

RESULTS OF TESTING BIOINSECTICIDE METAWHITE AGAINST SOIL PESTS OF SUNFLOWER

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Sunflower is often susceptible to attack by a wide range of pests and diseases, which in some years can significantly reduce the yield of this crop. A fundamentally different method of limiting the number of insect pests is the use of bioinsecticides based on entomopathogenic microorganisms. Most of the bioinsecticides currently produced are designed to control leaf-eating insects. Information on the effect of these preparations on soil pests, in particular on polyphagous ones, is extremely scarce.

Research work on testing the drug Metawhite was carried out in 2020, on the sunflower fields of the agricultural company SRL „Bardar-Agro”, Bardar, Ialoveni district. The soil was treated with various doses of Metawhite before sowing, on April 16, 2020.

The field plot experiment was carried out in quadruple repetition. The plot size is 10 rows with a distance between rows of 0.7 m and a row length of 10 m. Thus, the area of one plot was 70 m².

The experiment included four variants: 1st variant- control, without treatments; 2nd variant Metawhite insecticide with a consumption rate of 5.0 l/ha; 3rd variant Metawhite insecticide with a consumption rate of 10.0 l/ha; 4th variant Metawhite insecticide with a consumption rate of 15.0 l/ha. Throughout the study period, treatments were carried out manually using a portable backpack mechanical sprayer. To comply with the principle of single difference and to avoid side effects, treatments were carried out on the same day, in the morning.

In order to determine the most suitable field and place for establishing a field experiment, and to determine the phytosanitary condition, we carried out observations in early April. In the spring, 9 types of pests and four types of beneficial insects were identified in fields sown with sunflower. Of the pests in the adult phase, 4 species of insects were identified, the number of which varied from 0.5 to 2.0 exemplars/m².

Beneficial fauna was represented by adult from the g. Pterostichus (*P. cupreus*, *P. niger*). In this regard, the purpose of this study was to study the biological effectiveness of the microbiological preparation Metawhite in the control of soil pests on sunflowers. In the fight against soil pests, the most effective preparation is Metawhite with a consumption rate of 10.0-15.0 l/ha, which provides a reduction in soil pests at the level of 81.82 – 94.74% and a reduction in the number of damaged plants at the level of 83.33 – 91.30%.

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