



The Impact of the Ecological State of the Soil on the Quality of Food

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Annotation: Today, food security is one of the most important issues facing all countries. It is known that urbanization, the rapid development of urban agglomeration, as well as the increase in the number of urban residents are causing the demand for agricultural products to increase. Based on this demand that has arisen today, in order to provide the population with food products, various auxiliaries (mineral fertilizers) are widely used in their cultivation and productivity. These auxiliary tools cause the increase of various diseases and other various conditions in the health of people.

Keywords: Man, nature, soil, ecosystem, DDT, food, urbanization, agricultural products.

It is known that at all stages of development, a person is closely related to nature (the outside world). The rapid development of science and technology and industry has led to a sharp increase in human interference with nature. This caused various negative consequences in nature and ecosystems. As a result of this, the ecological balance in the biosphere was disturbed, and ecological risks began to appear. Among these, we must not forget that the problem of food safety is one of the most important and pressing issues today. We witnessed this during the recent COVID-19 pandemic in the world.

As a result of COVID-19, the global trade structure, which has been formed for many years, is in great danger, and the problem of food security in the cities of the world is more urgent than ever. In general, at present, the attitude of man to nature and its resources has increased dramatically. Among these natural resources, human influence on the soil should be noted. It is known that soil is the main resource for all terrestrial food production systems and also the habitat for living organisms. Man gets all his life needs from the soil.

We did not bring the soil in vain, because the problem of food and its security is also related to this soil. According to information, more than 1,500 types of pesticides are currently used on agricultural land to protect plants from various weeds, insects, and microorganisms, including organochlorides (DDT and its metabolites, metaphors, treflan, etc.) and organophosphate pesticides are very dangerous for the life of living creatures. In addition, the soil cannot fully absorb pesticides, organochlorine and organophosphorus substances, as a result of which they accumulate in the soil, destroy its natural and chemical composition, kill beneficial microorganisms in the soil, and reduce soil fertility by 20% [1: Kudratov. O. 2003-y]

In the years of stagnation in the Republic of Uzbekistan, an average of 54.5 kg of poisonous drugs were sprayed on 1 ha of arable land, and in other neighboring republics, 3-4 kg of poisonous drugs were sprayed.[2: Tilovov T. 2014- y] Many scientists equate the effect of pesticides with the effect of radioactive substances. This is due to the fact that soil pollution with pesticides and agricultural products not only causes human intoxication, rapid growth of malignant neoplasms, diseases related to the immune system, and genetic diseases. At the same time, it leads to a significant violation of human reproductive functions and, as a result, serious demographic consequences.



According to data, children under the age of 14 are most affected by pesticides [3: Lisa Deutsch, Robert Dyball, and Will Steffe 2013]. Today, the use of pesticides is prohibited in the countries concerned with agriculture. DDT (dichloride diphenyl trachylobane) is the most dangerous among pesticides. In addition to the above-mentioned pesticides, there are other elements that affect the soil, which we widely use to enrich the topsoil.

These are mineral fertilizers familiar to all of us. Mineral fertilizers include nitrogenous, phosphorous, potassium, and trace elements (B, Zn, Cu, Mo, Mn, Mg, Fe, etc.). [4: Ramazonov A., Buriyev S. 2018] it turned out that in recent years, the number of oncological and allergic diseases in the health of the population of the earth has increased sharply, and the reason for this is explained by the excessive concentration of nitrates entering the human body through food. It was found that when nitrates enter the human body at a concentration higher than 50 mg/l through various plants grown in the soil, their fruits, vegetables and other food products, due to the biological transformation of nitrates into nitrites and other toxic nitrogen compounds, they a direct general toxic effect occurs.

Also, the abundance of nitrates in mineral fertilizers affects the condition of the soil, reduces the amount of oxygen in it, and as a result, it leads to the increase of two "greenhouse" gases in the atmosphere, i.e. nitrogen oxide and methane. Today, agricultural production accounts for 11% of global greenhouse gas emissions, while urban areas produce more than 70% of global greenhouse gas emissions. [5: Jose G Vargas Hernandez., Karina Pallagst., Patricia Hammer 2018.] Currently, the agricultural sector is already one of the sectors most affected by climate change in the form of rainfall, drought and other extreme events. Of course, all this is caused by the anthropogenic factor. In general, nowadays it is very difficult to find places that have not been affected by humans. Because today, man is continuously influencing the biosphere directly and indirectly.

According to UN experts, the loss of productive land under human influence has led to the loss of almost 1/3 of the world's arable land. At a time of significant population growth and increased food demand, such a loss could be truly catastrophic for humanity. After all, research scientists predict that by 2050, the population of the earth will increase by another two billion people, or about 20%, and more than 70% of the world's population will live in cities. However, for this, food production will have to increase more than twice, by about 50%.

Scientists have estimated that by 2030, about 2% of agricultural land will be subject to urban expansion and occupation by cities. In addition, according to UN data, 815 million of the world's population are starving today, and this figure may reach 2 billion by 2050. [6: FAO and others 2017y.

What we mentioned above, food safety and its problem, and related issues are considered to be the most important issues in our country, and today our president Sh.M. Mirziyoyev has been carrying out systematic and consistent work in this field. In particular, Presidential Decree No. PF-5303 dated January 16, 2018 "On measures to further ensure the country's food security", adopted in the first months of 2019 "The country's food security for 2019-2024" National Program for Ensuring Food Safety", Presidential Decree No. PF-5853 dated October 24 of this year "On Approval of the Strategy for the Development of Agriculture of the Republic of Uzbekistan for 2020-2030" and 2021 It is not without reason that the decision and decree No. PQ-5009 dated February 7, "On measures to implement the tasks set in the strategy for the development of agriculture of the Republic of Uzbekistan for 2020-2030" was adopted.

Summary. In conclusion, it should be said that today food and related issues should be the main issue facing every country. Because every government ensures the life, health, and environmental safety of its citizens by properly organizing the food products necessary for human life and related



activities. In general, it is necessary to develop the system of natural sciences and the areas of activity they research in order to more thoroughly study all the processes directly in this field, to solve food safety and related problems. In our opinion, only then will safe food products for people and related issues be resolved. Also, international cooperation is of great importance in solving this issue, and it is necessary to highlight the activities of the UN specialized agency on food safety, FAO.

List of used literature.

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