

# The use of pheromones and semiochemicals for the control of insect pests in seed orchards



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Pheromones and other semiochemicals are being developed as pest management tools in seed orchards for the white pine cone beetle, *Conophthorus coniperda* (Schwarz), the fir coneworm, *Dioryctria abietivorella* (Grote), and the spruce seed moth, *Cydia strobilella* L.

*C. coniperda* is the major pest in white pine seed orchards in Canada. Use of the female sex pheromone, Pityol, for mating disruption appears to be a potential avenue to control this pest. Pityol was dispersed in a 5.5 ha white pine seed orchard. At the end of two years, an average of 20% of the cones were damaged in the treated area compared to 85% in a sector of the non-treated area.

*D. abietivorella* is one of the most important cone and seed pests of spruce and pine species across Canada. Two pheromone blends were tested in 2002 to evaluate their attractiveness to *D. abietivorella* in a white spruce seed orchard. Concurrently, terpenoid compounds were tested as lures for female *D. abietivorella* during the oviposition period. The results of these studies could provide useful monitoring and control tools.

*C. strobilella* is also among the 3 most important cone and seed pests of spruce species. A monitoring program was carried-out during the spring of 2002 in two white spruce seed orchards to test the efficacy of the sex pheromone. Significant differences were observed between catches for control and pheromone traps. Studies are planned to assess the efficacy of the sex pheromone for mating disruption in the orchard.