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

of cellular structures. Therefore, the study of the components of the antioxidant system is advisable in monitoring natural objects [1].

Biological systems or organisms that are most sensitive to the studied factors are selected as bioindicators. One of the most promising objects for biological monitoring of water bodies is aquatic mollusks [2].

The aim of this work is to study the activity of hepatopancreas superoxide dismutase in the lungs of freshwater mollusks of Gomel region under various anthropogenic loads.

Material and methods. Experiments were performed on 54 freshwater lung mollusks divided into two groups: 18 individuals of *Lymnaea stagnalis* (common pond fish) and 18 individuals of *Planorbarius corneus* (horn coil). Shellfish were collected in autumn (September-October) from reservoirs in two districts of Gomel region (table 1).

Table 1 – Shellfish selection locations

Shellfish collection area	Collection site	The name of the body of water
Gomel district	Gomel	Lyubenskoye Lake
Mozyr district	village Krasnaya Gorka	The Pripyat River

The method for determining the activity of superoxide dismutase (SOD) in the hepatopancreas of mollusks is based on determining the degree of inhibition by the quercetin autooxidation enzyme [3].

Mathematical processing of the obtained results was carried out by methods of parametric and nonparametric statistics using the package of statistical programs MicrosoftExcel 2010, STATISTICA 12.5.

Findings and their discussion. The results of determining the activity of SOD are presented in table 2.

Table 2 – SOD Activity in hepatopancreaselegic mollusks of Gomel region *(M±m)*

Shellfish collection area (n=9)	SOD, %	
	Planorbarius corneus	*Lymnaea stagnalis*
Gomel district	74,05±1,04	70,09±1,07
Mozyr district	68,84±1,72	65,01±0,86[1]

Note: [1]$p<0,05$ compared to shellfish from the Gomel district

The activity of SOD in *Planorbarius corneus* and *Lymnaea stagnalis* was statistically significantly different taking into account the habitat. In the reservoirs of the Gomel region, mollusks have a high activity of SOD, which is due to the fact that lake Lubenskoe in the Gomel region is experiencing a large anthropogenic load due to the close location of the private sector, the city's bypass route and the bus stop.

There were no significant differences between the types of differences in the activity of SOD in mollusks from the Gomel and Mozyr regions.

Conclusion. It was found that the activity of SOD in the hepatopancreas of *Planorbarius corneus* is higher than in *Lymnaea stagnalis*, which indicates a higher ability of coils to adapt to adverse stress factors and is associated with different types of oxygen transport (copper-containing hemocyanin and iron-containing hemoglobin).

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THE INFLUENCE OF PRE-SEEDING TREATMENT WITH EPIBRASSINOLIDE ON SOME INDICATORS OF *DAUCUS CAROTA* L. UNDER LABORATORY CONDITIONS

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Steroid compounds are widespread in nature and exhibit a biological activity. Much attention is paid to one of the representatives of phytohormones - 24-epibrassinolide, which performs a regulatory function at various stages of plant ontogenesis: growth, cell division, seed formation, biomass growth, development of protective mechanisms, etc. [2, 3]. The high biological activity of brassinosteroids contributed to the development of new drugs based on them for the needs of agriculture. The most common drug – «Epin-extra», contains 0,025 g/l, and for seed treatment, according to the instructions, it is recommended to use a solution with a concentration of 10^{-6}–10^{-7} %, although modern research shows that this substance exhibits a higher biological activity in lower concentrations [**Ошибка! Источник ссылки не найден.**].

The aim of our study was to study the effect of low-concentration 24-epibrassinolide solutions on some parameters of *Daucus carota* L.

Material and methods. The study was carried out in April 2020 on the basis of the Department of Botany and Ecology of BrSU named of A.S. Pushkin. The object of the study was solutions of 24-epibrassinolide in concentrations of 10^{-9}–10^{-11} %. The subject of the study was the reaction of morphometric parameters of seedlings, as well as indicators of sowing qualities of seeds of *Daucus carota* L. variety Chantenay Royal to the effect of