

Section II
Forage Insects

ALFALFA WEEVIL AND PEA APHID CONTROL IN ALFALFA, 1996

R. L. Stoltz and N. A. Matteson

University of Idaho, Twin Falls R & E Center

P. O. Box 1827, Twin Falls, ID 83303-1827

208/736-3600

bstoltz@uidaho.edu

Test plots were established near Filer, Idaho. The soil type was Portneuf silt loam and the field was irrigated by surface flow. Four treatments and an untreated check were replicated four times in a RCB design. Each individual test plot was 25 ft by 25 ft. Sprays were applied as a broadcast spray using a CO₂ pressurized backpack sprayer using 30 psi and delivering 20 gal finished spray per acre (four, 10X hollow cone nozzles). Sampling was accomplished by taking five, 90 degree pendulum sweeps (15 inch diameter sweep net) per plot. Counts were made of all alfalfa pest species present as well as all beneficial insects. A pre-treatment count was made and all treatments were applied on 17 Jun. Additional counts were made at 48 hr, 7 and 9 day post treatment. Data were analyzed using ANOVA and Neuman-Keuls multiple means comparison.

There was significant reduction of alfalfa weevil larvae from the untreated check with all treatments throughout the study. There was an initial reduction in pea aphid numbers with all treatments from the untreated check but this was not a significant reduction at 48 hr. At 7 day post-application there was a significant reduction in pea aphid numbers with the Lorsban treatment which was again observed at 9 days. Ambush provided some control of pea aphid through 9 day post-application. It was observed that an increase in number of other aphids occurred during this study and that there was a significant reduction in numbers with all treatments at 9 day post-application. It should be noted that economically damaging numbers of aphids were never reached during this study. Few beneficial insect species were observed during this study. The beneficial complex included primarily micro-hymenoptera, nabids, orius species and spiders. The micro-hymenoptera species were rarely observed after treatments were applied.

Treatment/ formulation	Rate (lb AI/acre)	Alfalfa Weevil Larvae			
		17 Jun	19 Jun	24 Jun	26 Jun
Check	-----	52.50 a	79.25 b	80.25 b	84.75 b
Baythroid 2EC	0.025	51.25 a	38.25 a	30.00 a	16.25 a
Baythroid 2EC	0.044	53.50 a	11.50 a	3.00 a	1.50 a
Lorsban	0.50	54.00 a	10.75 a	4.25 a	7.75 a
Ambush	0.1	44.00 a	18.25 a	16.25 a	23.00 a

Treatment/ formulation	Rate (lb AI/acre)	Alfalfa Weevil Adults			
		17 Jun	19 Jun	24 Jun	26 Jun
Check	-----	0.00 a	0.50 a	1.25 a	5.00 a
Baythroid 2EC	0.025	0.50 a	1.00 a	2.75 a	6.25 a
Baythroid 2EC	0.044	0.50 a	0.75 a	2.00 a	7.25 a
Lorsban	0.50	0.25 a	0.25 a	3.5 a	3.25 a
Ambush	0.1	0.50 a	1.25 a	2.5 a	8.25 a

Treatment/ formulation	Rate (lb AI/acre)	Pea Aphid			
		17 Jun	19 Jun	24 Jun	26 Jun
Check	-----	11.25 a	11.25 a	24.00 b	39.50 b
Baythroid 2EC	0.025	13.50 a	8.50 a	17.25 ab	32.25 b
Baythroid 2EC	0.044	13.25 a	2.75 a	11.00 ab	25.25 ab
Lorsban	0.50	9.75 a	1.25 a	1.25 a	3.50 a
Ambush	0.1	15.50 a	2.25 a	5.00 ab	12.00 ab

Treatment formulation	Rate (lb AI/acre)	Other Aphids			
		17 Jun	19 Jun	24 Jun	26 Jun
Check	-----		5.00 a	9.50 a	31.00 c
Baythroid 2EC	0.025		0.00 a	6.25 a	17.25 b
Baythroid 2EC	0.044		2.00 a	1.50 a	8.25 ab
Lorsban	0.50		0.00 a	0.75 a	2.00 a
Ambush	0.1		0.00 a	2.00 a	4.75 ab