

Sugarbeet tolerance and weed control with napropamide and clomazone

Trial ID: SB06-18 Study Dir.: Sprague, Powell, Stiles
 Conducted: Campus H6-8 Investigator: Christy Sprague

Planting Date: Apr-30-2018 **Row Spacing:** 30 IN
Variety: Crystal G515 **No. of Reps:** 4
Population: 4.375 " spacing **% OM:** 2.7
Soil Type: L loam **pH:** 6.8
Plot Size: 10 X 30 FT **Study Design:** Randomized Complete Block (RCB)

Tillage/Previous Crops: Fall chisel plow; spring soil finish; incorporation with Triple K (Kongskilde)
Fertilizer:

Crop and Weed Description

| | | | |
|-------------|-------------|--------------------|------------------------|
| Weed | Code | Common Name | Scientific Name |
| 1 | | | |
| Crop | Code | Common Name | |
| 1 | BETVU | Sugarbeet | |

Application Description

A
Application Timing: PPI
Date Treated: Apr-30-2018
Time Treated: 4:51 PM
% Cloud Cover: 0
Air Temp., Unit: 71 F
% Relative Humidity: 18.9
Wind Speed/Unit/Dir: 5 mph
Soil Temp, Unit: 66 F
Leaf Moist/Dew Presence (Y/N): 5
Soil Moist: 4

Crop Stage at Each Application

A
Crop 1 Name: BETVU
Height:
Stage:

Weed Stage at Each Application

A
Weed 1 Name:
Height:
Stage:

Application Equipment

| Appl | Sprayer | Ground | Nozzle | Nozzle | Nozzle | Nozzle | Boom | Spray | Carrier | Operation |
|------|---------|---------|--------|--------|--------|---------|-------|--------|---------|-----------|
| | Type | Speed | Type | Size | Height | Spacing | Width | Volume | | Pressure |
| A | CUB | 3.8 mph | AIXR | 11003 | 20 " | 20 " | 100 " | 19 GPA | WATER | 30 PSI |

Comments: Roundup PowerMax was broadcast over the trial at 32 fl oz/A + AMS at 17 lb/100 GAL on June 4 and July 28.

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Investigator: Christy Sprague

Study Director: Sprague, Powell, Stiles

| Pest Code | | | | ANGR | AMBEL | ABUTH | | | | | |
|--------------------|--------------------------|-----------|-----------|-------------|-------------|-------------|-------------|------------|-------|-------|-------|
| Crop Code | | | | BETVU | | | BETVU | | | | |
| Rating Date | | | | May-25-2018 | May-25-2018 | May-25-2018 | May-25-2018 | Jun-4-2018 | | | |
| Rating Type | | | | injury | control | control | control | injury | | | |
| Rating Unit | | | | percent | percent | percent | percent | percent | | | |
| Trt-Eval Interval | | | | 25 DA-A | 25 DA-A | 25 DA-A | 25 DA-A | 35 DA-A | | | |
| Number of Decimals | | | | 0 | 0 | 0 | 0 | 0 | | | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Appl Unit | Code | | | | | |
| 1 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 41 | 86 | 88 | 97 | 44 |
| 2 | Devrinol 2XT | 2 L | | 4 pt/a | A | | 25 | 58 | 73 | 5 | 35 |
| 3 | KFD-373-01 (napropamide) | 3.8 L | | 1.5 pt/a | A | | 31 | 60 | 77 | 10 | 45 |
| 4 | KFD-373-01 (napropamide) | 3.8 L | | 2 pt/a | A | | 26 | 73 | 73 | 5 | 45 |
| 5 | Untreated | | | | | | 0 | 0 | 0 | 0 | 0 |
| 6 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 69 | 82 | 75 | 98 | 78 |
| 6 | Devrinol 2XT | 2 L | | 4 pt/a | A | | | | | | |
| 7 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 49 | 83 | 83 | 95 | 64 |
| 7 | KFD-373-01 (napropamide) | 3.8 L | | 1.5 pt/a | A | | | | | | |
| 8 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 73 | 89 | 89 | 97 | 86 |
| 8 | KFD-373-01 (napropamide) | 3.8 L | | 2 pt/a | A | | | | | | |
| | LSD P=.05 | | | | | | 17.9 | 19.7 | 13.5 | 10.2 | 23.1 |
| | Standard Deviation | | | | | | 12.2 | 13.4 | 7.7 | 6.9 | 15.7 |
| | CV | | | | | | 31.0 | 20.2 | 11.01 | 13.65 | 31.74 |

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Location: Campus H6-8

Investigator: Christy Sprague

Study Director: Sprague, Powell, Stiles

| Pest Code | ANGR | CHEAL | AMAPO | AMBEL | ABUTH | BETVU | | | | | | |
|--------------------|--------------------------|------------|------------|------------|------------|-------------|-------|------|------|-------|-------|-------|
| Crop Code | | | | | | | | | | | | |
| Rating Date | Jun-4-2018 | Jun-4-2018 | Jun-4-2018 | Jun-4-2018 | Jun-4-2018 | Jun-22-2018 | | | | | | |
| Rating Type | control | control | control | control | control | injury | | | | | | |
| Rating Unit | percent | percent | percent | percent | percent | percent | | | | | | |
| Trt-Eval Interval | 35 DA-A | 35 DA-A | 35 DA-A | 35 DA-A | 35 DA-A | 18 DA-POST | | | | | | |
| Number of Decimals | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Appl Unit | Code | | | | | | |
| 1 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 74 | 84 | 43 | 60 | 100 | 33 |
| 2 | Devrinol 2XT | 2 L | | 4 pt/a | A | | 43 | 90 | 51 | 57 | 0 | 26 |
| 3 | KFD-373-01 (napropamide) | 3.8 L | | 1.5 pt/a | A | | 60 | 83 | 65 | 48 | 13 | 33 |
| 4 | KFD-373-01 (napropamide) | 3.8 L | | 2 pt/a | A | | 59 | 79 | 59 | 48 | 18 | 20 |
| 5 | Untreated | | | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 72 | 98 | 63 | 55 | 98 | 56 |
| 6 | Devrinol 2XT | 2 L | | 4 pt/a | A | | | | | | | |
| 7 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 73 | 94 | 53 | 64 | 95 | 46 |
| 7 | KFD-373-01 (napropamide) | 3.8 L | | 1.5 pt/a | A | | | | | | | |
| 8 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 84 | 98 | 70 | 72 | 95 | 66 |
| 8 | KFD-373-01 (napropamide) | 3.8 L | | 2 pt/a | A | | | | | | | |
| LSD | P=.05 | | | | | | 14.0 | 17.1 | 27.4 | 22.8 | 9.6 | 23.6 |
| | Standard Deviation | | | | | | 9.5 | 11.6 | 18.6 | 13.0 | 6.5 | 16.1 |
| | CV | | | | | | 16.42 | 14.9 | 37.0 | 25.79 | 12.44 | 45.95 |

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| Pest Code | | | | ANGR | CHEAL | AMAPO | AMBEL | ABUTH | | | |
|--------------------|--------------------------|-----------|-----------|-------------|-------------|-------------|-------------|-------------|------|-------|------|
| Crop Code | | | | | | | | | | | |
| Rating Date | | | | Jun-22-2018 | Jun-22-2018 | Jun-22-2018 | Jun-22-2018 | Jun-22-2018 | | | |
| Rating Type | | | | control | control | control | control | control | | | |
| Rating Unit | | | | percent | percent | percent | percent | percent | | | |
| Trt-Eval Interval | | | | 18 DA-POST | 18 DA-POST | 18 DA-POST | 18 DA-POST | 18 DA-POST | | | |
| Number of Decimals | | | | 0 | 0 | 0 | 0 | 0 | | | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Appl Unit | Code | | | | | |
| 1 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 98 | 98 | 98 | 97 | 100 |
| 2 | Devrinol 2XT | 2 L | | 4 pt/a | A | | 97 | 100 | 100 | 98 | 100 |
| 3 | KFD-373-01 (napropamide) | 3.8 L | | 1.5 pt/a | A | | 95 | 98 | 99 | 90 | 100 |
| 4 | KFD-373-01 (napropamide) | 3.8 L | | 2 pt/a | A | | 99 | 100 | 100 | 90 | 95 |
| 5 | Untreated | | | | | | 90 | 99 | 100 | 98 | 100 |
| 6 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 95 | 100 | 100 | 82 | 100 |
| 6 | Devrinol 2XT | 2 L | | 4 pt/a | A | | | | | | |
| 7 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 97 | 100 | 100 | 100 | 100 |
| 7 | KFD-373-01 (napropamide) | 3.8 L | | 1.5 pt/a | A | | | | | | |
| 8 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 98 | 99 | 98 | 90 | 100 |
| 8 | KFD-373-01 (napropamide) | 3.8 L | | 2 pt/a | A | | | | | | |
| | LSD P=.05 | | | | | | 8.4 | 2.7 | 3.3 | 20.2 | 3.0 |
| | Standard Deviation | | | | | | 5.7 | 1.9 | 2.2 | 11.5 | 2.0 |
| | CV | | | | | | 5.98 | 1.88 | 2.24 | 12.38 | 2.05 |

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Study Director: Sprague, Powell, Stiles

| | | | | | |
|--------------------|-------------|-------------|-------------|-------------|-------------|
| Pest Code | | | | | |
| Crop Code | BETVU | BETVU | BETVU | BETVU | BETVU |
| Rating Date | Jul-12-2018 | Jun-18-2018 | Sep-24-2018 | Sep-24-2018 | Sep-24-2018 |
| Rating Type | injury | stand count | stand count | % sugar | yield |
| Rating Unit | percent | 100' row | 100' row | | ton/acre |
| Trt-Eval Interval | 40 DA-POST | 49 DA-A | 147 DA-A | 147 DA-A | 147 DA-A |
| Number of Decimals | 0 | 0 | 0 | 1 | 1 |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Appl Unit | Code | | | | | |
|---------|--------------------------|-----------|-----------|----------|-----------|------|-------|-------|-------|------|-------|
| 1 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 33 | 127 | 136 | 15.5 | 15.5 |
| 2 | Devrinol 2XT | 2 L | | 4 pt/a | A | | 28 | 145 | 145 | 15.1 | 18.2 |
| 3 | KFD-373-01 (napropamide) | 3.8 L | | 1.5 pt/a | A | | 30 | 114 | 120 | 14.6 | 14.8 |
| 4 | KFD-373-01 (napropamide) | 3.8 L | | 2 pt/a | A | | 18 | 136 | 149 | 14.9 | 17.7 |
| 5 | Untreated | | | | | | 0 | 155 | 161 | 14.9 | 14.4 |
| 6 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 63 | 75 | 122 | 13.8 | 10.1 |
| 6 | Devrinol 2XT | 2 L | | 4 pt/a | A | | | | | | |
| 7 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 48 | 94 | 104 | 14.3 | 13.1 |
| 7 | KFD-373-01 (napropamide) | 3.8 L | | 1.5 pt/a | A | | | | | | |
| 8 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 68 | 55 | 95 | 13.7 | 9.4 |
| 8 | KFD-373-01 (napropamide) | 3.8 L | | 2 pt/a | A | | | | | | |
| | LSD P=.05 | | | | | | 17.1 | 49.4 | 71.1 | 0.77 | 5.71 |
| | Standard Deviation | | | | | | 11.6 | 33.6 | 48.4 | 0.52 | 3.88 |
| | CV | | | | | | 32.63 | 29.75 | 37.51 | 3.58 | 27.49 |

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| | | |
|--------------------|-------------|-------------|
| Pest Code | | |
| Crop Code | BETVU | BETVU |
| Rating Date | Sep-24-2018 | Sep-24-2018 |
| Rating Type | RWST | RWSA |
| Rating Unit | #/ton | #/acre |
| Trt-Eval Interval | 147 DA-A | 147 DA-A |
| Number of Decimals | 0 | 0 |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Appl Unit | Code | | |
|---------|--------------------------|-----------|-----------|----------|-----------|------|------|--------|
| 1 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 223 | 3494 |
| 2 | Devrinol 2XT | 2 L | | 4 pt/a | A | | 216 | 3931 |
| 3 | KFD-373-01 (napropamide) | 3.8 L | | 1.5 pt/a | A | | 207 | 3105 |
| 4 | KFD-373-01 (napropamide) | 3.8 L | | 2 pt/a | A | | 215 | 3800 |
| 5 | Untreated | | | | | | 215 | 3084 |
| 6 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 192 | 1960 |
| 6 | Devrinol 2XT | 2 L | | 4 pt/a | A | | | |
| 7 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 202 | 2690 |
| 7 | KFD-373-01 (napropamide) | 3.8 L | | 1.5 pt/a | A | | | |
| 8 | KFD-308-01 (clomazone) | 3 L | | 1 pt/a | A | | 193 | 1856 |
| 8 | KFD-373-01 (napropamide) | 3.8 L | | 2 pt/a | A | | | |
| | LSD P=.05 | | | | | | 13.7 | 1295.6 |
| | Standard Deviation | | | | | | 9.3 | 881.0 |
| | CV | | | | | | 4.48 | 29.47 |