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Analysis of the main provisions of the article LS-722 ‘‘Microbiocenosis of Anthropogenically Transformed Soils”

Maxim Viktorovich Larionov*

Russian State Agrarian University – Moscow Timiryazev Agricultural Academy, Moscow, Russia
Federal State Budgetary Educational Institution of Higher Education “State University of Land Use Planning (SULUP), Moscow, Russia
State University of Management (SUM), Moscow, Russia
Russian State Social University (RSSU), Moscow, Russia

Relevance of the topic: Soils are complex bio-inert systems. The biological component in them is a factor of resource value and stability of soil ecosystems. The authors have chosen interesting objects for research from the point of view of soil science, soil biology and toxicology. The study of microbiocenoses in soils is always relevant. Since it is a complex biological marker of geochemical processes and stability. In view of the significant variability of the pedosphere and directly soil biota, the study of representatives of the microbiota is an important area in soil science. And this is at any time. In addition, this study can be a scientific basis for soil bioremediation directly within the framework of environmental design in the territories of treatment facilities and other technospheric facilities.

Scientific novelty: New information about the composition of microorganism strains in the soils of Tashkent has been obtained. It is important that sampling was carried out in the zone of influence of the treatment facilities. The authors revealed the issues of the formation of microbiocenoses and some aspects of the stability of these organisms. A number of representatives of new representatives of microorganisms have been identified. The limits of resistance to the environment are determined.

Content and merit of the work: The identification of microorganisms was carried out according to the methodological guidelines generally accepted in international practice. Identification of taxa is of great importance in understanding trends in the formation of the composition and structure of microcenoses. The quantitative and qualitative composition of microorganisms was determined. This is a certain fundamental basis for further biological research of soils and soils, both in Uzbekistan and in other territories. The authors also established the bacterial complex dominating in terms of remediation ability. These are representatives of *Bacillus* and *Pseudomonas*.

Studies have also been carried out on the subject of tolerance of microorganisms in relation to the salinity of the pedosphere. A strong point is that salt-tolerant forms of bacteria have been obtained. They show vital activity at a chloride content of up to 5-7 %. Other biogeochemical properties of bacteria have also been obtained, including those with respect to nitrogen and phosphorus. This is important for future planning of environmental management when cultivating pollution-resistant plants in the zones of influence of wastewater treatment and other technospheric facilities in Asia. Data have also been obtained on the degradation of a number of pollutants,

*Maxim Viktovich Larionov <m.larionov2014@yandex.ru>

including organic composition.

Weaknesses and wishes: One of the most important issues of modern ecology and soil science is the detoxification of pollutants. It was necessary to dwell in more detail on the issue of bacterial resistance to various aggressive environmental conditions. It is the resistant forms of bacteria that are useful to recommend for the biodegradation of pollutants. The authors are encouraged to continue their research. They have relevance and practical necessity for many Asian cities and towns. It is expedient and very useful to carry out collaboration work between different countries: Uzbekistan, Pakistan, Russia and other neighboring states.