MATING DISRUPTION OF CODLING MOTH, *LASPEYRESIA POMONELLA* L., USING ISOMATE C PLUS DISPENSERS IN APPLE ORCHARDS OF BULGARIA

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Codling moth, *Cydia pomonella* (L.) (Lepidoptera: Tortricidae), is an important pest of pome fruit and walnut orchards throughout the world. Codling moth resistance to many insecticides has been detected in Bulgaria in 2006 (Charmillot, 2006).

A new technology – mating disruption with Isomate C plus dispensers of the Japanese company Shin-Etsu – was tested against codling moth (CM) in two consecutive years. In the conventionally treated plot, eleven treatments (17 active ingredients) were applied during the season to control CM, leafminers, leafrollers and San Jose scale. Eight of them (14 active ingredients) were timed against codling moth; in spite of that, damage reached there 3.4%. CM population in the conventionally treated orchard was apparently resistant. Isomate-C Plus dispensers inhibited completely the CM captures in the pheromone traps installed in the experimental plot. This indicated that mating disruption was very successful. Before harvest, damage stayed there at in a very low level – 0.06%. The overwintering population in autumn 2006 reached 0.075 larvae per tree. The good results obtained with Isomate-C plus dispensers from Shin-Etsu show that the mating disruption method may work perfectly under conditions of Bulgaria.

The results of this investigation, which was carried out for the first time in Bulgaria, will open the possibilities for usage of the pheromone dispensers as an alternative measure of control of codling moth in this country. This should bring the integrated control of this pest to a modern level as regards obtaining ecological production and preserving the natural environment, in accordance with the European standards for integrated fruit production. The studies are being continued.