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The results of ecological security monitoring of agricultural plantings under high concentration of fluorides in soils of Poltava region

To estimate the environmental safety of food raw materials it is important to monitoring agricultural crops and soil in. Where they grow. The quality of the soil in Poltava region worsens every year. Moreover, most of them have high content of water-soluble (w/s) forms of fluoride, and it leads to its accumulation in plant material. The excess of fluoride in plants penalizes the functions of their life and reduces their productivity. Consumption of products made of such plant material is additional source of fluoride in a human body that contributes to development of pathologies such as fluorosis.

This work presents the results of monitoring of fluoride in soils and agricultural crops in some districts of Poltava region. There was established relationship between the concentration of water-soluble fluoride in the soil and their content in certain cultures. There was determined the necessity of creating a package of regulations to control the content of fluoride in plant material.

Keywords: environmental safety, fluoride, soil, plants, MPC (maximum permissible concentration), fluorosis.