

Section VIII
Mites & Sap-sucking Insects

EVALUATION OF ACARICIDES FOR CONTROL OF SPIDER MITES ON
WATERMELONS

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As a new small-farm vegetable crops advisor, I was asked to participate in two test plots in commercial watermelon fields in order to generate data to support a Section 18 for the use of Vendex. In the first location, next to an almond orchard, mite pressure was high within 2 weeks of transplanting and no control was achieved in either the small replicated plot or the grower 7-row demonstration plots (nothing worked). This trial was terminated when the grower oversprayed the entire field with an air-boom type sprayer.

In the second trial, mite pressure was not as severe and research applications were made with a back pack air blower type mist sprayer on 28 Jun and 11 Jul in 80 gallons/acre. The infestation was monitored by removing 10 leaves per plot and brushing. Initially 25 leaves were removed, however due to the large amounts of soil and leaf material on the plates, the sample size was reduced.

A significant reduction of spider mite populations compared to the untreated check was achieved in all treatments with a few minor exceptions (everything worked). Green peach aphids became established in the trial and although Vydate has given control of aphids in previous situations, by August the Vydate treatments had significantly higher counts of aphids than the untreated control.

Twospotted spider mites/Leaf

Treatment Formulation	lbs (AI)/ acre	Jul 10	Jul 17	Jul 24	Jul 31	Aug 7	Aug 14
Agri-Mek 0.15 EC	0.01	0.48 a	0.15 ab	0.50 a	2.65 a	1.15 a	0.23 a
Vendex 50 WP	0.50	0.03 a	0.08 a	0.15 a	0.18 a	0.38 a	2.85 a
Vendex 50 WP	1.00	0.08 a	0.13 a	0.13 a	0.35 a	0.68 a	0.80 a
Vydate 2L	0.50	0.05 a	1.18 ab	3.73 a	3.15 a	7.45 a	34.9 a
Kelthne 35 WP	0.70	0.23 a	0.28 ab	0.13 a	0.35 a	0.65 a	1.13 a
Untreated Control	-----	1.05 b	6.03 b	13.35 b	23.55 b	55.68 b	110.72 b

Means within a column followed by the same letter are not significantly different (P=0.05; LSD).

Green peach aphids/Leaf

Treatment Formulation	lbs(AI)/ Acre	Jul 10	Jul 17	Jul 24	Jul 31	Aug 7	Aug 14
Agri-Mek 0.15 EC	0.01	0.25 a	2.25 a	0.93 a	0.28 a	0.53 a	2.90 ab
Vendex 50WP	0.50	0.03 a	0.58 a	0.83 a	0.10 a	0.83 a	0.33 a
Vendex 50WP	1.00	1.60 a	2.20 a	18.10 a	0.60 a	1.80 a	0.38 a
Vydate 2L	0.50	0.15 a	3.25 a	25.15 a	2.88 a	13.28 b	10.40 b
Kelthane 35WP	0.70	1.25 a	0.43 a	9.20 a	1.08 a	1.48 a	1.70 ab
Untreated Control	-----	0.15 a	0.68 a	2.45 a	0.38 a	0.60 a	1.10 ab

Means within a column followed by the same letter are not significantly different (P=0.05; LSD).