MANAGEMENT OF THE ACTIVITY OF MICROBIOCENOSES IN THE SOIL

Tokhirova Zarnigor Rakhmatullayevna
Employee of TATI Bukhara regional division

Abstract. *This article talks about soil microbiocenoses and their management.*

Key words. *Living organisms, nitrogen, phosphorus, microorganisms, soil, plant, physico-chemical, microbiocenoses.*

It is known that different types of living organisms live on the earth, and each of them has its own characteristics and has its place in the biocenosis. Among them, the importance of microorganisms is incomparable. When studying their diversity, way of life and activities, it was found that they have many characteristics. In particular, it has the ability to provide plants with nitrogen or phosphorus, which are considered the most important. Plant roots are home to many bacteria that can convert molecular nitrogen in the air into biological nitrogen (bionitrogen).

There are many microorganisms in the soil, that is, there are millions or billions of microorganisms in 1 g of soil. It is much more than air and water. There are various types of bacteria, actinomycetes, yeasts, algae and other animals in the soil, according to scientists' estimates, up to 3-5 tons of bacteria can be found in a layer of up to 25 cm deep in a hectare of plowed land. The distribution of bacteria in the soil depends on the characteristics of the soil. The number of microorganisms in the soil varies depending on the type of soil, physical and chemical properties, and climatic conditions. There is a large number of microorganisms on the surface of the soil, and their number decreases as it goes down. Microorganisms are abundant in the layer of 10-15 cm, because the sunlight does not fall directly here, and there is sufficient nutrition and moisture. And in the deep layers, they are less, because the soil acts as a natural filter and rarely transfers bacteria to the underground water. Plant and animal residues are decomposed with the participation of microorganisms capable of absorbing cellulose, pentoses, starch, pectin substances, etc., and ultimately turn into water with carbon dioxide.

Soil microbiology is a scientific discipline that deals with the study of all biological aspects of soil microorganisms such as bacteria, viruses, fungi and parasites. It is basically a sub-discipline of environmental microbiology. In the natural environment, plants are part of a rich ecosystem that includes many and diverse microorganisms in the soil. Some of these microorganisms play an important

role in plant performance by improving mineral nutrition. But some microorganisms destroy the geophysical properties of the soil and are harmful to the plants in it.

Although soil is thought of as a simple food source for plants, it is actually a complex ecosystem containing bacteria, fungi, and living organisms. Plants enter into a variety of interactions with organisms living in this soil, which includes all ecological possibilities.

Soil microbiology is important for managing the activities of harmful microorganisms and supporting the processes carried by beneficial organisms, thereby contributing to human health.Soil microbiology focuses on fungi as well as bacteria.

On the other hand, healthy and diverse soil bacterial populations produce antibiotics that protect plants from disease-causing organisms and plant pathogens.

In short, microorganisms are so simple that they cannot be seen with the naked eye. These include some types of fungi and viruses and bacteria. Microorganisms play a very important role in maintaining soil fertility, improving soil composition, supporting healthy plant growth, and breaking down organic pollutants.

Soil microbiocenosis is the composition of the soil, its world and the microorganisms that represent its active activity. These microorganisms are important in teaching the essence of the soil, ensuring the change of substances and protecting the soil ecosystem. The soil microbiocenosis includes a number of microorganisms, such as bacteria, symbiotic termites, polyglots and transductions consisting of hands, stilts, pandoraic fingers. They perform life activities through the physical and chemical properties of the soil.

The soil microbiocenosis itself performs important functions such as soil photosynthesis, nitrogen fixation, substance transformation, mineral matter regulation, and structural salinization. Such microorganisms form the ecosystem known as soil and are important in greatly increasing the potential of the soil.

Controlling the activity of microbiocenoses in the soil is an important part of the protection of natural resources of the soil. The following methods can help manage microbiocenoses:

1. Conservation of water resources: Microbiocenoses function well by regulating water wastage and protecting soil water flows. Frequent watering and cleaning protects the soil from drying out faster than when it is hot and not wet.

2. Cleaning and flowering: To improve the reservoir of the soil, it is recommended to put in the soil dry evil and learning lumps. This is necessary for maintaining the activity of microbiocenoses in the soil, for mutual cooperation.

3. Application of agroecological equipment: Application of agroecological equipment helps to stimulate the activity of mutualistic microorganisms in the soil. To change microbiocenoses, it is recommended to use organic substances, to use forms of composting.

4. Potent chemicals and proper dosage: Agrichemicals can also help stimulate microbiocenoses in the soil. However, it is necessary to be careful in its dosage and to prevent harmful effects on the soil ecosystem.

5. Ecological correction with ecologically diverse substances: Ecologically diverse substances help to stimulate and maintain the health of soil microbiocenoses. With the help of these various substances, it is possible to stabilize the activity of microbiocenosis.

These methods help to stimulate the activity of microbiocenoses in the soil and contribute to maintaining the health of the soil. It is also important that you directly implement the enterprise and personal implementation to improve the raw basic devices of the soil (structure, composition, molecular restorations).

REFERENCES:

1. Raupova N. Tohirov B. Ortikova H. "Soil biology and microbiology"
2. M.F. Fyodorov. "Microbiology", T. 1966.
3. Myself. The first volume. Tashkent, 2000
4. The role of microorganisms in the biological activity of the soil. Characteristics of Azotobacter Academic research in educational sciences volume 2. Issue 2021 ISSN: 2181-1385 Scientific Journal Impact Factor (SJIF) 5.723 Soil.
5. G.D. Mustakimov "Fundamentals of plant physiology and microbiology". T, 1995