT | # FRUIT | YIELD | YIELD | YIELD |
| Rating Unit | % | % | % | # | # | # | T/HA | T/HA | T/HA |
| Rating Date | Jun-14-06 | Jun-20-06 | Jul-03-06 | Aug-30-06 | Aug-30-06 | Aug-30-06 | Aug-30-06 | Aug-30-06 | Aug-30-06 |
| Crop Stage | 1 LF | 2 LF | 4-5 LF | | | | | | |
| Trt-Eval Interval | 7DAE | 14DAE | 28DAE | 91 DA-A | 91 DA-A | 91 DA-A | 91 DA-A | 91 DA-A | 91 DA-A |

| Trt | Treatment | Rate | Rate | Rate | Rate | Rate | Rate | Rate | Rate | Rate | Rate | Rate |
|--------------------|-----------|-------|----------|--------|-------|-------|-------|-------|---------|----------|-----------|------|
| No. | Name | Rate | Unit | Rate | Unit | Rate | Unit | Rate | Unit | Rate | Unit | Rate |
| 1 | UNTREATED | 0 | a 0 | a 0 | a 0 | a 18 | a 4 | ab 22 | a 49.8 | a 7.1 | a 56.9a | |
| 2 | KIH-485 | 209 | G A/HA 0 | a 0 | a 3 | a 16 | ab 4 | ab 20 | ab 37.3 | bc 8.3 | a 45.6bc | |
| 3 | BAS-670 | 18.75 | G A/HA 0 | a 0 | a 0 | a 16 | ab 6 | a 21 | ab 38.8 | abc 10.0 | a 48.8abc | |
| 4 | KIH-485 | 418 | G A/HA 0 | a 0 | a 6 | a 12 | b 4 | ab 16 | b 31.0 | c 9.9 | a 40.9c | |
| 5 | BAS-670 | 37.5 | G A/HA 0 | a 0 | a 0 | a 19 | a 2 | b 21 | ab 49.1 | ab 3.7 | a 52.7ab | |
| LSD (P=.05) | | 0.0 | 0.0 | 8.4 | 5.3 | 2.9 | 5.8 | 11.92 | 6.45 | 10.25 | | |
| Standard Deviation | | 0.0 | 0.0 | 5.5 | 3.4 | 1.9 | 3.8 | 7.74 | 4.18 | 6.65 | | |
| CV | | 0.0 | 0.0 | 312.98 | 21.75 | 46.85 | 19.02 | 18.78 | 53.69 | 13.58 | | |

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

Trial Comments

CONCLUSIONS: This trial was kept weed-free to test for the effect of preemergence applications of topramezone (BAS 670) and KIH-485 on visual injury, height, dry weight and yields of pumpkin. Topramezone is a new broadleaf corn herbicide with activity on pigweed, lambsquarters and other broadleaf weeds, while KIH-485 is a residual grass corn herbicide.

No visual injury was noted in the topramezone treatments. Though some initial growth distortion was observed in the KIH-485 treatments, the pumpkins did not show commercially unacceptable injury. Topramezone did not reduce the number of pumpkins per plot or yield. Significant reductions in pumpkin number and yield were observed at the high rate of KIH-485.

TOLERANCE OF SQUASH TO KIH-485 AND BAS-670

DAVE BILYEA, DARREN ROBINSON

Experiment ID: VC06T4

CROP: CUUMA, SQUASH (TAY BELLE). Planted: Jun-05-06, 11250 SE/HA, 2 CM Deep, 3 M Row Width.

Planting Method: MONOSEM VACUUM PLANTER. Emerged On: Jun-05-06.

FIELD Site. Expt. Design: RANDOMIZED COMPLETE BLOCK. Reps: 4. Plot Size: 3 M x 40 M.

Site Description: Soil Texture: LOAM. %OM: 5.1 %Sand: 51.0 %Silt: 28.5 %Clay: 20.5 pH: 7.1 CEC: 12.

APPLICATION DESCRIPTION

Application: A
 Date : May-31-06
 Time of Day: 10:00 :
 Method : SPRAY
 Timing : PRE
 Placement : SOIL
 Air Temp. : 34 C
 % Humidity : 40
 Wind Speed : 2 KPH
 Dew Present:
 Soil Moist.: 34
 Cloud Cover: 90%
 Equipment : CO2 SPRAY
 Pressure : 207
 Nozzle Type: AIR INDUC
 Nozzle Size: UDL120-02
 Noz.Spacing: 50 CM
 Boom Length: 2.0 M
 Boom Height: 50 CM
 Carrier : WATER
 Appl.Volume: 200 L/HA

| Crop Code | CUUMA | CUUMA | CUUMA | CUUMA | CUUMA |
|-------------------|-----------|-----------|-----------|-----------|-----------|
| Rating Data Type | INJURY | INJURY | INJURY | #/PLOT | YIELD |
| Rating Unit | % | % | % | # | T/HA |
| Rating Date | Jun-14-06 | Jun-20-06 | Jul-04-06 | Aug-28-06 | Aug-28-06 |
| Crop Stage | 1 LF | 2 LF | 6 LF | | |
| Trt-Eval Interval | 7DAE | 14DAE | 28DAE | 89 DA-A | 89 DA-A |

| Trt No. | Treatment Name | Rate | Unit | Rate | Unit | Rate | Unit | Rate | Unit | Rate | Unit |
|--------------------|----------------|-------|--------|-------|------|-------|------|--------|------|-------|-------|
| 1 | UNTREATED | 0 | | b 0 | | b 0 | | b 50.8 | ab | 20.9 | ab |
| 2 | KIH-485 | 209 | G A/HA | 0 | | b 0 | | b 45.3 | b | 20.0 | b |
| 3 | BAS-670 | 18.75 | G A/HA | 0 | | b 0 | | b 50.8 | ab | 21.3 | ab |
| 4 | KIH-485 | 418 | G A/HA | 13 | a 14 | a 9 | | a 45.0 | b | 16.4 | b |
| 5 | BAS-670 | 37.5 | G A/HA | 0 | | b 0 | | b 70.5 | a | 27.0 | a |
| LSD (P=.05) | | | | 2.0 | | 3.3 | | 3.3 | | 19.92 | 6.58 |
| Standard Deviation | | | | 1.3 | | 2.1 | | 2.1 | | 12.93 | 4.27 |
| CV | | | | 51.64 | | 77.85 | | 122.34 | | 24.66 | 20.22 |

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

Trial Comments

CONCLUSIONS: This trial was kept weed-free to test for the effect of preemergence applications of topiramazone (BAS 670) and KIH-485 on visual injury, height, dry weight and yields of squash. Topiramazone is a new broadleaf corn herbicide with activity on pigweed, lambsquarters and other broadleaf weeds, while KIH-485 is a residual grass corn herbicide.

No visual injury was noted in the topiramazone treatments, and topiramazone did not reduce the number of squash per plot or yield. Growth distortion and reductions were observed at the 2X rate of KIH-485. Though squash number was not significantly reduced, there was a significant yield reduction at the high rate of KIH-485.