

Section VIII.

Mites & Sap-sucking Insects

GREEN PEACH APHID CONTROL WITH FOLIAR SPRAYS I, 1995

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Experimental plots were established on the UI Research and Extension Center, Kimberly, Idaho. Potatoes were planted on 25 Apr and irrigated by solid set sprinkler. The soil type was Portneuf silt loam. Five treatments and one untreated check plot were replicated four times in a randomized complete block design. Individual treatment 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 sweet pepper plants (California Wonder) for release into individual plots. Aphid releases were made into test plots the last week in Jun and again in the first wk of Jul. A total of four heavily infested plants were released per plot. Treatment sprays were broadcast applied using a CO₂ pressurized backpack sprayer (30 psi) and delivering 20 gal finished spray per acre (four, 10X hollow cone nozzles). Aphid counts were made 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 number of aphids per 20 leaves. On 19 Jul a pre-count was taken and on 21 Jul all treatment applications were made. A second application of all treatments was made on 4 Aug. Data were analyzed using ANOVA and Student-Newman-Keuls multiple means comparison.

Significant reduction of aphid populations from the untreated check was achieved with all rates of Pirimor by 7 d post-treatment. The second application 4 Aug of Pirimor and Monitor further reduced aphid populations through 9 Aug. Populations of green peach aphids declined rapidly after 9 Aug.

Treatment	Rate (lb AI/acre)	Adults					
		Jul 19 (Pre)	Jul 24	Jul 28	Aug 4	Aug 9	Aug 11
Pirimor	0.033	57.5 a	42.0 a	11.3 a	25.0 a	1.0 a	5.5 a
Pirimor	0.125	70.8 a	66.8 a	29.8 a	31.5 a	3.8 a	3.8 a
Pirimor	0.188	65.3 a	37.3 a	22.3 a	30.0 a	4.3 a	2.3 a
Pirimor	0.250	51.3 a	46.3 a	11.5 a	23.0 a	1.3 a	3.5 a
Monitor	1.000	49.3 a	93.5 a	61.3 b	89.8 b	0.5 a	0.0 a
Untreated Check	-----	58.0 a	93.5 a	64.5 b	92.3 b	14.8 b	3.0 a

Means within a column followed by the same letter are not significantly different ($P = 0.05$, Student-Newman-Keuls).