

II. Pome Fruits

d. Chemical control

Pear psylla (PP); *Psylla pyricola* Foerster

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NOT EFFECTIVE  
on winter fans

PEAR: RESIDUAL CONTROL OF PEAR PSYLLA, 1987. Mature Bartlett pear trees were sprayed with a hand gun operating at 600 psi to evaluate residual life of Abamectin and amitraz for control of pear psylla nymphs. Leaves were collected from trees at intervals after applications. Ten circular disks, 2.2 cm diameter, were punched from leaves and floated on wet paper towelling in 15 cm plastic Petri dishes for each treatment at each post application interval. Ten PP nymphs were transferred to each disk. Petri dishes containing infested leaf disks were held in a growth room at 25° C and 16:8 photoperiod. Treatments were evaluated by counting dead and live nymphs after 1, 2 and 3 days exposure on the disks. Tests were conducted with leaves collected 1, 3, 7, 10 and 14 days after sprays were applied for the 4 May test but only 1, 7 and 14 days after sprays for the 8 and 29 June tests. To test toxicity of growing terminals to adult PP, shoots were collected from each treatment and the control 17 days after applications for the 4 May test but only 1, 7 and 14 days after sprays for the 8 and 29 June tests. Test shoots were placed upright in sand in clay pots. The pots were placed in a tray containing 2 inches of water to keep shoots turgid. Twenty-five summer-form adult PP were caged on each shoot for 3 to 6 days then surviving adults and/or eggs were counted.

The test procedure worked well for Abamectin but was less suited to testing residual activity of amitraz because the latter material repelled nymphs, causing some of them to walk onto the wet paper towelling. Seventy-two hours exposure produced the best measure of mortality on treated leaf disks with only a few nymphs dying on control disks. Activity of Abamectin decreased slowly. There was still significant mortality of nymphs exposed to 14 day old residues. An intense, short rain shower occurred about 30 minutes after sprays were applied on 8 June. Since the sprays had not dried when the rain started part of the residues were washed off. However, performances of residues on leaf disks were almost as good as those from the 4 May test. Spraying conditions for the 29 June test were good. Again there was significant activity of residues in leaf disk tests 14 days after application. Control mortality at 1 and 7 days was high suggesting that spray had drifted onto the control tree. I do not believe this happened but I cannot explain the control mortality. Results from caging adult PP on shoots collected from treated trees were not as clear as those from exposing nymphs to residues on leaf disks. None of the treatments provided good control of adults when residues were 1 wk old or older.