

The Role of High Standard Farmland Construction in Ecological Restoration

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Abstract

High standard farmland construction is an important agricultural development strategy promoted by the current Chinese government, aimed at improving agricultural production efficiency and quality, and promoting sustainable agricultural development. However, the impact of high standard farmland construction on the local ecological environment cannot be ignored. The article will explore the impact of high standard farmland construction on the local ecological environment and its effective governance methods from three perspectives: ecological environment, economy, and society.

Keywords

High Standard Farmland; Ecological Restoration; Land Remediation; Effect.

1. Introduction

With the continuous growth of population and the acceleration of urbanization, agricultural production is facing increasing pressure. In order to meet the people's demand for food, improve agricultural production efficiency, and ensure national food security, China has started the construction of high standard farmland. High standard farmland construction refers to the construction of farmland with high yield, efficiency, quality, and efficiency through scientific planning, fine management, and efficient utilization of land resources, while ensuring the basic agricultural functions of farmland. The significance and role of high standard farmland construction are not only reflected in improving agricultural production efficiency and ensuring national food security, but also in promoting rural economic development, improving farmers' lives, and protecting the ecological environment.

2. The Impact of High Standard Farmland Construction on the Ecological Environment

The traditional mode of farmland drainage is achieved through manual excavation, which does not cause damage to the structure of the farmland. This method not only achieves drainage function, but also has a certain protective effect on the ecological environment. For example, the drainage system can lower the groundwater level, thereby reducing the risk of farmland salinization. At the same time, various crops can also grow on both sides of the canal, which can absorb nitrogen, phosphorus and other related substances, To prevent Eutrophication of water body, it can also create a habitat for beneficial insects in the field. With the popularization and promotion of high standard farmland water conservancy project construction, people begin to use a large amount of concrete in farmland drainage, which is lack of definite scientificity. Many farmers directly use concrete on both sides of farmland for convenience, never caring whether this drainage method is conducive to the growth of plants on both sides of the canal, Will it reduce the nutrients in the water and cause harm to the ecological environment? Secondly, as there is no food available, the number of aquatic organisms will gradually decrease. In addition, the drainage on both sides of the concrete constructed farmland is relatively smooth, and the water flow speed increases, which can easily cause water loss problems. Finally, the drainage

engineering of farmland will also reduce the number of animals and insects beneficial to agriculture, such as frogs and earthworms, Disrupting the ecological balance and increasing the number of pests, people use pesticides to eliminate pests, which greatly increases the pesticide content of crops. In addition, due to the increase in agricultural drainage projects, the investment in concrete is increasing, and waste materials are also constantly increasing. If these cannot be better treated, simply stacking or dumping them around farmland will also greatly cause environmental pollution.

Farmland irrigation engineering is also a type of high standard farmland water conservancy engineering construction. Proper farmland irrigation can promote the growth of crops, but many agricultural production cannot grasp the "degree" when conducting farmland irrigation. Excessive irrigation of farmland not only leads to poor growth of crops, but also causes damage to the ecological environment. Nitrogen is present in soil particles and solutions of agricultural land, And nitrogen can only be absorbed by crops when producing nitrate and comparative nitrogen. In irrigated farmland, only through reasonable irrigation can all organic matter in the soil be decomposed, allowing nitrogen to be produced into nitrate and comparative nitrogen, which can be better absorbed by crops. However, excessive irrigation can cause the organic matter, fertilizers, pesticides, etc. in the soil to be washed away, Thus, nutrients are brought into other rivers and lakes to make them Eutrophication. In serious cases, red tide or algal blooms can also be caused. In addition, long-term irrigation will raise the water level of farmland, and then after a long period of evaporation, the salt in the soil will accumulate on the surface of farmland with the continuous evaporation of water, thus causing farmland salinization, which is detrimental to crop cultivation.

2.1. Ecological Environment

The primary task of constructing high standard farmland is to protect the ecological environment. In the process of farmland construction, attention should be paid to controlling Soil contamination and water loss to avoid damaging the local ecological environment. For example, when planting crops, it is necessary to use Organic fertilizer and efficient pesticides to reduce the use of chemical pesticides and environmental pollution. At the same time, the construction of high standard farmland also needs to strengthen environmental protection, establish environmental protection facilities, collect and treat wastewater and exhaust gas generated during the production process. High standard farmland construction also requires attention to protecting wildlife and ecological environment. During the construction process, it is necessary to respect nature and avoid damaging the habitats of animals and plants. At the same time, the restoration and improvement of the ecological environment can be promoted through the establishment of protected areas and ecological restoration projects.

2.2. Economic and Social

The construction of high standard farmland has also had a positive impact on the local economy and society. Farmland construction can provide stable food production and employment opportunities for the local area, and promote local economic development. At the same time, the construction of high standard farmland can also improve the income level of farmers, enhance their purchasing power, and promote the modernization of rural development. However, the construction of high standard farmland also requires attention to balancing the development of agriculture and cities. Farmland construction needs to take into account the needs of cities and avoid excessive reliance on agriculture, leading to excessive concentration of urban population. At the same time, the construction of high standard farmland also needs to pay attention to the diversity and sustainability of agriculture, ensuring the sustainability of agricultural production.

3. Effective Governance Methods

To effectively manage the impact of high standard farmland construction on the local ecological environment, a series of measures need to be taken. Firstly, the government needs to strengthen supervision and management, formulate relevant policies and regulations, and regulate the behavior of farmland construction. Secondly, it is necessary to establish efficient environmental monitoring and governance mechanisms, and strengthen the protection and restoration of the ecological environment during the construction process of farmland. At the same time, it is necessary to strengthen the education and training of farmers, and improve their awareness and ability to protect the ecological environment. Finally, it is necessary to pay attention to the sustainability of farmland construction and ensure that it contributes to the sustainable development of the local economy and society.

The impact of high standard farmland construction on the local ecological environment is multifaceted. In order to effectively address these impacts, the government needs to take a series of measures, strengthen supervision and management, establish efficient environmental monitoring and governance mechanisms, enhance farmers' awareness and ability to protect the ecological environment, and ensure the sustainability of farmland construction. Only in this way can we contribute to the improvement of the local ecological environment and sustainable development.

High standard farmland construction is an important measure to improve agricultural production efficiency, ensure national food security, promote rural economic development, improve farmers' lives, and protect the ecological environment. We should strengthen the publicity and promotion of high standard farmland construction, increase farmers' awareness and participation, and jointly promote the development of high standard farmland construction, making contributions to achieving agricultural modernization and rural revitalization.

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