

## MEASURES FOR SANITARY AND HYGIENIC PROTECTION OF THE SOIL

*Tuxtaeva M.M.*

*Bukhara State Medical Institute*

**Abstract:** Soil is the most important wealth of nature, it is the most porous, fertile part of the Earth's crust. It was formed as a result of physical, chemical and biological processes that took place in the lithosphere, hydrosphere, atmosphere and biosphere in connection with each other for a long time.

**Key words:** atmosphere, absorb, humus, chemical, against, metallurgical, thermal

Interaction of substances between the lithosphere and the atmosphere also takes place through the soil. As a result of the wind, the dust and pollen raised over the soil reach the atmosphere and affect the clarity of the air.

In nature, the soil also participates in the exchange of substances (soil-plant-soil), which V.R. Williams called the biological cycle. Thanks to these processes, the fertility of the soil is always maintained. As a result of the growth of agricultural culture, new nutrients are created due to the biological cycle that takes place between the soil and the cultivated plants.

The importance of soil in human society is that due to its self-cleaning properties, it has the ability to biologically absorb (adsorbent), clean (purifier) and neutralize natural pollutants. Soil is also an important medium for mineralizing any remaining organic matter on land.

The role of soils in nature and in the life of the society is incomparable. Soil is a living environment for organisms, a source of nutrients. So, soil refers to the upper, porous layer of the earth's surface, which has the characteristic of uniformity.

Soil is a finite and renewable resource. It is divided into 3 main layers according to its structure: A- the uppermost humus (humus) layer; V-horizon where mineral and organic compounds accumulate; S is the mother gender from which the soil is formed. Each soil horizon consists of a mixture of organic and mineral compounds. Soil is a complex, independent natural body with a historical composition. 1 million in 1 gram of soil. more than simple animals and bottom plants are found. It is known that there are 3-3.5 billion tons of microbes and microorganisms in the soil of 1 hectare of healthy fertile land, which amount to 8-12 tons. These include field mice, various soil-dwelling insects, and earthworms. In particular, the role of the earthworm in improving the soil structure is very large. The earthworm digs "channels" in the ground up to 1 meter deep, through which the plant root can breathe from the outside and absorb water and nutrients. They pass 300-400 tons of soil through their digestive organs and increase

soil fertility. Due to the importance of earthworms in improving soil fertility, there are special farms that breed and sell them in the USA and sometimes in Western Europe. Such works are organized in our republic and region.

Man appeared so that his life is connected with the earth. Because he accepted the land as a place of residence, a source of livelihood and a means of production. On the surface of the earth, the connection between different crusts is carried out through the soil, it is the basis of natural landscapes, and it carries out the interaction of substances between the lithosphere and the atmosphere. Soil is an invaluable natural resource of the people and a source of life necessary for human existence. Because 88% of the food energy needed for human existence comes from the soil, 10% from forests and meadows, and 2% from the ocean. The importance of soil for human society is that it has self-cleaning properties and biologically cleans and neutralizes impurities in nature.

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. The fight against re-salination of land is important in the protection of soil resources. In order to fight against re-salination of the soil, it is necessary to implement the following: establish ditches and drains in the places where the ground water is close to the surface of the earth; leaching of saline soil; strict adherence to irrigation norms and techniques; use of new methods of irrigation (under the soil, driving without a plow, using hoses and trays, sprinkling, drip irrigation, etc.); reduction of filtration by concreting canals and ditches, etc. In order to protect the soil from pollution caused by engineering communication, the following should be followed: the rules for laying pipes and cables in underground engineering communication constructions must be fully observed; when laying various pipes and cables, it is necessary to observe the width of the ecological zone; engineering communication pipelines, various cables should be dug in a special tunnel and passed through that tunnel. If these measures are implemented, firstly, the soil will not be poisoned and polluted, and secondly, it will be easier to control the operation of those communication pipes and cables. In the past, the cultivated fields were much smaller and surrounded by thick fruit trees. These trees protect the soil from strong winds. The trees also performed the function of biological drainage, that is, they pushed groundwater through their roots and did not allow it to rise to the top of the soil, helping to prevent soil poisoning and salinization. During the years of stagnation, fruit trees around farms were uprooted and cultivated fields were expanded. As a result, the strong wind blew into the open (bare) fields, wiping out the fertile part of the soil and increasing erosion. Such a situation happened many times in Nishan, Chirakchi, Qamashi, Mubarak, Mirishkor districts of Kashkadarya region.

In the following years, the use of chemical preparations in agriculture was more regular, but in 1993, 12 t of hexochloran, 1.5 t of chlorophos, 2 t of BI-58 were used against the locust locust in Nishon, Dehkhanabad, Qamashi, Koson regions of our region. lanned. These toxic substances collected on the ground are pushed through the root of the plant, collected in its fruits, pass through the weeds to the organism of animals and poison it. Due to the fact that people consume water and food products that contain several times more toxic chemicals than the norm, they suffer from diseases such as gastrointestinal, liver, respiratory organs, nervous system diseases, colds, allergies, and oncological diseases. 'p were exposed. Chemical poisons ingested through food destroy the body and the immune system.

In the case of soil pollution, ash, soot, toxic gases and dust from plants and factories, especially from chemical, metallurgical, thermal power plants, gradually fall to the ground or through precipitation and pollute the soil. According to data, 1 ha of clean soil contains 16-150 thousand bacteria, while 1 ha of contaminated soil contains

1 billion. Microbes have been found up to As a result, the soil becomes polluted and becomes a source of spread of various infectious diseases, including anthrax, cholera, typhus, and tuberculosis.

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