

## Effective use of Land Resources in Agriculture

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### Abstract:

Increasing the economic efficiency of the use of land resources is the main element that has a decisive impact on the result of social production. But salinization, erosion and desertification lead to serious land degradation, which, in turn worsens human health and ecosystem services. The article develops land relations in the agricultural sector, you will analyze the factors that limit the efficiency of the use of agricultural land.

**Key words:** Agriculture, land resources, economic aspects of land use, productivity, degradation of land resources.

**Introduction.** Many scientists have conducted research in different regions on the problem of efficient use of land resources in agriculture. Due to a number of natural climatic and socio-economic conditions that lead to the deterioration of land conditions under the influence of natural and anthropogenic factors and a decrease in soil fertility, it is important to improve and develop existing scientific and practical approaches to land use.

As stated in the Decree of the President of the Republic of Uzbekistan on the "Action Strategy" for further development of the Republic of Uzbekistan, "Strengthening macroeconomic stability and maintaining high economic growth, modernization and accelerated development of agriculture are very important for further development of the economy." [5]

It is clear to all of us that we need a new approach to each area, given the demands of today. In this regard, the Decree of President Sh.M.Mirziyoyev dated May 31, 2017 No PD-5065 "On measures to strengthen control over the rational use and protection of land, improving the activities of geodesy and cartography, regulation of state cadastres" and "Uzbekistan Resolution No. PD-3024 "On measures to further improve the activities of the State Committee for Land Resources, Geodesy, Cartography and State Cadastre of the Republic of Kazakhstan" created the basis for the use and protection of land resources and launched the next stage of development. [4]

Soil is a natural body that combines many properties, the most important of which is fertility - the ability to grow crops. As of January 1, 2020, the land resources of Uzbekistan amounted to 44,892.4 thousand hectares, of which only 9.6% or 4329 thousand hectares are irrigated agriculture. [8]

In developing countries, great attention is paid to the efficient and sustainable use of agricultural land. This move requires the establishment of a number of indicators for the zoning of land use in agriculture.

The main conditions for ensuring sustainable development of the agro-industrial complex of the Republic of Uzbekistan and the expansion of agricultural production are the preservation, restoration and rational use of fertile agricultural lands.

In economic activities, maintaining the fertility of lands and their rational use is of great importance. It is a natural condition for the development of agriculture, contributes to the increase of crop yields and gross yield, increases the value of agricultural land not only as an object of production, but also as an organizational part of the biosphere. [7]

The area of degraded lands in Uzbekistan is growing every year, including 46,335.2 hectares as of January 1, 2020, which is 634 hectares more than in 2009 and 1,171 hectares more than in 2008. [6]

[PD-5742 No 17.06.2019] The Decree of the Republic of Uzbekistan on measures for the efficient use of land resources in agriculture was developed, according to which irrigated and dry lands, mountain and foothill and desert pastures increase soil fertility, water and the importance of conducting research on the efficient use of other natural resources, ensuring the organization and implementation of scientific research on the creation of new high-yielding agricultural crops, their primary seed production in order to achieve sustainable food supply in the country on the basis of modern methods.

The fact that land in society is very multi-purpose depends on the diversity of aspects of land use. Aspects of land use are understood as the social significance of the land, the almost independent orientation of the land or the provision of conditions for the implementation of these processes. Therefore, the practice of land use differs in terms of direct use (social, economic, recreational, environmental) and aspects of the implementation of these processes (legal, informational, organizational, territorial, technological, resource, entrepreneurial).

The aspects of the first group (direct use of land) are specific to the acquisition of income from the use of land resources, and special methods are used to assess it. At the same time, it should be noted that the types of social and recreational efficiency of land use are currently assessed only by natural indicators, and it is impossible to compare these indicators with economic and environmental efficiency at all. Therefore, the issue of determining the price (money) value of social and recreational efficiency requires separate research. [1]

The decrease in the proportion of irrigated land per capita is due to the transfer of agricultural land to other sectors, soil erosion, swamping, pollution, as well as population growth. This situation requires a serious approach to land protection. Water and wind erosion cause severe damage to the soil, which destroys the fertile layer of the soil. Surface water erosion is typical in regions with no flat relief and abundant rainfall. Irrigated erosion occurs in irrigated agricultural areas. Wind erosion occurs in areas where moderate and strong winds move.

If it takes 200 to 1,000 years for fertile soil 2 cm thick to form under natural conditions, erosion of the soil layer due to erosion can occur within 20-30 years. Every day, due to erosion processes in the world, 3 hectares of arable land are lost from agricultural turnover. 1.5 million hectares of arable land in Uzbekistan are subject to water and wind erosion, half of which requires regular erosion control.

In areas where erosion processes occur, the yield is usually 20-40% lower, making the mechanisms more difficult to use. Along with the deterioration of economic production conditions for the cultivation of agricultural crops, there is a violation of biogeocenosis, as a result of which the biological balance in nature is disturbed. [3]

In order to improve the use of agricultural lands, firstly, it is necessary to take measures to improve the reclamation condition and prevent it from deteriorating, and secondly, to restore and increase the productivity of poorly irrigated lands.

As a result of ongoing reforms and structural changes in agriculture, the use of existing arable land is improving. Productivity is increasing due to increased land use efficiency.

Research on modernization of agriculture, conservation and rational use of land, efficient use of water and other natural resources, cultivation of new high-yielding agricultural crops and their implementation, efficiency of agricultural production, economic and food security of the country. Ensuring the sustainable development of not only the subjects of economic activity in agriculture, but also the material well-being of the entire population of Uzbekistan, the fertility of our land, which is our national wealth, its quality.

Soil erosion, desertification, and water scarcity cause many problems. Therefore, land degradation, which is currently one of the global problems, should be considered as a risk factor, especially in cases where the ability of people to use land for food and water storage is gradually reduced or other vital ecosystem services are adversely affected.

Land degradation is a complex phenomenon, usually associated with partial or complete loss of land fertility, soil, vegetation, biomass, biodiversity, ecosystem services, and environmental sustainability. There are interrelated factors that lead to land degradation. These are the biophysical factors that determine the land use system, the institutional factors that regulate land use policy, and the socio-economic factors that affect demand and land administration.

Soil degradation is particularly prevalent in the eastern Sahara, accounting for 20–50 percent of the land.[13] Soil degradation is common in Asia and Latin America, as well as in other parts of the world.[11]

The annual economic damage caused by the degradation of irrigated lands in Uzbekistan is \$ 252 million, pastures - \$ 91 million, transportation of irrational irrigation water - \$ 118.5 million. The components of this damage are the lack of nitrogen enrichment of the soil, the lack of yields as a result of the removal of poor quality soils from economic circulation, and the reduction of the nutritional potential of pasture lands. A serious negative factor in land use is the increase in the area of irrigation and collector networks, along with the decrease in the efficiency of use of irrigated lands. The importance of the degradation of irrigated lands is a real threat to the growth of agriculture and the well-being of the population. According to the World Bank and the Global Environment Facility (GEF WEMP), the total cost of rehabilitating national irrigation and drainage infrastructure is \$ 23-31 billion. Factors that determine the primary land use system typically include climate, vegetation, relief, and water availability. As an economic factor, it affects the timing and method of making changes, including management decisions. Institutional factors are often historically determined by perennial cultural norms, as well as influenced by political and economic decisions. Property and ownership rights play an important role in understanding the impact of institutional factors.[8]

In general, land use, which leads to land degradation and loss of land-related functions, is influenced by interacting elements at many local and global levels.[9]

An estimated 2.6 billion people have been affected by soil degradation and desertification in more than a hundred countries, affecting more than 33 percent of the earth's surface. Currently, about 73 percent of arid pastures are degraded. Reaches Africa. At the same time, land use efficiency in Uzbekistan is not yet high. A.K. Bazarov estimates that the annual economic loss due to irrational land use is \$ 1.6 billion. [10] This means that increasing agricultural production in recent years, especially increasing the yield per hectare of land, is an important task. Until recent years, there is an inextricable link between the reclamation, ecological condition and fertility level of soils, especially irrigated soils of the republic, and the yield obtained. From the above data, it is clear that it is impossible to obtain high quality crops from agricultural crops in degraded soils with unhealthy

reclamation, ecological status.

However, due to the lack of differential farming systems that take into account soil and climatic conditions, types of crops, and the lack of application of agro-technical measures in the coming years, there is a decrease in soil fertility and crop quality due to negative degradation processes.

### Conclusion

Based on the above, we can point out the following economic aspects as the most important, priority aspects of land use:

first, in the process of efficient use of land, the economic product necessary for the sustainable existence of society is produced;

secondly, the economic product produced in the process of economic aspects of land use is the material basis for the processing of land resources (soil fertility);

thirdly, the priority of the economic aspect of land use requires consideration in the development of programs of socio-economic development of countries and regions, the distribution of land by sectors of society, sectors of the economy, especially in improving the composition of rural land.

fourth, the introduction of a differential system of agriculture that fully takes into account the soil and climatic conditions, the types of crops grown;

fifth, it requires the introduction of bio-fertilizers and resource-saving technologies in order to prevent its negative effects on degraded irrigated arable lands.

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