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Legal Basis of Soil Protection and Ecological Regulation of its Quality

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Abstract: The article analyzes the legal foundations of environmental regulation of soil protection and their quality.

Theoretical conclusions were also reached by studying regulatory documents related to this area and analyzing them.

Keywords: soil, soil degradation, soil protection, soil fertility, soil erosion, soil condition, environmental regulation, standards.

According to experts, in recent years, as a result of soil degradation, an average of 8-10 million hectares of land is lost from the world's agricultural cycle, even 15-20 million hectares of productive land is lost and turned into desert, in general, the decrease in soil fertility is currently 30% of the entire earth's surface. It is said that it is observed in 50 percent. According to some scientists, due to such degradation, the soil cover of our planet may disappear completely after 100 years. Also, according to UN data, direct damage due to soil degradation is more than 40 billion dollars per year [5].

For the Republic of Uzbekistan, where 80% of the territory of land degradation and desertification consists of deserts and semi-deserts, the issues of combating desertification and drought occupy a priority position in ensuring sustainable development.

According to statistics, at present, nearly 10 million hectares of pastures need radical improvement. Repeated grazing of cattle on the same pasture, felling of trees for fuel and other purposes has led to a significant decrease in tree-shrub vegetation in the desert zone.

Shifting sands in the republic occupy an area of about 1 million hectares, and two hundred thousand hectares of these lands have recently appeared around irrigated fields. This creates a

serious threat, manifested in the acceleration of the desertification process. Land degradation is also occurring in irrigated areas involved in agricultural production.

The lack of crop rotation, non-optimal plowing of land, non-compliance with the requirements for the maintenance of agricultural crops, uncontrolled use of fertilizers, as well as the low level of implementation of agroecological standards lead to the violation of soil-ecological conditions and the increase of degraded land areas [2].

Environmental norms related to land include quantitative norms of chemical substances used in agriculture and forestry or norms used in allocating land plots for the construction of certain objects, norms in the field of soil protection, soil contamination with oil products, heavy metals, industrial and household waste, agricultural and forestry chemicals. standards aimed at reducing pollution and preventing the development of soil erosion, salinization and other negative flows [4].

Also, the standards in the field of soil protection include the permissible accumulation of pollutants and sanitary-hygienic standards.

Soil quality standards are determined primarily for agricultural land. To control the condition of the soil, it is the most important issue to determine the permissible levels of influence on the soil, their condition, perspective, the composition of pollutants, sampling and other methods [2].

The norms in the field of land protection have two main directions, firstly - to ensure the rational use of the land fund by regulating the allocation of land for industry, housing construction, extraction and processing of minerals and other purposes; and secondly, to improve the condition of lands degraded by human production activities through recultivation.

It is known that the widespread use of pesticides in agriculture, in addition to having a positive effect, also leads to several negative situations, that is, it has a harmful effect on the natural environment. Also, the accumulation and circulation of pesticide residues in soil, water, air and plants has a harmful effect on agricultural products, humans and animals. In this, by organizing an agrochemical service, establishing regulations and norms of their use that do not allow accumulation of pesticides, and controlling the use of pesticides by land users.

Today, indiscriminate use of agricultural plant chemical protection agents and mineral fertilizers, their untimely and incorrect use, and excessive spending not only do not produce the expected results, but also cause deterioration of the soil condition, pollution of the natural environment, and serious damage to human health. In our opinion, in order to prevent such situations, it is necessary to increase the demand for strict adherence to agrochemical regulations, to raise the culture of their application [4].

Also, when controlling pesticide residues in soil, their physical, chemical, hygienic and toxicological properties are taken into account. Pesticides used in agriculture are divided into three groups based on their level of danger, and herbicides (chemicals that kill weeds) and fungicides are among the most polluting.

According to the literature on the field, when determining pesticide residues, the average amount of residues of the drug in the field of use is calculated:

- ✓ the obtained data are reflected in maps and as a result, pesticide residues in each area are compared with the amount of permissible levels;
- ✓ it is desirable to obtain information about pesticide residues, usually two indicators are obtained;
- ✓ After applying the pesticide at the specified rate, its residue is measured and it constitutes the primary data.

Then, the data is collected after a specified period of time, after which its balance should decrease to zero or some other amount.

It is important to determine the allowable levels of accumulation of pesticide residues in soils, taking into account not only the type of pesticide, but also the type of soil, hygiene and toxic effects on the next planted plants.

Today, there is no single method for controlling residues of each type of pesticide in different types of soil, nor can it be created. However, setting uniform requirements for determining the level of environmental hazard, this issue can be solved by approving method standards for determining pesticide residues [3].

The following standards have been developed in the field of soil protection in the Russian Federation:

standard of sampling methods;

standard of methods for determination of physical and chemical properties of soil;

to erosion standard of methods of design of combat complexes;

standard on control equipment - equipment;

standards of soil leaching [6].

Scientists in the field distinguish between allowable accumulation levels and standards for pesticide residues in soil, and believe that standards should be set only for control methods [7].

In our opinion, it is very important to implement the tasks in this field today:

standardization in the field of soil erosion protection;

rational use of land at risk of erosion;

prevention of erosion processes;

prevention of further development of soil erosion;

increasing the productivity of eroded soils;

coordination of monitoring and control of eroded soils;

setting requirements for erosion control projects;

defining a unified system of indicators of natural and economic factors that cause the emergence and development of erosion processes;

development of uniform methods of research and obtaining data accuracy;

it is necessary to create a unified system of classification, terms and coding.

One of the main causes of erosion is the reduction of vegetation in pastures as a result of cattle grazing and the disturbance of the soil composition as a result of pollination by livestock. Therefore, it is important to introduce cattle grazing standards in the pasture hills.

It is known that some harmful substances accumulate in the soil as a result of man-made pollution or chemicals used in agriculture. All chemicals accumulate in the soil after entering it, and under certain conditions migrate into groundwater or into plants. As a result, it has a negative impact on human health, and in order to eliminate it, the level of soil pollution is studied and sanitary-normative documents are developed.

In general, chemicals not only increase the productivity of the soil, but also protect it from pests and diseases and ensure the preservation of agricultural products and their quality.

According to one group of scientists, the requirements of the established standards for pesticides include:

- low toxicity for humans and animals, making it possible to use it in agriculture;
- to be able to break down into harmless substances for humans and animals in one growing season under normal conditions of the external environment;
- to have ease of use, storage and transportation; to have high economic efficiency in application [8].

For example, in agriculture, only approved chemicals can be used in specified amounts.

According to experts, pollutants that pollute the soil and pose a threat to human health should be divided into three classes:

- Class 1 - high risk;
- Class 2 – moderately dangerous;
- Class 3 low-hazard substances.

When determining belonging to classes, properties such as toxicity, shelf life, level of transfer to water, air, plants, and effects on the condition of food are taken into account. For example, substances such as mercury, mercury and pesticides can be included in class 1, substances such as cobalt (silver-colored metal), manganese, potassium and nitrogen mineral fertilizers can be included in class 2, and phosphorus and mineral fertilizers can be included in class 3. However, properties of harmful substances are different in the soil [8].

Determining the permissible levels of accumulation of toxic substances in the soil, taking into account the violation of the self-cleaning properties of the soil, pollution of groundwater, atmospheric air and plants through the soil, taking into account their prevention.

Permissible accumulation levels of toxic (poisonous) substances mean the highest amount (limit) of this substance in a certain environment.

It is worth noting that the standards for laying a fertile layer on recultivated and low-yielding lands are on average 10-15 centimeters, and in some cases 60 centimeters. The thickness of the layer depends on what kind of land is being reclaimed, what purpose the reclaimed land will be used for, the quality and thickness of the subsoil layers and the rocks being built.

At the same time, eIt is appropriate to highlight several priority directions regarding the prospects of improving the norms of legislation in the field of:

first of all Based on the study of the land legislation, in particular, the norms related to the legal protection of the land, we can observe that they are mainly aimed at the protection of the land from degradation and other harmful effects, as well as the restoration of the land affected by negative economic effects. However, it does not regulate the issues of improving the productivity of lands that have not been negatively affected by human activities, especially those that are under the negative influence of natural forces (floods, desertification, etc.).

In order to eliminate this deficiency, it is appropriate to include a separate article in the land code dedicated to these issues and reflecting their specific characteristics.

secondly, taking into account that soil is the fertile layer of the earth and the storehouse of the main organic substances that supply agricultural products in general, it is appropriate to include a separate chapter on maintaining and increasing soil fertility in the Land Code. Within the framework of this chapter, the main directions of ensuring soil fertility, state and regional programs in the field of ensuring soil fertility, control over ensuring soil fertility, standardization of soil fertility, provision of soil and agrochemical services, financing of activities in the field of

ensuring soil fertility, extraction and preservation of the fertile soil layer are discussed. regulation is necessary.

thirdly, one of the important activities of land protection is land recultivation, its legal expression should be reflected in the land legislation. Accordingly, it is necessary to include a special article regulating relations related to land recultivation in Chapter 11 of the Land Code on land protection. In it, the organizations that carry out mining, geological exploration and other works on agricultural lands or forest fund lands for use or leased, after the completion of the specified works on these lands, recultivation at their own expense to bring the land into a condition suitable for use in agriculture and forestry. it is appropriate to determine the obligation;

fourthly, in the land legislation, it is necessary to determine the powers and rights of the ministries and agencies, especially citizens, responsible for soil protection, improving its condition, maintaining its fertility;

fifthly, special attention should be paid to strengthening the legal framework and implementation mechanisms for soil fertility improvement and protection;

sixthly, it is necessary to create a legal basis for land recultivation, state examination of projects, tools and technologies affecting the condition and quality of the soil, as well as determine measures to increase soil fertility and protection.

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