

Technology of Organization of Drainage Work

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Abstract: As provided for in the Decrees of the President of the Republic of Uzbekistan No. PF-5742 of 2019 “On measures for the effective use of land and water resources in agriculture” and No. PF-6024 of 2020 “On approval of the Concept of the development of water management of the Republic of Uzbekistan for 2020-2030”. Today, more than 20 million hectares of land are used in agriculture, including 3.2 million hectares of irrigated arable land, where food products for the needs of the population and raw materials necessary for economic sectors are grown. In order to increase the productivity of irrigated areas, improve the reclamation condition and water supply, large-scale irrigation and reclamation measures are being implemented within the framework of state programs.

Keywords: Irrigation, reclamation, productivity, necessary, reconstructing, water, groundwater.

As a result, in 2010-2020, the water supply of more than 1.7 million hectares of irrigated areas and the reclamation condition of 2.5 million hectares of land improved.

However, as a result of global climate change, the periodically observed water shortage in recent years and the fact that most of the internal irrigation networks have become unusable have led to the deterioration of the reclamation condition of irrigated arable lands and their disuse over the years.

In our republic, it is possible to reduce water loss by gradually reusing lands that have been abandoned due to the deterioration of irrigation and land reclamation over the years, by effectively using groundwater reserves, introducing water-saving technologies, and reconstructing internal irrigation networks. Open or closed drainage systems are used to wash away salt from saline lands and prevent groundwater levels from rising. Open drainage systems (sometimes called collectors or culverts) are constructed in areas with low groundwater density and good water permeability, and require cleaning them of sediment and various weeds every two to three years. The areas occupied by open horizontal drainage systems limit the total land area intended for planting agricultural crops. This leads to a decrease in the land use coefficient.



Closed drainage construction technology

Closed horizontal drainages are mainly used in conditions where the groundwater permeability of the subsoil is low. The construction of closed horizontal drainages is carried out in two ways: one of them is called semi-mechanized, which is mainly used in unstable soils, areas with very hard soils and areas where the groundwater level is very close to the surface.

The program for improving the condition of land reclamation provides for further expansion of the scale of reclamation construction and improvement of its organization. Successful implementation of the specified tasks can be achieved only through rational organization of labor, advanced work technology and the use of highly efficient machines and mechanisms.

The introduction of progressive technology and new equipment into reclamation construction is the main condition for increasing labor productivity and reducing construction time, improving the working conditions of mechanizers. In addition, high labor productivity in reclamation work is achieved through comprehensive mechanization, rational technology and excellent organization of work.

Improving the technology of soil development and leveling has a significant impact on increasing the volume of excavation work. Therefore, land reclamation and construction organizations, design and research institutes are paying great attention to improving technology and organizing drainage work.

In peasant farms, the use of a complex flow method for carrying out preparatory and construction work allows you to improve the management of the technological process of drainage construction, increase the efficiency of laying drainage pipes and controlling production quality.

The transition of land reclamation and construction organizations to year-round production is an urgent issue, which will reduce the time for commissioning land reclamation systems and evenly use labor resources and land reclamation equipment throughout the year.

LIST OF REFERENCES

1. Decree of the President of the Republic of Uzbekistan No. 5742 "On measures for the effective use of land and water resources in agriculture" of 2019. Tashkent.2019.
2. Decree of the President of the Republic of Uzbekistan No. 6024 "Concept of the development of the water sector of the Republic of Uzbekistan for 2020-2030" for 2020. Tashkent.2020.
3. M.Mamadaliyev, A.Abdullaev. Analysis of research conducted with an improved leveler. Education and science in the XXI century.2021.
4. M.Mamadaliyev M.Mamorasulova R.Abdirahmonov. A new design of machine tools used in the mechanization of land reclamation works. Effective use of resource-saving innovative technologies in agriculture.2023.