

Section VIII Mites and Sap-Sucking Pests

SPIDER MITE CONTROL IN CARROTS

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In 2005 and 2006, Washington State carrot growers experienced economic injury from late-summer spider mite outbreaks. While several insecticides are registered for use against mites on carrots, they are not effective and are inappropriately broad in spectrum. At present no miticides are registered for spider mite control on carrots in Washington State. Acaricides were screened for ability to control two-spotted spider mite on carrots. Field plots were established near Othello, Washington State, USA. Plots were 6 ft. wide and 20 ft. long and were replicated four times in a complete random block design. Acaricide applications were made on August 31, 2007 using a CO² propelled backpack sprayer. To evaluate efficacy, ten carrot leaves per plot were collected ten days post application and transported to the laboratory where mites were counted under a stereoscope.

Data were subjected to ANOVA and means were separated from the untreated check using Fisher's PLSD ($p < 0.05$). The plots treated with Oberon, Fujimite, and Zeal at the 3 oz. rate had significantly fewer mites than did the untreated check. Moderate levels of control were also achieved with Comite, Acramite, and Zeal at the 2 oz. rate.

<u>Treatment</u>	<u>Mites/5 leaves +/- SE</u>
Untreated	62.25 +/- 35.75
Oberon 2SC	15.38 +/- 9.58*
JMS Sylet Oil	43.88 +/- 22.07
Comite	25.38 +/- 14.14
Fujimite	17.25 +/- 11.34*
Champ	39.25 +/- 15.59
Capture 2EC	112.00 +/- 43.91
Zeal 2 oz.	23.50 +/- 19.83
Zeal 3 oz.	17.88 +/- 9.14*
Acramite 4SC	34.50 +/- 13.98

Figure 1. Mite counts 10 days post treatment. * Denotes treatments with significantly fewer mites in a pair-wise t-test compared to the untreated check ($p < 0.05$).