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Organizational, Economic, Agro-Technological Activities Aimed At Increasing the Efficiency of Agricultural Land Use.

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Abstract: . The economic reforms that are being carried out step by step in the agrarian sector of our country are mainly aimed at creating favorable conditions for producers and supporting them economically. It is known that agriculture as a branch of material production differs from other branches in that land resources are considered as the main and non-exchangeable means of production. Therefore, rational use of agricultural arable land, ensuring the balance of technological and ecological conditions of the soil is considered the main factor of sustainable development of agricultural production.

Keywords: natural resources, material base, land policy, land reform, social importance, economic factors, additional income, free-market price, land resources, economic factors.

Origin

Among natural resources, land stands out as a material base with its economic potential. The organization of land use in a rational, productive and scientifically based way over time is important for the current period and future. In solving these issues, knowledge of legal norms, understanding the basics of land law, strengthening its legality and implementing legal obligations related to finding a solution to land disputes occupy an important place. Development of the land legislation of the Republic of Uzbekistan, especially in the years of independence in our country, the importance of legal regulation of land-related relations, improvement of the land legislation at the level of modern requirements is incomparable.

Currently, important changes are taking place in the land policy of our country. The Land Code of the Republic of Uzbekistan serves as the basis of normative legal documents related to land.

In the Land Code of the Republic of Uzbekistan, the regulation of land relations of the Cabinet of Ministers of the Republic of Uzbekistan (Article 4), Regions, Tashkent city state authorities (Article 5), District state authorities (Article 6), City state authorities (Article 7) powers and other rules in the field are defined..

In our country, large-scale work has been carried out on land use, legal regulation of land relations and improvement to the level of modern requirements based on the norms of the Land Code.

Law of the Republic of Uzbekistan "On Regulatory Legal Documents" adopted on December 14, 2000, Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 483 of October 19, 2004 "On the organization of the activities of the State Committee for Land Resources, Geodesy, Cartography and State Cadastre of the Republic of Uzbekistan" and according to other regulatory

and legal documents, legislative documents regulating land relations during 2010 by the State Committee for Land Resources, Geodesy, Cartography and State Cadastre of the Republic of Uzbekistan, land legislation with constitutional, state, civil, administrative, criminal, labor, ecological and other branches of legislation Normative-legal, normative-technical, normative-methodological acts were developed.

Amendments and additions were made to the Land Code of the Republic of Uzbekistan, "Code on Administrative Responsibility", "On Farming", "On Farming" and some other laws and regulatory legal documents.

In agreement with the State Committee for Land Resources, Geodesy, Cartography and State Cadastre of the Republic of Uzbekistan and the relevant ministries, the rational use of land and its protection, implementation of state control over protection, preservation, restoration (restoration) and increase of soil fertility, state land cadastre a number of regulatory legal documents on the development of the legal framework related to the coordination of activities in the field of administration have been developed and put into practice. These include:

- Draft "Regulation on the commission considering issues of land allocation (realization) under the Cabinet of Ministers of the Republic of Uzbekistan";
- Draft "Regulation on the procedure for granting land plots to citizens for farming";
- Draft "Regulation on improving the determination of the standard price of agricultural land by producers of agricultural goods in the Republic of Uzbekistan";
- "Regulation on horticulture and viticulture companies" project;
- "Recommendations on scientifically based placement of agricultural crops on agricultural lands";
- "Program of topographic-geodetic and cartographic provision of the Republic of Uzbekistan in 2011-2015";
- Draft decision of the Cabinet of Ministers of the Republic of Uzbekistan "On changes and additions to the decision of the Cabinet of Ministers of the Republic of Uzbekistan dated 02.06.1997 No. 278 "On maintaining the state cadastre of buildings and structures in the Republic of Uzbekistan".

The drafts of regulatory legal documents were developed with the involvement of experts of enterprises and organizations that are part of the State Committee "Ergeodezkadastr", qualified experts of scientific-designing, scientific-research enterprises and organizations of interested ministries, state committees and offices.

In addition, the goal of land reform in the agrarian sector during the years of independence is to increase the economic efficiency of land use by introducing a new form of land relations, maintain ecological balance, preserve and increase soil fertility, democratize land ownership and increase its economic and social importance.

On the negative side of the improvement of land relations, it can be mentioned that the plots of land are over-shredded and, as a result, the possibility of efficient use of equipment decreases, insufficient amount of mineral and organic fertilizers are given, and the quality of soil cultivation is deteriorating.

As you know, in the conditions of our country, where the possibility of expanding irrigated land is limited, it is important to increase the efficiency of the use of existing land, first of all, to increase the amount of production and, ultimately, income from a unit of area. Studies show that increasing the efficiency of land use depends on many factors, and these factors can be conditionally divided into 2 groups. These are: organizational-economic factors and technological factors (Fig. 1).

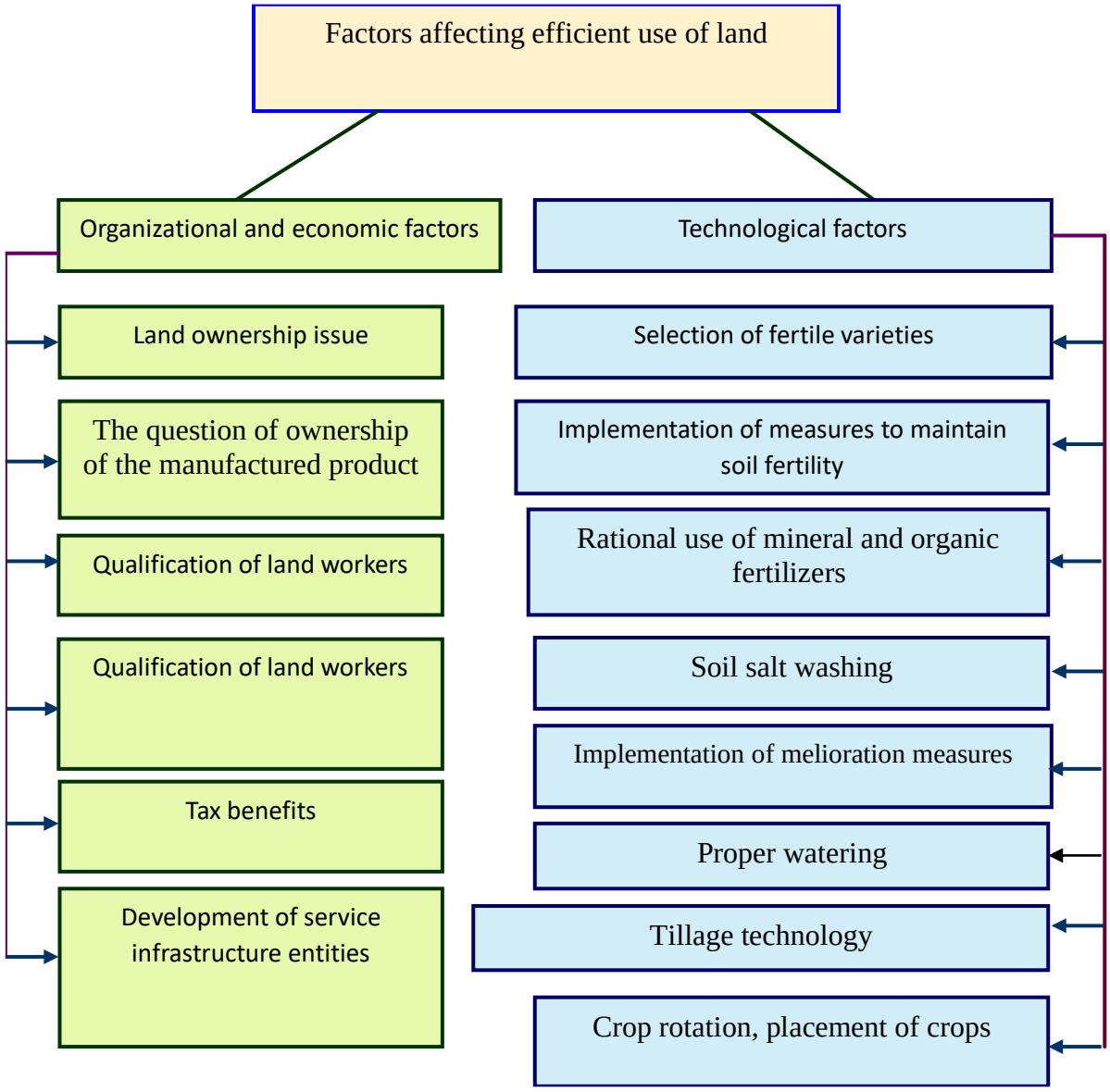

Figure 1. Factors affecting efficient use of land[1].

Organizational and economic factors include the resolution of the issue of ownership of land and manufactured products, the qualifications of those who work directly with the land, state support for producers of agricultural products, tax benefits, the development of infrastructure entities that provide service to them, technological factors include the placement of crops, soil implementation of measures to maintain fertility, use of mineral and organic fertilizers, washing of soil salt, implementation of melioration measures, correct irrigation, soil tillage technology, crop rotation, placement of crops, selection of high-yielding varieties and other factors.

Organizational and economic factors. Among the organizational and economic factors affecting the effective use of land, the resolution of the issue of ownership of land and manufactured products is of great importance. Studies of a number of scientists show that the productivity of agricultural crops in peasant farms is 1.5-2.0 times higher than in other forms of farming. This is certainly the result of the ownership of the land and the cultivated products being fully resolved in this form of management.

At the same time, there are many cases of taking away land from farms that cannot use the land effectively. For example, in 2011, according to the schedule approved by the State Committee "Land Geodetic Cadasters" and its regional departments on the use and protection of land, 242 economic entities have 847,145.0 hectares of land. Inspections were conducted regarding the use of land in the

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area. A case of administrative responsibility was initiated against the heads of 210 economic entities that committed land law violations.

One of the most important aspects in increasing the efficiency of land use is to give freedom to farms in land ownership. One of the most important aspects in increasing the efficiency of land use is to give freedom to farms in land ownership. Based on this, the farmer is forced to plant cotton and grain on all his land, regardless of the state of productivity, and as a result, he gets very little yield from low-quality fields. Therefore, it is necessary to determine the state order for farms only in terms of tons and to allow them to take measures to increase the productivity of their low-yielding lands.

Investments, especially domestic investment, are very important in improving land productivity. Farming also needs to have additional income in order to spend on increasing the productivity of the land. At the same time, they can create this additional source of income by improving the ownership mechanism of the product they are producing. For this, it is desirable to create an opportunity for companies and farms to sell the part of the cotton and grain grown outside of the state order at the free-market price and spend part of the income to increase soil fertility.

The technological knowledge and experience of farmers or family contractors who work directly with the land also play an important role in improving the efficiency of land use. Today, the number of farms is increasing rapidly. At the same time, farms are being established on the basis of loss-making companies and collective farms. A simple laborer or mechanizer of the former farm is leading the farm. Therefore, effective use of available land resources can be achieved by increasing the knowledge and skills of the managers of such farms.

Due to the fact that the optimal (optimal) sizes of farms have not been determined depending on the field of activity and the direction of production (farming and animal husbandry), in practice, the size of their land areas varies from 3-4 hectares to 250-300 hectares. Production efficiency is low in both cases - small land areas and extremely large land areas. Based on this, the minimum land area of cotton and grain farmers should be set at 40-50 hectares, and the maximum land area should not exceed 150-160 hectares, and the land area of vegetable farmers should be up to 10 hectares. When determining the optimal (optimal) size of farmers' land, it is taken as a basis to allocate the land to the farmer with melioration and irrigation sub-districts on the basis of contours, to ensure that the income is sufficient to feed the farmer's family and for extended reproduction, and to create opportunities for efficient use of machines and mechanisms.

Technological factors. Along with organizational and economic factors, technological factors play an important role in increasing the efficiency of land use, and they are inextricably linked with each other.

Today, the efficiency of using the available land is very low due to the fact that the placement of crops is not approached on a scientific basis. When planting agricultural crops, it is necessary to take into account the fertility of the soil, as well as its biological and chemical properties, land reclamation status, agrochemical composition and other aspects. As mentioned in the previous chapters, it is necessary to stop the practice of planting cotton and grain on lands with a low credit score, especially on lands with a score below 40. Then the efficiency of the material and technical resources spent on the area unit and, of course, the efficiency of land use will be high.

Among the factors affecting the effective use of land, salt washing, implementation of land reclamation measures, proper organization of irrigation of crops and improvement of soil tillage technology are also important. Today's technology and methods have had many negative consequences. These include the rise of groundwater, the increase in soil salinity, the disruption of microbiological processes in the soil, the increase of nitrate and other heavy metal residues in its content, and ultimately, the decrease in soil fertility. Therefore, it is important to switch from

traditional to non-traditional methods in soil cultivation and production. Bentonite, phosphorite, making composts with local fertilizers is one of them.

Based on the results of long-term experiments, it is advisable to carry out the following reclamation measures in order to increase the productivity of irrigated soils and obtain a high yield from agricultural crops:

In almost half of the irrigated areas of the republic, reconstruction of collector-water networks, and in the rest of the areas, carrying out capital repair work is one of the first and urgent tasks.

In order to ensure the flow of groundwater and prevent secondary salinization, it is necessary to clean 45-50 percent of inter-farm and intra-farm ditches annually.

Due to the technical failure and extremely low productivity of existing collector-water networks and vertical wells, replacing the existing hydromorphic water regime with a semi-hydromorphic water regime is the most optimal reclamation regime. In this case, a set of measures aimed at keeping the level of underground seepage water below the "dangerous" depth (2.5-3.0 m) should be implemented.

Improving the land reclamation of gypsum soils, which are common in many regions of our republic, and increasing their productivity requires a set of special measures. In such soils, deep plowing, high-quality leaching with organic fertilizers will give good results. In order to maintain the fertility of these soils, it is necessary to establish good rotation systems, to use fertilizers correctly, and to carry out chemical melioration measures when necessary.

The fight against water erosion has a special place in maintaining soil fertility. Therefore, it is necessary to implement the following: improvement of irrigation technology and determination of irrigation standards depending on the slope of the soil surface, application of chemical means against water erosion. It is necessary to use synthetic polymers, prolycopene’s and humic preparations. Synthetic polymers create artificial grain on the surface of the soil. Erosion resistance of well-grained soils increases. Application of biological means against water erosion. Bio humus, chlorella and blue-green algae can be used as biological agents against erosion. These biological agents enrich the soil with organic matter and improve its graininess, multiply beneficial microorganisms. Application of various agrotechnical methods against water erosion. In this direction, the following measures can be implemented in the republic: sowing intercrops, applying bentonite between the rows of crops on eroded soils, applying organic and mineral fertilizers according to the level of leaching of the soil, etc.

Wind erosion is also one of the negative factors that reduce soil fertility. Therefore, against wind erosion, the following should be applied: intermediate, mechanical, biological and chemical measures, establishment of hedgerows and placement perpendicular to the wind direction. In this case, planting intermediate crops on light sandy soils, firstly, reduces wind speed, and secondly, enriches the soil with organic matter when the land is plowed.

In order to protect the land from erosion, it is necessary to establish tree groves, create stairs on eroded mountain slopes, strengthen sands and grow trees, establish tree groves near the banks of large main canals, rivers, reservoirs, ravines, build flood defenses, build various hydrotechnical structures, it is important to perform vertical alignment of the welds.

Application of new technologies of irrigated land cultivation is an important tool in increasing the productivity of land areas. For example, the soil does not break down into small grains when it is plowed in high humidity conditions, the surface lies in the form of a shiny ribbon, and when it is processed in dry conditions, large lumps are formed. As a result, the negative effects of plowing in high humidity and dry conditions persist for several years. Therefore, it is important to determine the limit of soil moisture physic ability for processing.

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In recent years, most of the lands that have been brought into agricultural circulation are poor land reclamation and low fertility soils. In order to increase their productivity, a mastery period should be established. Experiments show that this period is around 10 years. During this period grasses, legumes, spikes, intermediate crops should be planted on such lands. During this time, a cultured, humus plowed layer is formed. If such measures are not taken, investments in land will not pay for themselves economically.

In maintaining the productivity of irrigated lands, measures should be taken to restore damaged lands, improve the condition of low-yielding lands, prevent wind and water erosion, salinization, secondary salinization, and waterlogging, soil pollution with industrial and chemical waste, and protect agricultural crops from weed infestation.

The importance of the crop rotation system in maintaining soil fertility is high, and the failure of the crop rotation system caused the average score of irrigated lands in the republic to drop from 58 to 55 in the next 8-10 years, and even more in some regions.

Improving the quality of irrigated soils through the introduction of moderate crop rotation poses a number of challenges in the presence of a large number of commodity producers. To solve this problem, it is appropriate to consider the issue of expanding farm lands to the size of crop rotation fields and large areas (arrays).

The above proposals and recommendations are important in increasing the efficiency of using irrigated agricultural land in our republic and maintaining land productivity, and these measures should be implemented without delay.

In conclusion, we can say that in our Republic, land is not considered a state property, taking into account that enterprises using land operate under different forms of ownership and management, it is appropriate to evaluate irrigated land from an economic point of view. Economic indicators of land use can be divided into natural and value indicators. Relative indicators can also be used.

Among the natural indicators determining the economic efficiency of the use of irrigated land areas, the productivity of agricultural crops; unit of feed obtained at the expense of arable land; livestock products obtained from one hectare of irrigated area (by product types); it is possible to enter the amount of livestock products obtained from one hectare of fodder crop area (by product types). The value indicators include the value indicator of the gross agricultural product grown at the expense of one hectare of irrigated land area; the indicator of net profit (gross income) obtained from one hectare of land area; the indicator of the gross product value of the irrigated arable land at the expense of one credit rating; It is possible to enter indicators of net profit (gross income) obtained by calculating the irrigated crop area per point credit.

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