

Mating Disruption/SIR

The Right Timing and Enough Pheromone: Mating Disruption in Hybrid Poplars

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

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Abstract: In 2003 we received a regional Section 18 for the use of an unregistered sex pheromone against the western poplar clearwing moth. There were two factors that prevented the optimal effectiveness of our mating disruption strategy: 1) the Section 18 was not given to us until May 29 in 2003, a month and a half after the first emergence of WPCM; 2) we were limited by the amount of pheromone supplied. We believe that the majority of the damage that occurred in 2003 was due to the late application of pheromone. In 2004 we received our Section 18 and had the pheromone applied before the first emergence of the WPCM. By applying pheromone on time, we reduced the mean number of hits at the base of 1st year trees from a mean of 0.30 hits/tree to 0.12 hits/tree and eliminated the need for a third replant. We were limited to 11 kg of pheromone in 2003. This limitation allowed us only enough pheromone for the 1st and 2nd year trees, leaving almost 25,000 acres untreated and a very large population of WPCM to mate and immigrate to the adjacent younger trees. Without the pheromone limitation in 2004, we were able to treat 25,000 acres of poplars which, we believe, along with the proper timing of applications, reduced the mean amount of damage from 0.45 hits/tree in 2003 to 0.24 hits/tree in 2004.