

Mating Disruption/SIR

Rapid Assessment of New Pheromone Mating Disruption Devices Using an EAG

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Abstract: A portable electroantennogram (EAG) from Syntech was used to provide a rapid, relative assessment of the activity of a variety of pheromone dispensing devices that were aged from 0 to 10 weeks in the field. The dispensing units were collected over time and kept frozen until testing. Emission devices tested included Hercon flakes, Scentry fibers, and microencapsulated formulations of the codling moth pheromone, codlemone, from Suterra and 3M. Antennae from codling moth were exposed to an air stream passing over the pheromone dispensers. The EAG was used to determine the relative antennal activity of the pheromone dispenser compared to the response to a known plant volatile. The Scentry fiber exhibited a high release rate on week 1, but this rate leveled off to ca. 50% from weeks 2 to 6 in the light-exposed fibers. Fibers kept in the dark were generating antennal responses by week 10 that were ca. half of week 0. The Hercon flake emissions in the light declined quickly from weeks 0 to 2 with little activity noted after 3 weeks. The Hercon flakes kept shaded produced a longer emission curve with activity declining fairly steadily from weeks 0 to 7. The microencapsulated formulations did not provide adequate protection against sunlight beyond 2 weeks.