

EFFICACY OF PHEROMONE AND POISON BAITS, AND THEIR USE IN THE INTEGRATED CONTROL OF THE HOUSE FLY

STANISAW IGNATOWICZ¹ AND JACEK SWIĘTOSŁAWSKI²

¹Warsaw Agricultural University, Department of Applied Entomology, ul. Nowoursynowska 166, 02-787 Warszawa, Poland

²“Best-Pest”, ul. Moździerzowców 9a, 32-520 Jaworzno, Poland

We evaluated the efficacy of the toxic (methomyl) baits with a sex pheromone, (Z)-9-tricosene, in controlling adults of the house fly, *Musca domestica* (L.). The poison bait was distributed on the carton Tables “Zwalcza muchy” in a form of color pattern and prints. Each table contained a shelf to collect the dead flies. The tables were placed in enclosures infested with house flies, and number of dead insects was recorded daily for a week period.

Tables “Zwalcza muchy” were found to be effective in controlling house flies for at least 2 month period. Poison baits provided rapid knockdown of adult flies, causing large numbers of flies to die near the baited areas.

Tables “Zwalcza muchy” attracted flies that landed on the printed area, and started feeding on the bait. Feeding of adult flies lasted 3-4 minutes until the beginning of uncontrolled spasms. Flies ceased feeding, tried to clean their legs and wings, and quickly moved around. After a while, flies tried to fly away, but their flight was strongly affected. Most of them fell into the table shelf, but some escaped for a distance of 2-3 m, where they were “knock-downed”. Short knockdown times (= the time elapsed from the onset of feeding until the beginning of uncontrolled spasms) indicate the susceptibility of Polish population of *M. domestica* to methomyl.

Number of dead flies found in the shelter of the Tables “Zwalcza muchy” or under them varied with the location, time of the treatment, and with the level of infestation of the enclosed space. About 47 flies were killed daily in the barn with animals. In a highly infested area (outdoor of the barn, insulated walls), about 114 dead flies per day were found, while only a few insects were killed in the living room.

Tables “Zwalcza muchy” may be used to determine the changes in population density after the treatments aimed to control the immature stages, and simultaneously, to enhance the effectivity of these treatments. A fly control method with the FlyBait and FlyLarw was incorporated in the 150 m² enclosure with cattle. FlyLarw was used at a concentration of 40 g per 10 L, and FlyBait was placed on 6 trays (40 x 25 cm). At the beginning of the program about 190 flies were caught on the sticky trap. After 2 weeks, the Tables “Zwalcza muchy” killed about 20 insects daily, indicating a high efficacy of this program. However, a fly control program requires both indoor and outdoor traps to be effective, or the infested enclosure should be insect-tight during the control program using the Tables.

The main advantage of the poison baits is that they may be placed in scattered places within the enclosure, whereas the non-residual insecticides (pyrethroids) must be sprayed on all inner and outer surfaces of the buildings.