

**Section VIII**  
**Mites & Sap-sucking Insects**

**GREEN PEACH APHID CONTROL WITH FOLIAR APPLIED INSECTICIDES  
 IN POTATOES, 1999**

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Experimental plots were established on the University of Idaho Research and Extension Center, Kimberly, Idaho. Uncut New Leaf Plus™ potato seed was obtained from the NatureMark Company which was subsequently cut and treated with the label rate of Tops MZ at the U of I, Kimberly Research and Extension Center on 20 Apr. Potatoes were planted on 27 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 25 Jun and 1 Jul. A total of two heavily infested leaves were placed in each plot on each date. Insecticide treatments were applied on 12 Jul as a broadcast S using a modified CO<sub>2</sub> pressurized backpack sprayer with 10 x nozzle tips (20 gal per acre, 30 psi). 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 Neuman-Keuls multiple means comparison.

Green peach aphid numbers were significantly reduced with all treatments from the untreated checks on 16, 26, and 29 Jul, 9 and 16 Aug, 4, 14, 17, 28 and 35 days respectively, post application. Aphid numbers in the check plots remained high until 39 days after infestation when a natural decline in aphid populations was noted.

Treatment/ formulation	Rate (lb (AI)/acre)	GPA Counts - # GPA / 20 Leaves						
		12 Jul	16 Jul	19 Jul	26 Jul	29 Jul	9 Aug	16 Aug
Untreated Check	---	22.75 a	46.75 b	35.00 b	157.30 b	106.50 b	60.75 b	7.25 b
Actara 25WG	0.0232	37.00 a	1.50 a	18.25 ab	8.00 a	6.00 a	6.75 a	2.00 a
Actara 25WG	0.0473	39.00 a	3.00 a	7.75 a	7.50 a	9.30 a	6.50 a	2.50 a
Fulfill 50WG + OS (0.01 V:V)	0.0857	58.50 a	5.25 a	21.75 ab	16.00 a	26.30 a	11.00 a	2.00 a
Monitor	1.0000	49.75 a	2.50 a	2.25 a	4.75 a	4.50 a	9.25 a	1.75 a

Means within a column followed by the same letter are not significantly different ( $P = 0.05$ ; Student-Newman-Keuls). Data were analyzed using ANOVA and Newman-Keuls multiple means comparison ( $P = 0.05$ ).