

EFFECT OF CHLORONICOTINYL INSECTICIDES ON PHYTOPHAGOUS AND
PREDATORY MITE POPULATIONS IN A COVER SPRAY PROGRAM

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Abstract: This study provides a reasonably clear indication that the use of Assail for codling moth may be problematic in terms of integrated mite control. This product is currently the most likely non-IGR OP replacement for control of Washington's key apple pest. While the mechanism is not clear from this field trial, both toxicity to predatory mites and stimulation of tetranychid mite reproduction may be contributory. The pest mite populations resulting from a 4-spray Assail program were moderate, although the small scale of these plots may influence the degree of immigration, and the effect may be more severe in larger plots. The other chloronicotinyls Calypso and Actara appear to have some effect on either predatory or tetranychid mites, but not to the same extent as Assail. Provado was not statistically different from either Imidan or the check in this regard. Asana suppressed predatory mites, but did not cause a mite flareup during the current growing season. Imidan has no apparent effect on either predatory or phytophagous mites. Assail, Calypso, Asana and Imidan provided the best codling moth control; Assail also appears to suppress San Jose scale. All the chloronicotinyls controlled white apple leafhopper, as did Imidan and Asana in 4-spray cover programs.