

4. Chemical Control/New Products

TWOSPOTTED SPIDER MITE: CHEMICAL EVALUATIONS

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Trials to assess the acaricidal activity of a number of materials were conducted in southern Oregon during the mid to late season in 1996. BAS 300 15, pyridaben (trade name Pyromite), was tested at two rates along with Agrimek in a replicated speed sprayer trial. Two rates of CM 006, milbemectin, were also evaluated in a speed sprayer trial. A replicated handgun trial compared Trilogy, bifenthrin (Brigade), Savey, and a combination of Brigade and Savey. The July temperatures in Medford were very high, the monthly average temperature was the highest on record and twospotted spider mite (TSM) populations responded accordingly.

In the pyridaben trial, which was applied on 15 July to Bartletts, there was some evidence of a rate effect. At six weeks post-treatment the TSM level in the high rate of pyridaben was 2.2 motiles per leaf, the low rate was 5.8 motiles per leaf, and Agrimek was 6.4 motiles per leaf. There was considerable plot variability and few significant differences among treatments were evident.

The trial with milbemectin was not replicated and two standards were used, Agrimek and a combination of Mitac (for control of pear psylla) and Savey. Treatments were applied on 21 June in a mixed cultivar block and leaf samples were taken from Anjou trees. At thirty days post-treatment, all the materials were providing good control of TSM with no motiles recorded in the high rate of milbemectin. At forty days after treatment the TSM level in the check was over 15 motiles per leaf, both rates of milbemectin were just under 5 motiles per leaf, while the combination of Mitac and Savey had the lowest level observed, 1.5 per leaf.

In the replicated handgun trial, applied on 23 July to Bosc pear trees, the bifenthrin, treatments gave immediate control of motiles. However, where bifenthrin was applied by itself TSM levels had risen to over 8 per leaf at five weeks post-treatment, while at the same time where bifenthrin was applied in combination with Savey, or Savey was used by itself the TSM levels averaged 3.3 and 2.7 motiles per leaf, respectively. Trilogy, a neem oil compound, reduced TSM levels to some degree. The TSM level in the low rate of Trilogy was significantly lower than the check at one week post-treatment, but the level of TSM reduction seen in the Trilogy plots relative to the check was generally less than 50%.