PROBLEMS OF ENVIRONMENTAL POLLUTION WITH AZOTOBACTERIUM

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The use of various pesticides, crop protection products and mineral fertilizers in the food supply of the village is not only the retention of their residual amount in the food, but also the pollution of the soil environment. The total area of arable land in the republic is 4064.7 thousand hectares, including the total area of irrigated arable land is 4307.3 thousand hectares or 13.1% of agricultural land types, and the total land area of lalmi arable land is 757.4 thousand hectares or 3.0% of agricultural land types, supplying more than 30-35% of all agricultural products. According to the Food and Agriculture Organization of the United Nations and the World Health Organization, there are currently more than 840 million people in the world, or almost one out of every 8 people, who are malnourished. To increase the yield of agricultural crops, to provide the population with food, various pesticides and mineral fertilizers are used. But in comparison with mineral fertilizers, it is considered desirable to use only biological fertilizers, which are also environmentally friendly. But before using them, it is necessary to establish hygienic standards.

Based on the above, we investigated the toxicological properties of a new biological fertilizer for agricultural use. Biological fertilizer is intended for the pre-planting processing of vegetables, technical crops, seedlings of young fruit trees, seeds and seedlings of forest crops to accelerate plant growth, increase yield, improve its quality, reduce phytopathogenic microflora. The study of the toxicity and bio effects of biological fertilizer was carried out on the basis of the requirements of the methodological guidelines "To substantiate studies on the allowable concentration of bioinsecticides in the environment (REK)."

Biological fertilizer "Malaeks "Ground Malk" in dry form is packaged in the amount of 50, 100, 200, 400, 1000 g, in peat form 200, 400, 800, 1000 g in liquid form in the amount of 5 dm3, 50 dm3 and produced in packaging containers under the labels "are afraid of moisture" and "are afraid of heating". Biological fertilizer "Ground Orange" is intended for the pre-planting processing of vegetables, industrial crops, potatoes, seedlings of young fruit trees, seeds and seedlings of forest crops to accelerate plant growth, increase yield, improve its quality, reduce phytopathogenic microflora.

The soil of the cultivated areas treated with the drug was examined for 10 days and the results were found: on the day of application of the drug in the rate from 10.7 to 0.3 g / kg, on day 2 - 9.3±0.26; Day 3 - 8±0.2; Day 4 - 6.3±0.23; Day 5 - 5.1±0.14; Day 6 - 4±0.15; On day 8 -

1.6±0.14 and on day 10 - up to 0.3±0.05 g / kg and on day 15, the residual amount of the drug was not detected in the soil environment. At the same time, we examined the soil environment on the edge of the field treated with the drug and obtained the following results: on day 1 - up to 0.9±0.086 g/kg, on day 2 - 0.81±0.26, on day 3 - 0.55, on day 4 - 0.3±0.057; on day 5, in the soil of the outskirts of the cultivated area, an amount of 0.11±0.021 was detected 6 - 8 and 10 - the residual amount of the drug was not detected in the soil environment. As a result of the study of the residual content of the substance in the ambient air it was established: at the site of the preparation of the solution of the drug for 1 day - 6.2±0.2, the following days the residual content was not determined. The residual content of 2.1±0.14 mg/m3 was detected in the air of the treated place for 1 day; in the air of the treated seedlings 1 day 1.8±0.15 mg/m3; in the air of the watering place 1.5±0.13 mg/m3. in the central part of the treated field for 1 day - 2.4±0.15; On day 2 it was detected at an amount of -1±0.05 and on day 3 - 0.1±0.014 mg/m3. 1 day at a distance of 50 meters from the edge of the treated area - 0.19±0.018; Day 2 - 0.08±0.010 mg/m3 was detected, but on day 3, the amount of residual was not determined. 1 day at a distance of 100 meters - 0.1±0.017; Day 2 - 0.05±0.011 mg/m3, and on day 3, the amount of residual was not determined.

Based on the results obtained, it can be noted that when using the biofertilizer "Earth ointment" in agriculture, the soil on the first and second days polluted the environment much more than on other days. In the last days on the soil on the edge of the treated field, the residual amount of the drug was not detected. Even in atmospheric air, the amount of residue was detected on the first days, while the amount of residue was not detected in the following days.

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