 doi: 10.4182/amt.2011.D2

D2

ALMOND: *Prunus dulcis* (Miller) D. A. Webb

PACIFIC SPIDER MITE CONTROL IN NON-BEARING ALMOND, 2010

David R. Haviland
University of California Cooperative Extension, Kern County
1031 South Mount Vernon Ave.
Bakersfield, CA 93307
Phone: (661) 868-6215
Fax: (661) 868-6208
E-mail: dhaviland@ucdavis.edu

Stephanie M. Rill
Email: smrill@ucdavis.edu

Pacific spider mite: *Tetranychus pacificus* McGregor

During 2010 we conducted a trial in Shafter, CA to evaluate the effects of miticides on the density of Pacific spider mites in almond. The trial was located in a 3.0 acre portion of a second-leaf orchard that contains alternating rows of the varieties Nonpareil and Monterey. Plot size was five consecutive Nonpareil trees on a 20 × 22 ft spacing. The plots were organized into a RCBD with 5 blocks of 5 treatments and an untreated check; rows of Monterey trees were not sprayed and were used as buffers between blocks. Treatments were applied to individual trees at 150 psi with a hand gun at a water volume equivalent to 100 gpa. All treatments were combined with 1% 415 oil. Mite densities were evaluated in each plot prior to treatment on 21 Jul and then at 3-4 day intervals after treatment. On each sample date a total of 20 leaves were collected per plot. This included four random leaves per tree from each of the five trees per plot. Leaves were transported to a laboratory where the numbers of motile Pacific spider mites (larvae, nymphs, and adults) per leaf were counted. Average number of motiles per leaf were analyzed by ANOVA using transformed data (square root (x + 0.5)) with means separated by LSD (P = 0.05).

Mite density in precounts averaged 20.5 mites per leaf across all treatments (Table 1). By 6 DAT all treatments reduced mite densities to 3.1 or less mites per leaf compared to 32.8 mites per leaf in the untreated check. At 9 DAT and 12 DAT all treatments maintained significant reductions in mite density compared to the untreated check. At 16 DAT and 19 DAT all treatments showed similar trends as previous data with regards to which plots had numerically lower or higher mite densities. However, none of the treatment counts were significantly different from the untreated check. On the 23 DAT and 26 DAT evaluations all mite densities were statistically equivalent.

Treatment/ formulation[a]	Rate amt form/acre	Avg spider mites per leaf							
		Pre-counts	6DAT	9DAT	12DAT	16DAT	19DAT	23DAT	26DAT
Acramite 50WS	16 oz	15.6a	0.3a	0.6a	3.2a	4.6a	4.4a	33.1a	89.4a
Acramite 50WS	24 oz	23.2a	0.3a	2.4a	10.2a	6.1a	10.0a	61.1a	116.0a
Acramite 4SC	24 fl oz	16.9a	3.0a	5.2a	7.2a	3.1a	7.4a	24.2a	48.0a
Onager 1EC	24 fl oz	7.3a	3.1a	4.7a	7.5a	7.0a	3.3a	19.4a	30.4a
Fujimite 5EC	48 fl oz	28.3a	2.4a	19.3a	13a	17.9a	14.9a	24.0a	92.6a
Untreated check	--	31.7a	32.8b	63.6b	56.7b	12.5a	5.2a	19.1a	54.6a

[a] 415 Spray oil was added as a surfactant at 1% v/v
Means in a column followed by the same letter are not significantly different (P > 0.05, Fisher's protected LSD) after square root (x + 0.5) transformation of the data. Untransformed means are shown.