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PRELIMINARY TESTING OF THE EFFECT OF ADDING ANALOGUES OF NATURAL COMPOUNDS TO CODLING MOTH PHEROMONE TRAPS

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The codling moth (*Cydia pomonella* L.) is an invasive pest of fruit trees, particularly apple trees, causing significant harvest damage. One widely used, environmentally friendly method for monitoring pest populations is the use of pheromone traps. Attractiveness of pheromone traps can be enhanced by adding attractants to the synthetic sex pheromone used. The attractants selected for the research were synthetic analogues of volatile compounds specific to apple fruit, which serve to attract insects to the host plant.

Our research involves testing the compositions at different dosages. Primarily, our goal was to test pheromone traps supplemented with these attractants at a dosage of 1 mg.

The field trials were conducted in an apple orchard in central Moldova, during the summer of 2025. Specimens of *Cydia pomonella* L. were found in the standard pheromone traps in the orchard. Initially, five experimental variants were prepared (in three replicates): a control variant (the codling moth's main pheromone) and four variants with the addition of volatile compounds of terpenic origin, under abbreviated names (CAR, MYR, TER, and LIN) to main pheromone, at a dosage of 1 mg. Trap catches were monitored regularly (every three days), and the number of male moths captured in each trap was recorded. The average catch per trap was calculated. Throughout the growing season, varying numbers of pests were captured in traps baited with attractants. Regarding the variants with additives, 20 males were captured on the TER- combined traps, 38 males on the CAR-combined traps, 41 males on the LIN-combined traps, and 70 males on the MYR-combined traps, compared to the trap with the standard sex pheromone, which caught 66 males. The catch results

indicated that all additives attracted males poorly at this low dosage, with the exception of the MYR-combined traps; the latter yielded a higher catch than the control with 6%, although the difference was not statistically significant.

The results obtained represent only the beginning of an experiment, and further research involving variations in the dosage applied to the dispenser is required to evaluate the correlation with trap capture efficiency.

Keywords: monitoring, mixed traps, pheromone traps, attractants, apple orchard

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