

## **INFLUENCE OF MINOR COMPONENTS ON THE EFFICIENCY OF APPLE WORM SEX PHEROMONE**

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The apple worm is the main pest of apple trees, leading to losses of up to 70-90% of production. Today, there is an intensive development of organic farming in the world. In this regard, the development of non-invasive methods and environmentally friendly products used in the biological protection of plants, including through the use of sex pheromone traps, is of major importance for agricultural producers worldwide. The use of approved pheromone-based preparations can minimize population density, which is extremely important for the production of a rich harvest of ecologically pure products. The role of minor components found in the literature is currently being investigated, for example, different authors list up to thirteen components for the apple pheromone sex pheromone, where their ratio varies in different compositions. In our work, we studied the effect of two minor components on the effectiveness of the codling moth sex pheromone.

In the laboratory "Integrated Plant Protection", within the IGPPP, the main component E8,E10-12:OH was synthesized and variants with different two-component pheromone compositions were prepared where the minor component dodecanol (C<sub>12</sub>H<sub>25</sub>OH) was added to the synthesized basic component in the amount of 5%, 10%, 30%, 60%, and the minor component tetradecanol (C<sub>14</sub>H<sub>29</sub>OH) in the amount of 3%, 6%, 12%, respectively, which were subsequently impregnated on rubber septas, according to the scheme of experiments, with the formation of pheromone sets on variants, composed of the delta-shaped trap body, sticky plate and rubber septa.

In 2020, experiments were performed in the apple orchard of the Scientific - Practical Institute of Horticulture and Food Technologies in Codru town. The observations were made with an interval of 5-7 days, the sticky plates were changed once in 15 days. From the obtained data it was found that the use of dodecanol as a minor component in the pheromone composition increased its biological efficacy. In variants where 60% and 30% of the minor component dodecanol were added, the average male catches increased by 56% and 62% respectively. An analogous trend in the use of the minor component tetradecanol was observed. In this case, the number of males caught in delta-traps with pheromone compositions where 12% and 6% of tetradecanol were added, increased by 29 - 35%, the statistical analysis did not confirm the differences observed due to the variability of the data obtained. In this way, a significant positive effect of the influence of minor components in two-component pheromone compositions was observed.

**Acknowledgments:** This work is a product derived from the State Program "Strengthening capacities of forecasting and control of harmful organisms and phytosanitary risk analysis in integrated plant protection" (Nr. 20.80009.5107.19).

**Keywords:** apple worm, pheromone, dodecanol, tetradecanol, biological efficacy.