Without those 'damn' apples!

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Abstract: Consider how much fun orchard pest management research could be if you did not have to worry about damage to the fruit and you were protecting only the trees themselves. We are using pest management strategies developed in Pacific Northwest orchard systems to protect hybrid poplars in eastern Oregon and Washington that are being attacked by wood burrowing lepidopteran and coleopteran pests. Here we report on the biology/phenology of three pests: Western Poplar Clearwing Moth, *Paranthrene robiniae* (Sessidae), Carpenterworm moth, *Prionoxystus robiniae* (Cossidae), and the Poplar Willow Borer, *Cryptorhynchus lapathi* (Curculionidae). We share two years of pheromone trap data, mercury-vapor light and pit-fall trapping. We have registered Dimilin® and Nolo® for use against two species of hoppers, *Cannula pellucida*, the smaller of the two, and the Two-stripped Grasshopper, *Melanoplus bivittatus*, and demonstrated the successful use of Admire® against *Phylloxerina populoria* (Pergande).

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Effect of *Bt* on phenology of obliquebanded leafroller and pandemis leafroller

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Abstract: The effect of *Bt* on the developmental rates of OBLR and PLR was investigated. We found that PLR were more sensitive to *Bt* and showed reduced growth rate at 1% of the field rate. OBLR were less sensitive, and the effects were about the same at 1, 2, or 4% of the field rate. For both species, the instar following the ingestion of *Bt* had the slowest developmental rate, and the effect decreased as caterpillars aged. PLR developmental time to adult was slowed 23-30% for caterpillars treated as 3rd instars and 6-36% for 4th instars. OBLR treated as 3rd instars had a developmental time about the same as control insects except for the 4% field rate treatment, where developmental time to adult was increased by about 8.5%. When treated as 4th instars, developmental time to adult was 13-23% longer than control caterpillars.