NEW SEMIOCHEMICAL TOOLS BEING DEVELOPED FOR TORTRICIDS

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Apple and pear growers have adopted the use of sex pheromones for mating disruption of their key pest, codling moth, *Cydia pomonella*. Hand-applied dispensers and aerosol units are the two most widely-adopted technologies. Research has continued to develop new improved technologies, including combined applications of sex pheromone and pear ester. Now, we have two additional avenues of improving mating disruption: sprayable technology and potent bisexual lures for leafrollers. The new sprayable formulation for codling moth follows the development of the microencapsulated pear ester product, DA-MEC by Trécé Inc. Studies conducted in 2015 found that the efficacy of this new formulation for codling moth compared with the one existing sprayable product is significantly longer-lasting under field conditions and under overhead watering for sunburn protection. The efficacy of this new product when applied with pear ester was demonstrated to be comparable to sex pheromone dispensers in a small field trial. Research will continue for another year prior to eventual registration.

New plant-derived compounds have been identified that are highly attractive to the suite of leafrollers and eyespotted budmoth that are pests of fruit crops in North America. The lures catch both sexes of moths and appear to have the potential to be used in mass trapping efforts. Studies conducted in 2015 evaluated lures for three species including *Pandemis pyrusana*, *Choristoneura rosaceana*, and *Spilonota ocellana*. In orchards treated with sex pheromones for the latter two species the new lures were effective in tracking both the phenology and population density of these pests. In comparison, traps baited with sex pheromone lures caught almost no moths. Research is continuing on the use of these lures for monitoring and mass trapping for the next two years. Tortricid pests of crops other than tree fruits should be evaluated.