

LYGUS CONTROL ON ALFALFA GROWN FOR SEED

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Insecticides were screened for their ability to control Lygus nymphs in alfalfa seed fields. In early spring, field plots were established at Prosser, Othello, and Touchet Washington State. At each location, plots were 18 ft. wide and 20 ft. in length and treatments were replicated 4 times in a complete random block design. Insecticides were applied to mimic grower timing at a pre-bloom, bloom, and post bloom period of the alfalfa. Treatments were applied using a CO₂ powered back pack sprayer equipped with a four nozzle boom using 25 gallons of water per acre as carrier. Five 180° sweeps per plot were used as a means to sample Lygus abundance and efficacy post application.

During the pre-bloom period of the alfalfa maturity, we applied more treatments to the Prosser location than at the Touchet and Othello locals. The plots at the Touchet location were abandoned and no results obtained due to overspray of insecticide by the grower cooperator. At the Prosser location, the Orthene, Lorsban, Dimethoate, Capture, and Warrior treatments provided significantly better Lygus control than did the untreated check. At the Othello location, Orthene, Lorsban, Avaunt, Capture, and Dibrom treatments provided significantly better Lygus control than did the untreated check. At the Othello location, Dibrom was substituted for the Warrior treatment at the Prosser location.

During the bloom period of the alfalfa maturity, we applied the same exact treatments at all three locations. At the Prosser and Touchet locations, none of the treatments applied provided significantly better control than the untreated check. At the Othello location, Assail was the only treatment that controlled Lygus nymphs significantly better than the untreated check. At all three locations, the HGW86 10% at the high rate tended to provide the next best level of control of Lygus nymphs, but never statistically significant.

Due to time and harvest constraints, post-bloom alfalfa maturity applications were only made at the Prosser location. In this case, all products tested with the exception of the HGW86 10% at the moderate rate provided significantly better control of Lygus nymphs than the untreated check.

Pre-Bloom Treatments

Mean Lygus/5 Sweeps ± Std. Error

Product	Rate	Prosser, WA	Touchet, WA	Othello, WA
Rimon 0.83 EC	12 oz./A	4.0 ± 0.7		1.4 ± 0.4*
Assail 70 WP	0.05 lb/A	5.0 ± 1.5		-----
Provado 1.6 F	3.8 oz./A	3.5 ± 0.9		3.3 ± 0.8
Actara 25 WDG	4.0 oz./A	2.0 ± 0.6		-----
Calypso 4 SC	4.0 oz./A	4.8 ± 1.4		-----
Orthene 75 S	1.33 lb. ai/A	0.4 ± 0.1*		0.4 ± 0.2*
Lorsban 4 E	2 pt/A	0.3 ± 0.2*		0.1 ± 0.1*
Dimethoate 4 EC	1 pt/A	1.2 ± 0.4*		-----
Avaunt 30% WDG	3.5 oz./A	4.1 ± 0.9		0.9 ± 0.6*
Capture 2 EC	6 oz./A	0.1 ± 0.1*		0.1 ± 0.1*
Warrior 1lb./gal.	3.84 oz/A	0.7 ± 0.3*		-----
MSR Spray Conc. 2 lbs/gal.	2 pints/A	2.4 ± 0.8		-----
MSR + Capture	2 pints + 6 oz/A	7.5 ± 1.3		-----
HGW86 10% SC	4.8 fl oz/A	4.9 ± 0.9		-----
HGW86 10% SC	10.3 fl oz/A	3.8 ± 0.8		2.4 ± 1.1
HGW86 10% SC	20.6 fl oz/A	6.4 ± 1.7		-----
HGW86 20%	10.3 fl oz/A	5.5 ± 1.4		-----
Dibrom 8 E	1 pint/A	-----		1.5 ± 0.5*
Untreated check	- - -	4.5 ± 1.1		4.0 ± 1.2

Means followed by * are significantly different from the untreated check (pairwise t-test, P< 0.05)

Bloom Treatments**Mean Lygus/5 Sweeps ± Std. Error**

Product	Rate	Prosser, WA	Touchet, WA	Othello, WA
Rimon 0.83 EC	12 oz./A	3.1 ± 0.9	1.8 ± 0.6	2.8 ± 1.5
Assail 70 WP	0.05 lb/A	4.6 ± 1.6	2.5 ± 1.3	2.0 ± 1.1*
Calypso 4 SC	4.0 oz./A	2.6 ± 0.8	5.5 ± 1.5	5.5 ± 1.3
HGW86 10% SC	4.8 fl oz/A	6.7 ± 2.2	4.0 ± 0.4	7.8 ± 1.5
HGW86 10% SC	10.3 fl oz/A	7.8 ± 1.7	1.5 ± 0.5	2.0 ± 4.0
HGW86 10% SC	20.6 fl oz/A	1.5 ± 0.4	1.3 ± 0.1	4.8 ± 2.9
HGW86 20% SC	10.3 fl oz/A	5.3 ± 1.5	2.3 ± 0.8	8.0 ± 1.6
Dibrom 8 E	1 pint/A	3.8 ± 1.1	2.3 ± 1.1	4.3 ± 1.5
Dipel 2x 6.4% WP	8 lb/A	5.4 ± 1.8	3.5 ± 1.2	6.0 ± 1.0
Untreated check	-----	2.5 ± 0.4	3.5 ± 1.3	7.8 ± 3.0

Means followed by * are significantly different from the untreated check (pairwise t-test, P< 0.05)

Post Bloom**Mean Lygus/5 Sweeps ± Std. Err**

Product	Rate	Prosser, WA
Rimon 0.83 EC	12 oz./A	1.9 ± 0.8*
HGW86 10% SC	4.8 fl oz/A	6.6 ± 4.2*
HGW86 10% SC	10.3 fl oz/A	7.3 ± 1.7
HGW86 10% SC	20.6 fl oz/A	3.8 ± 0.9*
HGW86 20%	10.3 fl oz/A	2.5 ± 0.9*
Orthene 75 S	1.33 lb. ai/A	1.1 ± 0.5*
Capture 2 EC	6 oz./A	1.1 ± 0.6*
Warrior 2 EC 1lb./gal.	3.84 oz/A	2.5 ± 1.2*
Lannate 90% SP	2 pints/A	3.6 ± 2.4*
Dibrom 8 E	1 pint/A	1.4 ± 0.7*
Lorsban 4 E	2 pt/A	1.6 ± 0.6*
Dimethoate 4 EC	1 pt/A	2.3 ± 1.1*
Untreated check	-----	14.0 ± 7.3

Means followed by * are significantly different from the untreated check (pairwise t-test, P< 0.05)