

Evaluation of a Multisurface Trap for the Capture of *Ephestia kuehniella* in Stored Wheat

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An experiment was conducted to assess the use of a multisurface trap for the capture of *Ephestia kuehniella* Zeller (Lepidoptera: Pyralidae) in a horizontal-type warehouse in southern Greece, filled with approx. 200 tons of wheat. This type of trap consists of five white rectangular adhesive cardboard strips, suspended vertically from a cruciform apparatus. Four different types of traps were placed in the warehouse, one at each corner (pheromone-baited multisurface, unbaited multisurface, pheromone-baited single, and unbaited single trap). Traps were checked at 15-day intervals from July to November 2000. Approx. 85% of the total number of captured adults were recorded by late August. The highest numbers of moths were observed from mid-July until mid-August. As compared with the unbaited multisurface trap, the baited single and the unbaited single, the baited multisurface traps caught approximately 4.2, 4.8 and 41.2 times more *E. kuehniella* adults, respectively. For all trap types, significantly higher numbers of adults were captured at the lower part of the sticky surface, as compared with the central and upper parts ($P < 0.05$). A considerable percentage of the moths captured was found at the edges of the trapping surfaces, especially on the unbaited traps, where the figure exceeded 36%. With the exception of the unbaited single trap, significantly more adults were recorded at the lower edge of the trap ($P < 0.001$), while the upper edge – as compared with the other edges – captured the fewest adults. Exposure of the trapping surface to illuminated areas of the warehouse, or location of the trapping surfaces close to walls, had no significant effect on captures.

KEY WORDS: *Ephestia kuehniella*; stored wheat; pheromone-baited traps; multisurface trap.

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