2016 Alfalfa Weevil Insecticide Efficacy Trial – Dickinson Co., KS.

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Pest: Alfalfa weevil, *Hypera postica*

Crop: Alfalfa; Established stand – 5 years

Location: Dickinson Co., KS

Planting Date: N/A

Plot Size: 10 ft. x 30 ft.

Experimental Design: Randomized Complete Block; 4 Replications

Information: Sprayed with hand sprayer delivering 15 gal/acre at ca.30 psi on 2 April, 2016. Treatments 11, 13, and 17 sprayed again on 13 April, 2016.

Special Notes: Severe freeze damage overnight on 24/25 March killed off much of the foliage. Due to dry conditions it was very slow to recover and put on new growth. Additional cold temperatures seemed to impact alfalfa and alfalfa weevils. Significant cold temperatures:

3/24 = 31°F
3/25 = 26°F
4/2 = 28°F
4/8 = 34°F
4/9 = 33°F
4/12 = 34°F

Phytotoxicity: None noted

Evaluation: Pre-treatment counts conducted on 28 March, 2016. Average of 8.8 larvae/ 10 stems. 10 stems randomly selected in each plot and shaken

into 1 gal. bucket and counted 5 April (3 DAT), 8 April (6 DAT), 15 April (13 DAT), 22 April (20 DAT), 29 April (27 DAT), and 5 May (33 DAT).
Pea aphid and spotted aphid counts were made at each evaluation but populations were never sufficient to analyze.
DAT = Days After Treatment

Weather at Time of Treatment: 2 April - 68^{o}F, wind NW 9 - 12mph; 13 April - 74^{o}F, wind S 8 mph

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Treatment Date: 2 April, 2016

Treatment/Product Name	Alfalfa weevil larvae / 10 stems (Mean ± SE)					
	5 Apr. (3 DAT)	**8 Apr. (6DAT)**	**15 Apr. (13 DAT)**	**22 Apr. (20 DAT)**	**29 Apr. (27 DAT)**	**5 May (33 DAT)**
Untreated	9.8 ± 0.9a	10.3 ± 3.9a	3.3 ± 0.6a	11.3 ± 3.9a	11.8 ± 2.2a	7.0 ± 2.1bc
Hero @ 10.3 oz/a	6.3 ± 2.4abc	3.0 ± 1.7b	1.0 ± 0.6b	4.3 ± 0.9bc	2.5 ± 0.3bc	4.3 ± 1.4bcd
Stallion @ 11.75 oz/a	3.0 ± 1.8bcd	1.8 ± 0.3b	1.0 ± 0.7b	2.5 ± 0.9c	4.5 ± 0.3b	6.0 ± 0.9bcd
Mustang Maxx @ 4 oz/a	1.3 ± 0.3d	1.0 ± 0.6b	1.0 ± 0.4b	2.5 ± 1.0c	12.3 ± 1.2a	8.9 ± 1.8ab
Mustang Maxx @ 4 oz/a -followed by Stallion @ 11.75 oz/a on 13 Apr.	1.3 ± 0.3d	1.0 ± 0.4b	0.8 ± 0.8b	1.5 ± 0.6c	4.5 ± 0.5b	2.5 ± 1.3cde
Mustang Maxx @ 4 oz/a + Dimethoate @ 16 oz/a	2.0 ± 0.3cd	1.8 ± 1.0b	0.3 ± 0.3b	2.8 ± 1.1c	11.0 ± 1.8a	11.8 ± 2.5a
Steward @ 5.3 oz/a + surfact. -followed by Steward @ 6.0 oz/a + surfact. on 13 Apr.	1.8 ± 0.5cd	0.3 ± 0.3b	0.8 ± 0.3b	1.3 ± 0.6c	0.5 ± 0.3c	1.0 ± 0.6e
Steward @ 8.0 oz/a + surfact.	4.3 ± 1.3bcd	2.3 ± 1.6b	1.3 ± 0.8b	5.0 ± 1.2bc	2.5 ± 0.3bc	3.5 ± 0.3cde
Steward @ 11.3 oz/a + surfact.	6.8 ± 2.6ab	2.0 ± 1.7b	1.0 ± 0.6b	7.8 ± 1.3ab	2.8 ± 0.3bc	2.3 ± 0.6de
Exirel @ 10.3 oz/a + surfact.	6.0 ± 1.7abc	2.5 ± 1.9b	0.5 ± 0.5b	5.3 ± 2.4bc	4.3 ± 0.5b	6.3 ± 2.9bcd
Lorsban @ 32 oz/a - followed by Steward @ 6 oz/a + surfact. on 13 Apr.	3.3 ± 2.0 bcd	1.3 ± 0.9b	0.0 ± 0.0b	1.8 ± 0.6c	0.8 ± 0.5c	2.0 ± 0.8ed

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