

Improved pheromone blends for stored product moths

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The three pyralid moths *Plodia interpunctella* (Indian meal moth), *Ephestia kuehniella* (Mediterranean flour moth) and *E. (Cadra) cautella* (almond moth) are worldwide indoor pests of stored food. They use similar sex pheromones with (Z,E)-9,12-tetradecadienyl acetate as the main component. In commercial baits this is the sole active ingredient and according to many users the traps do not work satisfactory. In food factories and storage rooms, hygiene requirements are high and early detection of new infestations or increasing populations is important. In a series of flight tunnel and trapping experiments we have shown that attraction can be improved considerably by adding one or more substances to the main component. For instance, in *E. cautella* a commercial bait and our own bait containing only the main component caught on average 1.3 and 1.8 males respectively, whereas a bait with the earlier identified (Z)-9-tetradecenyl acetate added caught on average 7.1 males (n=15). In flight tunnel tests with *P. interpunctella* a 4-component blend was equally active as female extracts were. In trapping experiments the blend was usually only slightly more attractive than the main component alone. We suggest the use of new, more effective blends to improve detection and monitoring reliability of these moth species.

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