

THE IMPACT OF ECOLOGY ON THE SOIL

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Abstract: *Soil biology is a new science that emerged as part of the sciences of biology and soil science. In addition to studying the subjects of microbiology, biochemistry, algology, mycology, soil zoology and protistology, this science deals with the science of genetic soil science: the origin of the soil, the formation of the soil profile.*

Key words: *Anthropogenic, Erosion, autotroph, osmotroph.*

The positive and negative effects of man on the soil are distinguished. The positive effects include increasing soil fertility, improving the condition of the land, planting green plants, creating hedgerows, providing natural fertilizers, etc.

The negative impact is caused by the construction of cities, pollution of the environment, inadequate agrotechnical measures, incorrect implementation of hydrotechnical measures, excessive use of chemicals, grazing livestock on pastures, forest and lands become unusable as a result of deforestation, etc.

Human influence is especially strong on irrigated lands, and if advanced agrotechnical rules are followed when planting crops under irrigation (observance of irrigation rules and standards, improvement of land reclamation, etc.) soil condition, physical - chemical and biological properties improve, and its productivity increases.

Soil decay or erosion is observed in nature under the influence of wind and water. But today, due to human mistreatment of soil, i.e. improper plowing of steep land, over-irrigation, improper treatment of plants, re-salination, application of toxic chemicals and others cause soil erosion. Anthropogenic erosion is a consequence of

improper use of soil resources, the main causes of which are the cutting of forests and groves, non-compliance with the norm of feeding cattle on pastures, use of incorrect methods of farming, etc. According to data, 3,500 hectares of fertile land are destroyed by erosion every day. Water erosion is more common in foothills and mountainous regions, and wind erosion is observed.

To prevent the processes of erosion, it is necessary to restore vegetation cover, carry out proper agrotechnical measures, build green protective shields, plan hydrotechnical measures, etc.

In the 1960s, crop rotation was criticized and banned for many years. Later, in many regions, the widespread introduction of crop rotation became impossible due to monoculture. As a result, the productivity of the land decreased more and more. The total area of land used for agriculture in our republic is 28 million ha, of which 23 million ha are pastures, 0.7 million ha are arable land, and 4.2 million ha are irrigated land. 42% of irrigated land is planted with cotton and 12% with grain.

Soil biology is a new science that emerged as part of the sciences of biology and soil science. In addition to studying the subjects of microbiology, biochemistry, algology, mycology, soil zoology and protistology, this science deals with the science of genetic soil science: the origin of the soil, the formation of the soil profile. Soil physics and chemistry also studies problems such as the role of microorganisms in the formation of permeable, water-resistant aggregates, the cycle of elements in nature and accumulation in the soil profile, soil fertility and plant nutrition in relation to the sciences of agrochemistry and agriculture. Soil biology does not describe the mechanism of biochemical processes taking place in the soil, but studies the causes of these processes and their stages through special methods and is formed as a separate science.

For a long time, the understanding of the living world was limited to dividing it into two branches: plants and animals, i.e., flora and fauna, respectively. Starting from Aristotle, K. Linnaeus strengthens this concept in his work "System of Nature",

which is one of the main reasons for the division into two worlds. and they live a sedentary life.

The soil layer consists of the general planetary product - the pedosphere, which together with living beings such as the lithosphere, hydrosphere and atmosphere forms the planet's biosphere. The soil layer is a universal bioenergetics and biogeochemical system, which ensures the existence of plants, animals and microorganisms and the repeated production of biomass of living matter. These properties of the soil layer create the productivity of the biosphere. It has a special place in the general problem of rational use of land and soil protection, protection of natural resources and their use. As noted by our scientists, such a special place is primarily determined by the fact that humanity receives 88% of food products as a result of tilling the soil layer; if livestock products are taken into account, this number reaches 98 percent. However, the value of the soil is determined not only by its extremely important importance in growing food products and raw materials for industry, but also by the great ecological role it plays in the life of the biosphere in general.

Conclusion For a long time, the understanding of the living world was limited to dividing it into two branches: plants and animals, i.e., flora and fauna, respectively. Starting from Aristotle, K. Linnaeus strengthens this concept in his work "System of Nature", one of the main reasons for the division into two worlds is the way organisms are fed heterotrophic and holozoic in animals, and autotrophic and osmotrophic in plants, the structure of cell walls and mobile and they live a sedentary life.

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