

Mating Disruption/SIR

Mating Disruption Paraffin Emulsion Efficacy in Commercial Cling Peaches and Walnuts

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A commercially prepared paraffin emulsion based slow release pheromone product sponsored by Agrium was evaluated for the control of oriental fruit moth and peach twig borer in commercial cling peaches and for codling moth in commercial walnuts. The paraffin emulsion is formulated with a 5% active ingredient and is typically applied at 30 grams per acre. The paraffin was sprayed twice in the cling peach orchard during the growing season and monitored regularly. The orchard was monitored using OFM and PTB traps and shoot strike counts. The cling peach test site was a 4-acre site of 18 to 20-year-old trees with 30% replacement trees of varying ages in the Hallwood District of Yuba County. The cling peach variety was Starns, a late variety typically harvested in late August. The tree spacing was approximately 117 trees per acre. There was also a nearby 7-acre grower standard in the Loadel variety, a mid-season variety, for comparison. The grower followed a standard spray program using synthetic pyrethroids based on monitoring and degree-days. The data indicate that the product may have lasted 90 days in the field. This product shows excellent potential for controlling oriental fruit moth. The paraffin emulsion was sprayed once in the walnut but in two concentrations and was monitored regularly throughout the growing season. Codling moth damage was monitored in three ways, nut drop, to determine first or over-wintering generation, canopy counts, and tree bands to determine subsequent generations. The walnut test site was a 10-acre site of Vina variety in Tehama County. Vina harvested in September typically has problems with codling moth damage. The tree spacing is approximately 24 trees per acre. The 10-acre plot was divided into two 5-acre blocks. The paraffin was sprayed in 30 gram per acre concentration and 15 gram per acre concentration. These blocks were further broken down into 3 replicates per block. The treatments include paraffin emulsion alone and paraffin emulsion coupled with the parasitic wasp *Trichogramma* for a total of 4 treatments. There was no significant difference in treatments in the nut drop counts, harvest counts, or tree band counts. There was significant difference in the canopy counts. The 15 gram pheromone treatment alone had significantly more damage than the other treatments. The 30 gram pheromone rate with and without *Trichogramma* had the least amount of damage. There appears to be a positive trend at reducing damage in using a higher concentration of pheromone coupled with the use of *Trichogramma* in walnuts.