

Mating Disruption/SIR

Developing Ultra Low Volume Microencapsulated Sprayables for Codling Moth

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*Abstract:* Apple orchard plots treated with an ultra low volume application of a microencapsulated sprayable sex pheromone formulation for codling moth had significantly lower levels of fruit injury than similar plots treated with a standard airblast application and untreated check plots. The ultra low volume application deposited nearly seven times more capsules per leaf than the airblast application. The lower leaf surface in the upper canopy had the highest mean capsule density. Apple, pear, and walnut leaves treated with 40 capsules per leaf remained attractive for at least 4 weeks under field conditions. The influence of rain was to primarily remove capsules from the top of leaves. The addition of Asana to the sprayable sex pheromone killed moths for two weeks and mortality was dependent on the density of capsules deposited per leaf. The addition of Asana with the sprayable sex pheromone further reduced moth catch 90% for 2 weeks in replicated orchards. A new formulation of the microencapsulated material significantly extended the disruption of sex pheromone-baited traps with commercial formulation from 2 to 5 weeks.