Mating Disruption/SIR

Mating Disruption in a System Where the Trees are the ‘Fruit’

Neal T. Kittelson, Eugene R. Hannon and John J. Brown
Washington State University Department of Entomology, Pullman, WA

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Abstract: The Western Poplar Clearwing Moth (WPCM), Paranthrene robiniae (Sesiidae), is the most economically important pest of hybrid poplar in Washington and Oregon. WPCM larvae burrow into poplar, causing galleries that discolor the heartwood and weaken limbs and trunks to the point of breakage. Historically poplars have been used only for high quality paper pulp but, with pulp value dropping, Potlatch® has switched its target product to quality veneer logs and WPCM galleries cannot be tolerated. Chlorpyrifos (44,000 pounds) failed to control WPCM in 2002. Potlatch® is restricted by guidelines of the Forest Stewardship Council, which prohibits the use of broad-spectrum pesticides. Boise® is not as restricted in its choice of insecticides but is still very enthusiastic toward a ‘soft’ management strategy. We received a Section 18 and implemented a pheromone-based mating disruption strategy in 2003 that targeted 8,000 acres of newly planted and 1-year-old trees. Here we will report our season-long trap catch data, effects of the pheromone treatments and results of our damage survey. Membrane dispensers were more effective but expensive to apply, and flowable formulations of 0.5 g/acre/season effectively suppressed trap capture. Monitoring traps in non-treated blocks were influenced even at one mile from any application of pheromone.