

Chemical Control/New Products

Efficacy and Field Longevity of Insecticides Used for Codling Moth

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Keywords: Guthion, azinphosmethyl, Imidan, phosmet, Danitol, fenpropathrin, Assail, acetamiprid, Intrepid, methoxyfenozide, Success, spinosad, codling moth, *Cydia pomonella*, pear, chemical control, insecticide, resistance, assay, bioassay

Abstract: Sets of four Bartlett pear trees were sprayed with a handgun applicator one time each with one of 5 insecticides, so a total of 20 trees was sprayed on one date (18 May). Five other sets of 4 trees were similarly sprayed at weekly intervals, for a total of 5 wks. Therefore, 100 trees were sprayed (5 products x 5 wks x 4 trees). Fruit were harvested the day after the last spray, and 2 lab-reared larvae placed on each fruit were evaluated for mortality after **5 days of exposure**. Guthion resulted in nearly complete mortality until 21 days after treatment (DAT), Imidan declined 14-21 DAT, Danitol was slightly less effective but never declined, Assail declined somewhat from day 7 on, and Intrepid (which also has ovicidal activity) had low mortality on all dates. Additional fruit were harvested 2 weeks after the last spray and Assail-treated fruit were subjected to lab-reared larvae and larvae from field-collected moths with high Guthion resistance (0.985 µg/µl). Mortality of lab-reared larvae at 0, 7, and 14 DAT was 65%, 46%, and 57%, respectively, compared to 20%, 10%, and 0% for field larvae. In another field study, trees were sprayed once and 2 lab-reared larvae were placed on each fruit weekly and evaluated after **1 day of exposure**. Larval mortality from Guthion, Imidan, and Danitol did not differ significantly through 14 DAT, but Imidan was slightly more effective at 7, 14, and 21 DAT. Assail and Success performed relatively poorly throughout the trial.