

Table 6 – Influence of different amounts of inoculum on biomass yield and sporogenesis of *Tr. mentagrophytes* No. 135 in kvass concentrate wort medium with 6% carbohydrates

No of test	Amount of inoculum, %	Microconidia content, mln/cm ³	Dry mycelium concentration at the end of growth, %	Content of microconidia at the end of growth, mln/cm ³	Microconidia viability, %
1	9,88±0,42	4,9±0,21	0,66±0,021	13,8±1,68	21,8±1,68
2	5,0±0,42	2,5±0,21	0,67±0,021	15,0±1,68	22,0±2,52
3	2,5±0,21	1,25±0,11	0,44±0,025	11,8±1,26	14,8±1,68

Conclusion. 1. The most technologically advanced liquid-phase cultivation of *Trichophyton spp.* is stated to be in kvass wort with 3% sugars.

2. Adding of at least 5% of *Tr. verrucosum* No. 130 and *Tr. mentagrophytes* No. 13 seed material to the medium from the kvass wort is highly advisable.

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ANALYSIS OF THE CONTENT OF CESIUM-137 IN AGRICULTURAL PRODUCTS OF MINSK DISTRICT IN THE PERIOD 1990–2019

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As a result of the accident at the 4th power unit of the Chernobyl NPP about 70% of the radioactive substances emitted from the destroyed reactor into the atmosphere and fell to the territory of Belarus. At the same time 23% of the territory of the republic (46.5 thousand km²) with 3668 settlements was contaminated with cesium-137 more than 37 kBq/m². After the accidental release a significant part of the radionuclides accumulated in the upper soil

layer. Therefore, the soil is the main source of radionuclide intake in agricultural products [1].

The long-term half-life of ^{137}Cs and soil contamination with this radionuclide as well as its spread along the food chain the final link of which is a person, determines the relevance of studying this topic [2,3].

Purpose: To analyze the content of ^{137}Cs in agricultural products of the Minsk region in the period 1990 - 2019.

Material and methods. Fresh samples of products (not subjected to storage and processing) were studied: milk, potatoes, beets, carrots, tomatoes, cucumbers, cabbage, apples, strawberries, rye. The studies were carried out in the period May - October. The research period is related to the seasonality of vegetables. An “Adani-Rug 91-2” gamma-ray radiometer was used to study the level of cesium-137. The data obtained were subjected to statistical analysis.

Findings and their discussion. According to the current Republican permissible levels, the content of cesium-137 in milk should not exceed 100 Bq/l, potatoes - 80 Bq/kg, beets and carrots - 100 Bq/kg, vegetables (cucumbers, tomatoes, cabbage) - 100 Bq/kg, apples - 40 Bq/kg, garden berries (strawberries) - 70 Bq/kg [4].

In fig. 1. presents the dynamics of the content of cesium-137 in agricultural products of the Minsk region from 1990 to 2019.

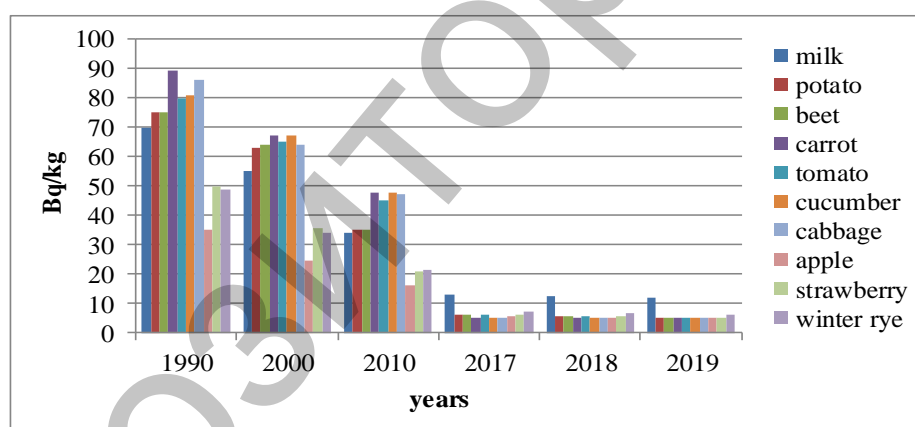


Figure: 1. - Dynamics of the level of cesium-137 content in agricultural products of the Minsk region from 1990 to 2019

Based on the research carried out on agricultural products in the Minsk region and a comparative analysis of archival data with the obtained research results, the following conclusions can be done:

1) To date, the highest level of cesium-137 content is recorded in milk; potatoes, root crops (beets; carrots), vegetables (tomatoes; cucumbers; cabbage), apples, strawberries, winter rye - contain approximately the same indicators of the level of cesium-137. But the indicators of the level of cesium-137 are not significant and do not pose a danger to the population, they are fit for human consumption.

2) The level of cesium-137 content today has significantly decreased in comparison with 1990 for all categories of the considered products (milk by 5.5 times; in potatoes by 13.2 times, in root crops: beets by 15 times, carrots 18 times; in vegetables: tomatoes 14.3 times, cucumbers 16.2 times, cabbage 17.2 times; in apples - 6.9 times, in strawberries - 8.8 times; winter rye - 7.1 times). The level of cesium-137 content decreased in all agricultural products of the Minsk region in the period 1990 - 2019.

The level of cesium-137 content decreased in comparison with 2010 for all categories of the considered products (milk by 2.7 times; in potatoes by 6.1 times, in root crops: beets 8 times, carrots by 9.6 times; in vegetables: tomatoes 8 times, cucumbers 9.6 times, cabbage 9.4 times; in apples 2.9 times; in strawberries 3.6 times; in winter rye 3.2 times). The specific activity of cesium-137 decreased in all agricultural products of the Minsk region in the period 2010 - 2018.

Conclusion. The territory of the Minsk region was slightly polluted after the Chernobyl accident, and the content of cesium-137 in the period 1990-2019 in agricultural products did not exceed the established norms.

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SUPEROXIDE DISMUTASE ACTIVITY IN THE HEPATOPANCREAS OF GASTROPODS LIVING IN THE RESERVOIRS OF GOMEL REGION

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In recent decades, a large amount of research has been carried out on the effect of stressors on the activity of the body's antioxidant system. One of the most important components of the enzymatic antioxidant system is superoxide dismutase. Together with catalase and other antioxidant enzymes, it protects cells from constantly forming highly toxic oxygen radicals. Superoxide dismutase catalyzes the dismutation of superoxide into oxygen and hydrogen peroxide and counteracts the development of oxidative stress and the destruction