Mating Disruption/SIR

Response of Oriental Fruit Moth Males to Codlemone

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E8, E10-12:OH (codlemone), the primary component of the female sex pheromone of codling moth, *Cydia pomonella* L., has no intrinsic attraction to male oriental fruit moth (OFM), *C. molesta* (Busck). However, this compound may act as a synergist when added to the OFM pheromone blend of Z8-12:Ac (85.5%), E8-12:Ac (5.5%), and Z8-12:OH (9.0%) by increasing trap catches of male OFM in the field by two- to three-fold over the OFM blend alone.

Results of semi-field and flight tunnel experiments in which behaviors were monitored on or near sheet-metal arenas indicated increases in both long-range behaviors (wing-fanning before take-off, flight initiation, and upwind flight) and close range behaviors (landing, wing-fanning while walking, hairpencil displays, closest approach to and attempted copulation with the pheromone dispenser) of male OFM in response to the OFM synthetic pheromone/codlemone blend (110/1000 µg, respectively) as compared to the 3-component OFM blend (110/1000 µg) alone.

Results of flight tunnel arena experiments using caged virgin female OFM and codlemone indicated a significant increase in the number of contacts/landings of the arena in response to the combined species pheromone compared to OFM natural pheromone alone.

Flight tunnel arena experiments also were conducted to test if codlemone could be a redundant component which is mutually replaceable with one or more components of the OFM pheromone blend. Results indicated that substituting codlemone for Z8-12:OH produced equivalent responses from male OFM.