

## 2013 Sunflower Head Moth Foliar Treatment Efficacy Trial – Dickinson Co., KS

#### Jeff Whitworth, Holly Davis, Department of Entomology, Kansas State University

Pest: Sunflower Head Moth, *Homoeosoma electellum* 

Crop: Sunflower; 20 treatments

Location: Dickinson Co., KS

Plot Size: 4 rows x 20ft.

Experimental Design: Randomized Complete Block; 4 Replications

Information: Sprayed by hand sprayer with ca. 20 gal. H<sub>2</sub>0/a. at 30 psi. on 21

July, 2013 – 10-15% bloom at time of application. 86°F with 10 mph winds. This year was the first year we have ever experienced

untreated plots with no head moths.

Phytotoxicity: None noted.

Evaluation: Dissected 4 heads/ treatment and counted all larvae on 27 July (6

DAT, 31 July (10 DAT) – dissected 2 heads/treatment), and 5 August (15 DAT), 2013. Unusual, but there were not enough head moths to justify treating this field and this is the second field in central Kansas that we sampled for potential plots and neither had

enough head moths to justify treatment.

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Evaluation Dates: 27 July (6 DAT), 31 July (10 DAT), and 5 August (15 DAT), 2013

| No. | Treatment/Product Name  | Avg. SHM<br>(mean ± SE)        |                                 |                   |
|-----|---|--------------------------------|---------------------------------|-------------------|
|     |   | 27 July (6 DAT)<br>SHM/4 heads | 31 July (10 DAT)<br>SHM/2 heads | 5 August (15 DAT) |
| 1   | Chlorpyrifos + Lambda<br>Cyhalothrin @ 13 oz./a                 | $0.0 \pm 0.0 b$                | $0.0\pm0.0b$                    | 1.5 ± 1.0bc       |
| 2   | Chlorpyrifos + Lambda<br>Cyhalothrin @ 16 oz./a                 | $0.0 \pm 0.0b$                 | $0.0 \pm 0.0$ b                 | $0.0 \pm 0.0$ c   |
| 3   | Lambda Cyhalothrin + Sulfoxalor<br>@ 2.5 oz./a                  | $0.5\pm0.5b$                   | $0.0 \pm 0.0$ b                 | $1.3 \pm 0.8$ bc  |
| 4   | Lambda Cyhalothrin + Sulfoxalor<br>@ 3 oz./a                    | $0.0 \pm 0.0 b$                | $0.0 \pm 0.0$ b                 | $1.0 \pm 0.6$ bc  |
| 5   | Asana XL @ 9.6 oz./a  | $0.0 \pm 0.0b$                 | $0.0 \pm 0.0$ b                 | $1.3 \pm 0.8$ bc  |
| 6   | Belt SC @ 3 oz/a + NIS @ .25%                                   | $0.0 \pm 0.0 b$                | $0.0 \pm 0.0$ b                 | $1.0 \pm 1.0 bc$  |
| 7   | Baythroid XL @ 2.8 oz./a  | $0.0 \pm 0.0$ b                | $0.0 \pm 0.0$ b                 | $1.0 \pm 0.7$ bc  |
| 8   | Stallion @ 11.75 oz./a  | $0.0 \pm 0.0$ b                | $0.0 \pm 0.0$ b                 | $0.0 \pm 0.0c$    |
| 9   | Stallion @ 8 oz./a + Stallion @ 8 oz./a 14 days later           | $0.0\pm0.0b$                   | $0.0\pm0.0b$                    | $1.0 \pm 0.7$ bc  |
| 10  | Mustang Max @ 4 oz./a   | $0.0 \pm 0.0 b$                | $0.0 \pm 0.0$ b                 | $0.8 \pm 0.8$ bc  |
| 11  | Mustang Max @ 3 oz./a + Stallion<br>@ 8 oz./a 14 days later     | $0.0 \pm 0.0 b$                | $0.0 \pm 0.0$ b                 | $0.8 \pm 0.8$ bc  |
| 12  | Asana @ 8 oz./a   | $0.0 \pm 0.0 b$                | $0.0 \pm 0.0$ b                 | $1.3 \pm 0.5$ bc  |
| 13  | Fastac EC @ 3.8 oz./a + surfactant<br>@ .25%                    | $0.0 \pm 0.0b$                 | $0.0 \pm 0.0$ b                 | $0.5 \pm 0.5c$    |
| 14  | Fastac EC @ 3.8 oz./a + Lorsban @ 8.0 oz./a + surfactant @ .25% | $0.0 \pm 0.0 b$                | $0.0 \pm 0.0$ b                 | $0.8 \pm 0.8$ bc  |
| 15  | Endigo ZCX @ 4 oz./a  | $0.0 \pm 0.0 b$                | $0.0 \pm 0.0$ b                 | $2.3 \pm 1.3$ bc  |
| 16  | Warrior II @ 1.92 oz./a   | $0.0 \pm 0.0b$                 | $0.0 \pm 0.0$ b                 | $1.0 \pm 1.0 bc$  |
| 17  | Centric 40 WG @ 19 oz./a  | $0.0 \pm 0.0 b$                | $0.0 \pm 0.0$ b                 | $3.3 \pm 1.8b$    |
| 18  | Besiege @ 9 oz./a   | $0.0 \pm 0.0 b$                | $0.0 \pm 0.0$ b                 | $0.5 \pm 0.5c$    |
| 19  | Cobalt @ 24.7 oz./a   | $0.0\pm0.0b$                   | $0.0 \pm 0.0$ b                 | $1.0 \pm 1.0$ bc  |
| 20  | Untreated   | $7.3 \pm 0.8a$                 | 2.8 ± 1.1a                      | $10.5 \pm 2.1a$   |

### Means within a column followed by the same letter are not significantly different (P>0.05; PROC GLM; Mean comparison by LSD [SAS Institute 2003]).

Reference to specific products is provided solely for informational purposes. Experiments with pesticides on non-labeled crops or pests is part of the insecticide registration process, it does not imply endorsement or recommendation of non-labeled uses of pesticides by Kansas State University. All pesticide use must be consistent with current labels.

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