Section VIII
Mites & Sap-sucking Insects

GREEN PEACH APHID CONTROL WITH SOIL APPLIED INSECTICIDES, 1998

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Experimental plots were established on the UI Research and Extension Center, Kimberly, Idaho. Uncut New Leaf™ potato seed was obtained from the NatureMark Company which was subsequently cut and treated with Tops MZ at the U of I, Kimberly Research and Extension Center on 20 Apr. Insecticide treatments were applied in furrow at planting as a banded spray over the seed piece using a CO_2 pressurized backpack sprayer (30 psi). Potatoes were planted on 28 Apr and irrigated by solid set sprinkler. The soil type was Portneuf silt loam. Four treatments and one untreated check plot 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 with all treatments from the untreated checks except for the low rate of Admire and the high rate of CGA-203343 on 30 Jun when aphid numbers increased unexpectedly in all treatment and check plots. Aphid numbers in the check plots remained high until 104 days after planting.

Treatment/ Formulation	Rate (gm AI/100 m)	No. GPA per 20 leaves							
		Jun 22	Jun 30	Jul 6	Jul 13	Jul 20	Jul 27	Aug 3	Aug 10
Check	-----	15.8 b	90.5 b	47.5 b	113.8 b	116.0 b	47.5 b	23.8 b	1.0 a
Admire	2.0	0.8 a	38.0 ab	4.0 a	1.5 a	1.8 a	0.0 a	0.0 a	0.0 a
Admire	3.0	0.3 a	22.0 a	2.5 a	0.0 a	0.0 a	0.5 a	0.3 a	0.0 a
CGA-293343 (Adage)	0.5	1.3 a	22.8 a	0.5 a	13.0 a	2.8 a	0.0 a	0.0 a	0.0 a
CGA-293343 (Adage)	1.0	0.0 a	27.8 ab	2.3 a	1.3 a	0.3 a	2.3 ab	0.0 a	0.0 a

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