

Pome Fruits

a. Biological control

1. Pear psylla on pear

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The potential to biologically control pear psylla in the Hood River Valley.

A mini-orchard of 20 unsprayed small pear trees was established adjacent to six commercial pear orchards in the Mid-Columbia Area to monitor the establishment of potential natural enemies of the pear psylla. Because most of these orchards had already been reinfested by the overwintering generation of the pear psylla, initial infestation of mini-orchards by both psylla and potential natural enemies was quite low. Nevertheless, timed observations of the mini-orchards offered glimpses of differences in natural enemy species abundance, composition, and phenology among the six locations. Sampling of neighboring uncultivated vegetation at each location more clearly identified such differences. At some sites, selected branches of mini-orchard trees were seeded with psylla while predators were excluded with fine mesh bags. Psylla densities decreased much faster on branches which were similarly seeded but which were later exposed to potential predators. Future experiments intend to more clearly identify the potential of natural enemies to control pear psylla.