

2007 Acramite / Spider Mite Trial in Seed Alfalfa – Fruita, CO

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Objective:

Evaluate Acramite 4SC at two rates against two spotted spider mite, *Tetranychus urticae*, populations in alfalfa grown for seed.

Treatments:

1) Untreated; 2) Acramite 4SC 0.75 lb a.i./A (1.5 pt/A); 3) Acramite 4SC 1.0 lb a.i./A (2.0 pt/A)

Methods:

The trial was conducted in a seed alfalfa field located on Waters Farms, at the NE corner of 21 & K Rds., 3 mi east of Fruita, CO. Miticides were applied with a JD 4930 self propelled sprayer with a 120 ft boom. Each of four replications was 250 ft in length. The center 10 ft section of the 7-section boom was left as an untreated control for the entire 1000 ft length of the trial. One of the Acramite rates was randomly assigned to either side of the untreated control, using the outer 3 sections (55 ft) of the spray boom. The plots were traveled twice, once spraying the 1.5 pt/A rate and again spraying the 2.0 pt/A rate.

Treatments were applied at dusk on 5 July 2007 at a finished gallonage of 20 gal/A, with the rate regulated by the on board spray computer. Plots were flagged in the field so the operator could find them and the location of the treatments was confirmed with the GPS on the sprayer.

The plots were sampled five times (pre, 5, 13, 20, 33 DAT), although the July 18 (13 DAT) sample was lost due to sample contamination issues. Five random alfalfa stems were taken at ground level in each plot and mites extracted in Berlese funnels for 24 hours. Mites were counted under a dissecting microscope, and adult and immature stages counted separately.

Results:

Data generated by the experiment is displayed in the table. Acramite was effective in reducing TSM numbers three weeks after application, but differences between treatments were not statistically significant 33 DAT. There appeared to be a rate response to the Acramite, with lower mite counts consistently recorded in the 2.0 pt/A rate.

Treatment	TSM per five stems											
	06/28/2007 (pre)			07/10/2007 5 DAT			07/25/2007 20 DAT			08/07/2007 (33 DAT)		
	Adult	Imm.	Total	Adult	Imm.	Total	Adult	Imm.	Total	Adult	Imm.	Total
Acramite 4SC 1.5 pt/a	0.3	2.8	3.0	5.25 B	9.5 B	14.8 B	23 B	23.0	46 AB	45.0	83.5	128.5
Acramite 4SC 2.0 pt/a	3.3	22.8	26.0	3.0 B	7.25 B	10.3 B	9.3 B	10.5	19.75 B	31.0	47.0	78.0
Untreated	4.0	15.3	19.3	16.75 A	33.5 A	50.3 A	77.5 A	34.5	112 A	47.8	115.5	163.3
P-value	0.2765	0.3361	0.2903	0.0043	0.0862	0.0324	0.0485	0.1843	0.0771	0.2138	0.1682	0.1280