

MSU Weed Science Research Program

WEED CONTROL IN NO-TILL CORN, 2005-06

Trial ID: C2606
 Conducted: CAMPUS

Study Dir.:
 Investigator: MSU Crop and Soil Science Weed Control

Date Planted: 5/1/2006 **Row Spacing:** 30 IN
Variety: DKC42-95 **No. of Reps:** 4
Population: 31,000 S/A **% OM:** 2.7
Soil Type: sandy loam **pH:** 6.7
Plot Size: 10 X 35 FT **Design:** RANDOMIZED COMPLETE BLOCK

Tillage: No-Till
Fertilizer: 285 lbs/A 46-0-0 broadcast. 200 lbs/A 19-19-19 in row at planting.

Crop and Weed Description

| Weed | Code | Common Name | Scientific Name |
|------|-------|-------------------|---------------------------------------|
| 1. | TAROF | DANDELION, COMMON | TARAXACUM OFFICINALE WEBER IN WIGGERS |
| 2. | DAUCA | CARROT, WILD | DAUCUS CAROTA L. |
| 3. | AMBEL | RAGWEED, COMMON | AMBROSIA ELATIOR L. |
| Crop | Code | Common Name | |
| 1. | ZEAMX | CORN, FIELD | |

Application Description

| | A | B |
|------------------------------|-----------|-----------|
| Application Timing: | FALL | SPRING |
| Date Treated: | 11/2/2005 | 4/19/2006 |
| Time Treated: | 5:00 pm | 10:00 am |
| % Cloud Cover: | 30 | 30 |
| Air Temp., Unit: | 52 F | 73 F |
| % Relative Humidity: | 65 | 44 |
| Wind Speed/Unit/Dir: | 3 mph SW | 6 mph E |
| Soil Temp., Unit: | 54 F | 47 F |
| Soil/Leaf Surface M: | 3 3 | 2 2 |
| Soil Moist (1=w 5=d): | 3 | 3 |

Crop Stage at Each Application

| | A | B |
|-------------------|-------|-------|
| Crop Name: | ZEAMX | ZEAMX |

Weed Stage at Each Application

| | A | B |
|----------------------|----------|-----------|
| Weed 1 Name: | TAROF | TAROF |
| Height (In.): | 1-4 (2) | .25-3 (2) |
| Stage (L): | 3-12 (8) | 1-6 (3.5) |
| Weed 2 Name: | DAUCA | DAUCA |
| Height (In.): | 1-3 (2) | 1-4 (2) |
| Stage (L): | 1-5 (4) | |
| Weed 3 Name: | AMBEL | AMBEL |
| Height (In.): | | .25 |
| Stage (L): | | cot |

Weed Density (plants/sq. ft.)

| | 1 | 2 |
|-------------------|-----------|-----------|
| Date: | 11/2/2005 | 4/19/2006 |
| Weed Name: | TAROF | TAROF |
| Density: | 4 | 5 |
| Date: | 11/2/2006 | 4/19/2006 |
| Weed Name: | DAUCA | DAUCA |
| Density: | <1 | 1 |
| Date: | | 4/19/2006 |
| Weed Name: | | AMBEL |
| Density: | | <1 |

Application Equipment

| Appl | Sprayer | Speed | Nozzle | Nozzle | Nozzle | Nozzle | Boom | | | |
|------|---------|-------|--------|--------|--------|---------|-------|-----|---------|-----|
| A | Type | MPH | Type | Size | Height | Spacing | Width | GPA | Carrier | PSI |
| A | cub | 3.5 | FF | 8003 | 24" | 20" | 100" | 20 | H2O | 30 |
| B | cub | 3.5 | FF | 8003 | 20" | 20" | 100" | 20 | H2O | 30 |

Comments: Entire study received .75lb ae of glyphosate and 2% w/w/acre on June 8, 2006.

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| Weed Code | | | | | | ANGR | | CHEAL | AMBEL | TAROF | DAUCA | | ANGR |
|--------------------|--------------------|-----------|-----------|------|------------|----------|------|----------|----------|----------|----------|----------|----------|
| Crop Code | | | | | | | | | | | | ZEAMX | |
| Rating Data Type | | | | | | control | | control | control | control | control | injury | control |
| Rating Unit | | | | | | percent | | percent | percent | percent | percent | percent | percent |
| Rating Date | | | | | | 5/1/2006 | | 5/1/2006 | 5/1/2006 | 5/1/2006 | 5/1/2006 | 6/6/2006 | 6/6/2006 |
| Trt-Eval Interval | | | | | | AT PLANT | | AT PLANT | AT PLANT | AT PLANT | AT PLANT | | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Grow Stg | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Basis | 75 | WG | 0.5 | oz/a | FALL | 88 | 96 | 99 | 88 | 71 | 0 | 59 |
| 1 | 2,4-D Ester | 3.8 | L | 1 | pt/a | FALL | | | | | | | |
| 1 | Herbimax | | L | 1 | % v/v | FALL | | | | | | | |
| 2 | Basis | 75 | WG | 0.5 | oz/a | FALL | 94 | 100 | 98 | 84 | 66 | 0 | 62 |
| 2 | Karmex | 80 | WG | 16 | oz/a | FALL | | | | | | | |
| 2 | 2,4-D Ester | 3.8 | L | 1 | pt/a | FALL | | | | | | | |
| 2 | Herbimax | | L | 1 | % v/v | FALL | | | | | | | |
| 3 | Basis | 75 | WG | 0.5 | oz/a | FALL | 93 | 99 | 98 | 91 | 74 | 0 | 69 |
| 3 | Princep | 4 | L | 0.9 | qt/a | FALL | | | | | | | |
| 3 | 2,4-D Ester | 3.8 | L | 1 | pt/a | FALL | | | | | | | |
| 3 | Herbimax | | L | 1 | % v/v | FALL | | | | | | | |
| 4 | Princep | 4 | L | 0.9 | qt/a | FALL | 97 | 100 | 100 | 38 | 65 | 0 | 74 |
| 4 | 2,4-D Ester | 3.8 | L | 1 | pt/a | FALL | | | | | | | |
| 4 | Herbimax | | L | 1 | % v/v | FALL | | | | | | | |
| 5 | Roundup WeatherMax | 4.5 | L | 22 | fl oz/a | FALL | 83 | 86 | 99 | 97 | 97 | 0 | 0 |
| 5 | 2,4-D Ester | 3.8 | L | 1 | pt/a | FALL | | | | | | | |
| 5 | Ammonium Sulfate | | DF | 17 | lb/100 gal | FALL | | | | | | | |
| 6 | Untreated | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | | | | | | | | | | | | | |
| 7 | Roundup WeatherMax | 4.5 | L | 22 | fl oz/a | SPRG | 97 | 100 | 100 | 55 | 68 | 0 | 44 |
| 7 | 2,4-D Ester | 3.8 | L | 1 | pt/a | SPRG | | | | | | | |
| 7 | Ammonium Sulfate | | DF | 17 | lb/100 gal | SPRG | | | | | | | |
| 8 | Harness Xtra 5.6 | 5.6 | L | 2 | qt/a | SPRG | 100 | 100 | 99 | 60 | 69 | 0 | 90 |
| 8 | Roundup WeatherMax | 4.5 | L | 22 | fl oz/a | SPRG | | | | | | | |
| 8 | Ammonium Sulfate | | DF | 2 | % w/w | SPRG | | | | | | | |
| 9 | Lumax | 3.94 | SE | 2.5 | qt/a | SPRG | 99 | 100 | 100 | 65 | 71 | 0 | 95 |
| 9 | Herbimax | | L | 1 | % v/v | SPRG | | | | | | | |
| LSD (P=.05) | | | | | | | 9.9 | 4.7 | 1.8 | 16.3 | 16.0 | 0.0 | 21.4 |
| Standard Deviation | | | | | | | 6.7 | 3.2 | 1.2 | 11.1 | 10.9 | 0.0 | 14.6 |
| CV | | | | | | | 8.08 | 3.7 | 1.4 | 17.31 | 16.91 | 0.0 | 26.82 |

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| | | | | | |
|-------------------|----------|----------|----------|----------|----------|
| Weed Code | CHEAL | AMBEL | ABUTH | TAROF | DAUCA |
| Crop Code | | | | | |
| Rating Data Type | control | control | control | control | control |
| Rating Unit | percent | percent | percent | percent | percent |
| Rating Date | 6/6/2006 | 6/6/2006 | 6/6/2006 | 6/6/2006 | 6/6/2006 |
| Trt-Eval Interval | | | | | |

| Trt No. | Treatment Name | Form Conc | Form Type | Form Rate | Rate Unit | Grow Stg | CHEAL | AMBEL | ABUTH | TAROF | DAUCA |
|--------------------|--------------------|-----------|-----------|-----------|------------|----------|-------|-------|-------|-------|-------|
| 1 | Basis | 75 | WG | 0.5 | oz/a | FALL | 64 | 76 | 65 | 70 | 63 |
| 1 | 2,4-D Ester | 3.8 | L | 1 | pt/a | FALL | | | | | |
| 1 | Herbimax | | L | 1 | % v/v | FALL | | | | | |
| 2 | Basis | 75 | WG | 0.5 | oz/a | FALL | 83 | 76 | 68 | 67 | 65 |
| 2 | Karmex | 80 | WG | 16 | oz/a | FALL | | | | | |
| 2 | 2,4-D Ester | 3.8 | L | 1 | pt/a | FALL | | | | | |
| 2 | Herbimax | | L | 1 | % v/v | FALL | | | | | |
| 3 | Basis | 75 | WG | 0.5 | oz/a | FALL | 81 | 91 | 72 | 69 | 68 |
| 3 | Princep | 4 | L | 0.9 | qt/a | FALL | | | | | |
| 3 | 2,4-D Ester | 3.8 | L | 1 | pt/a | FALL | | | | | |
| 3 | Herbimax | | L | 1 | % v/v | FALL | | | | | |
| 4 | Princep | 4 | L | 0.9 | qt/a | FALL | 78 | 73 | 45 | 55 | 50 |
| 4 | 2,4-D Ester | 3.8 | L | 1 | pt/a | FALL | | | | | |
| 4 | Herbimax | | L | 1 | % v/v | FALL | | | | | |
| 5 | Roundup WeatherMax | 4.5 | L | 22 | fl oz/a | FALL | 0 | 0 | 0 | 94 | 91 |
| 5 | 2,4-D Ester | 3.8 | L | 1 | pt/a | FALL | | | | | |
| 5 | Ammonium Sulfate | | DF | 17 | lb/100 gal | FALL | | | | | |
| 6 | Untreated | | | | | | 0 | 0 | 0 | 0 | 0 |
| 6 | | | | | | | | | | | |
| 7 | Roundup WeatherMax | 4.5 | L | 22 | fl oz/a | SPRG | 54 | 51 | 23 | 91 | 84 |
| 7 | 2,4-D Ester | 3.8 | L | 1 | pt/a | SPRG | | | | | |
| 7 | Ammonium Sulfate | | DF | 17 | lb/100 gal | SPRG | | | | | |
| 8 | Harness Xtra 5.6 | 5.6 | L | 2 | qt/a | SPRG | 100 | 100 | 90 | 91 | 90 |
| 8 | Roundup WeatherMax | 4.5 | L | 22 | fl oz/a | SPRG | | | | | |
| 8 | Ammonium Sulfate | | DF | 2 | % w/w | SPRG | | | | | |
| 9 | Lumax | 3.94 | SE | 2.5 | qt/a | SPRG | 98 | 100 | 94 | 81 | 81 |
| 9 | Herbimax | | L | 1 | % v/v | SPRG | | | | | |
| LSD (P=.05) | | | | | | | 9.7 | 21.9 | 21.0 | 10.0 | 9.9 |
| Standard Deviation | | | | | | | 6.6 | 14.9 | 14.3 | 6.8 | 6.8 |
| CV | | | | | | | 10.74 | 23.75 | 28.3 | 9.98 | 10.31 |