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Mites & Sap-sucking Insects

GREEN PEACH APHID CONTROL WITH SEED TREATMENT INSECTICIDES, 1998

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Experimental plots were established on the UI Research and Extension Center, Kimberly, Idaho. Uncut G2, Russet Burbank potato seed was obtained from the University of Idaho, Tetonia Research and Extension Center. This seed was cut, weighed and treated with formulated dusts on 21 Apr. After cutting and treating, seed was placed in heavy-weight plastic bags, loosely closed to prevent condensation and stored at 42° F until planted. Potatoes were planted on 28 Apr and irrigated by solid set sprinkler. The soil type was Portneuf silt loam. Five treatments and two untreated check plots were replicated four times in a RCB design. Individual plots were 4 rows (36 inch row spacing) wide by 25 ft long with 5 ft alleyways separating the plots. Green peach aphids were mass reared on greenhouse mustard plants ('Chinese Cabbage') for release into individual plots. Aphid releases were made into test plots on 17 Jun and 26 Jun. A total of four heavily infested leaves were released per plot on each date. Green peach aphid counts were made weekly, from non-destructively sampling 20 leaves at random from the top, middle and bottom sections of plants in the center two rows of each plot. The data collected and presented is the total no. of aphids per 20 leaves sampled. Data were analyzed using ANOVA and Studentized-Tukeys multiple means comparison.

Green peach aphid numbers were significantly reduced in most treatments from the untreated checks until 27 Jul. Variability in counts on 21 Jul adversely affected mean separation tests. Green peach aphid numbers remained low in treated plots until aphid numbers declined naturally between 27 Jul and 3 Aug.

Treatment/ formulation	Rate (g AI/cwt) or (g AI/cwt + g AI/100 kg)	No. GPA per 20 leaves							
		Jun 22	Jun 30	Jul 6	Jul 14	Jul 21	Jul 27	Aug 3	Aug 10
Check (Maxim Only)	1.1	11.5 b	7.0 b	16.0 b	10.8 bc	16.5 c	7.3 b	0.0 a	0.3 a
Maxim Only (Check)	1.1	12.3 b	2.8 a	6.5 ab	13.0 c	16.0 bc	5.3 b	0.3 a	0.3 a
Maxim + Adage	1.1 + 40.0	0.3 a	1.0 a	1.0 a	0.0 a	0.0 a	0.0 a	0.0 a	0.0 a
Maxim + Adage	1.1 + 50.0	0.8 a	0.8 a	1.3 a	0.0 a	0.5 ab	0.3 a	0.0 a	0.0 a
Maxim + Adage	1.1 + 60.0	0.0 a	0.3 a	3.3 a	0.0 a	0.3 ab	0.0 a	0.0 a	0.0 a
Gaucho	4.26	1.3 a	0.8 a	1.0 a	0.5 ab	2.8 abc	0.0 a	0.0 a	0.3 a
Gaucho	5.68	1.0 a	0.3 a	0.3 a	0.0 a	1.0 abc	0.0 a	0.0 a	0.3 a

Means within a column with the same letter are not significantly different (P = 0.05, Studentized-Tukeys).