

Present Situation and Suggestions of Cultivated Land Protection Field Length System in Hangzhou

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Abstract

Hangzhou cultivated land protection field length system is an innovative system implemented under the background of national food security strategy. Through the combination of digital scene of "cultivated land intelligent protection" and field length system, the quantity, quality and ecological management and protection of cultivated land are strengthened. The system responds to the national policy orientation, relies on the advantages of digital economy in Hangzhou, and integrates the means of "civil air defense+technical defense", which has achieved remarkable results in farmland protection. However, there are still some problems in the process of practice, such as insufficient functions of APP, low participation of villagers, lack of incentive measures, insufficient fund guarantee and lack of experience exchange. In view of these challenges, it is suggested to optimize the intelligent function of APP, strengthen diversified publicity, improve the incentive mechanism, strengthen financial support, and promote cross-regional cooperation. Through the two-wheel drive of "science and technology empowerment+system innovation", the efficiency of cultivated land protection can be improved, which will help rural revitalization and the construction of common prosperity demonstration zones.

Keywords

Farmland Protection Field Length System; Digital Management; Hangzhou; Overwhelm.

1. Background Introduction

Report to the 20th CPC National Congress pointed out that it is necessary to comprehensively promote rural revitalization, consolidate the foundation of food security, firmly hold the red line of 1.8 billion mu of cultivated land, gradually build all permanent basic farmland into high-standard farmland, strengthen the support of agricultural science and technology and equipment, and ensure that Chinese's rice bowl is firmly in its own hands. In order to strictly implement the responsibility of the party and government for cultivated land protection and put the responsibility of cultivated land protection on people, the Hangzhou Municipal Party Committee and the Municipal Government issued the "Implementation Opinions on Implementing the strictest cultivated land protection system and fully implementing the farmland tenure system" in June 2022, which was fully implemented.

The grain safety related to the long-term system of storing granaries, ensuring the safety of the world and protecting cultivated land has always been the top priority of the party and the country. On the one hand, the grain safety needs to arouse vigilance and sense of crisis. Relevant studies have preliminarily found that the total grain production level in China in 2050 will be 14%-23% lower than that in 2005. In recent years, Affected by international epidemic, Russia-Ukraine conflict, the risk of a larger-scale war and complicated trade disputes in the world, the external environment of food security faced by China is not optimistic. On the other hand, with the joint efforts of the Party and the people, China's food security has made great progress. Faced with multiple unfavorable factors such as epidemic situation, sharp fluctuations in

international food prices and high prices of agricultural materials, The Central Committee of the Communist Party of China has issued a number of documents to make strict plans and arrangements for food security, so that China's grain output has been stable at more than 1.3 trillion Jin for eight consecutive years. New ideas have led a new era, new missions have started a new journey, and with the constant appeal of the party and the state, the national awareness of farmland protection has been growing, and "science and technology+effective system" has gradually become an important measure to safeguard food security.

Hangzhou is a digital city. Under the guidance of the "Eighth Five-Year Plan", Hangzhou took the lead in laying out the digital economy in the country, courageously took the lead, and proposed to rebuild the first city of digital economy in the country at a high level. Therefore, Hangzhou is an excellent experimental field for agricultural digitalization. At the same time, Hangzhou's cultivated land resources with "seven mountains, one water and two fields" are very valuable, and it is an important practice place to implement the long-term farmland protection system. In recent years, a new pattern of cultivated land protection has been built for high quality. Hangzhou has made a series of "combination boxing" of cultivated land protection to ensure that the number of cultivated land in the city is not reduced, the quality is improved, and the layout is more reasonable. For example, it has successively launched digital scenes such as "field length system" for cultivated land protection, "intelligent protection of cultivated land", "reclamation and quality improvement", and firmly guarded the precious cultivated land resources with the hard measures of "long teeth" to strive for Hangzhou to be an example of Zhejiang's high-quality development and construction of a common prosperity demonstration zone city.

After on-the-spot visits and online reading of various reports and documents, we found that the farmland tenure system has played a practical and important role in Hangzhou's farmland protection, food security and rural revitalization, and has been widely supported by people. Through the organic combination of intelligence and farmland tenure system, we can accurately crack down on arbitrary land use and illegal exploitation of farmland on the basis of saving manpower and material resources, which provides an important institutional guarantee for farmland protection and food security.

2. PEST Analysis of the Long-term System of Cultivated Land Intellectual Protection Field

Hangzhou's long-term farmland protection system responds to the trend of the times of national protection and guarding food security and digitalization, and has the function of specimen and reference significance. Its implementation and practice in many places in Hangzhou have proved that the system can stand the test and is worthy of our deep exploration and application.

2.1. P(Political), Political Factors

Food security, agricultural intelligence and advanced agricultural management system have always been important topics in various policies. Report to the 20th CPC National Congress pointed out that it is necessary to firmly hold the red line of 1.8 billion mu of cultivated land, gradually build all permanent basic farmland into high-standard farmland, strengthen the support of agricultural science and technology and equipment, and ensure that Chinese's rice bowl is firmly in its own hands. "We must make good use of modern information technology, innovate rural governance methods, and improve the level of rural good governance." "Agricultural modernization, The key is the modernization of agricultural science and technology. "The Hangzhou Municipal Party Committee and Municipal Government have issued programmatic documents such as" Work Plan for Digital Agriculture, Countryside and Farmers

in Hangzhou in 2023 "and" Implementation Opinions on Implementing the Strictest Farmland Protection System and Carrying out the Tenure System in an All-round Way ", which also put forward important instructions for agricultural digitalization and science and technology to help agriculture.

2.2. E(Economic), Economic Factors

Food is the most important thing for the people, and food is the most important thing for the country. Adequate food production is not only the basic need to solve the people's food problem, but also the important foundation for healthy economic development, and the cornerstone of national security and social stability. The country has always attached great importance to food production, and proposed to firmly grasp the rice bowl, continuously strengthen the protection of cultivated land, do a good job in the construction of high-standard farmland, and set the minimum purchase price of grain. The long-term system of intellectual protection of cultivated land is an important part of stabilizing grain production and promoting healthy economic development, which has a great role.

2.3. S(Sociocultural), Social Factors

From the perspective of social benefits, the cultivated land tenure system can effectively reduce management costs and improve management efficiency. The cultivated land tenure system is conducive to ensuring food security, while food security is conducive to stabilizing market prices. The stability of food prices is the premise of price stability, and enhancing the ability to ensure food security plays an important role in curbing inflation and stabilizing prices. At the same time, digital technology has the advantages of accuracy, precision and precision, and improves the scientific and timeliness of rural governance. By gathering and integrating data from different fields,

2.4. T(Technological), Technical Factors

With the new round of scientific and technological revolution and industrial transformation advancing in depth, the digital economy has accelerated to penetrate into agriculture and rural areas, and the system of intellectual protection of cultivated land is the product of this wave of transformation. The digital transformation of agriculture can accelerate the liberation and development of agricultural productive forces and promote the leap of agricultural value chain, while Hangzhou is at the forefront of the digital wave and is an excellent place to implement digital field management. With the continuous upgrading of digital technology, "science and technology+effective system" has gradually become an important measure to safeguard food security.

3. Existing Problems of the Long-term Farmland Protection System

In the process of carrying out the system of intellectual protection of cultivated land, it has played its role, but at the same time, there are still some problems to be solved. After a comprehensive analysis of interviews with villagers, village cadres and field chiefs in different villages in various districts of Hangzhou, we have summarized the following problems and disadvantages.

3.1. There are Problems in the Function and Use of Cultivated Land Intellectual Protection APP

In the use of cultivated land smart insurance APP, many villagers have operational skills problems, such as not knowing how to use the APP and not knowing how to download it. At the same time, the cultivated land intelligent protection APP itself still has some problems, and it is difficult to fully meet the needs of digital intelligent management. For example, the monitoring of punching routes has not been fully intelligent, and the benefits gained are difficult to query;

For some rural areas that are too remote, there is still the problem of incomplete signal coverage in mountainous areas, which is not conducive to the comprehensive development of digital APP use and digital management.

3.2. Publicity Efforts Need to Be Improved

Through investigation, it is found that people's participation and understanding of the farmland tenure system is not high enough, which is largely confined to village cadres and inspectors. Many farmers do not understand the relevant policies and measures, which leads to their inability to effectively participate in and support the work of protecting farmland. The farmland tenure system is worthy of publicity, and the limitations of village cadres and superiors should be broken, so that all villagers can widely understand the farmland tenure system. Besides the scope of publicity needs to be expanded, the forms of publicity need to be innovated, and the current publicity methods are more traditional.

3.3. The System Itself Has Some Shortcomings

First of all, in the process of implementing the tenure system, the incentive measures for the corresponding personnel are insufficient, which leads to insufficient motivation, insignificant short-term effect, tedious tasks but no salary increase, and low initiative in grassroots work.

Secondly, the system is not perfect, there is no specialized director and inspector, and most of them are village cadres, which not only increases the workload of village cadres, but also makes the director's manufacturing management mechanism lack of specialized personnel to implement.

Finally, the problem of funds, the imbalance of market regulation and control, is an important issue in the process of implementing the farmland tenure system. The implementation of the farmland tenure system needs comprehensive intelligence, and it is essential to build facilities such as probe monitoring. It is difficult for villages with large investment and underdeveloped economy to afford this expense. Therefore, the problem of funds has become an important factor hindering the comprehensive promotion of the farmland tenure system.

At the same time, the field-length system is implemented based on fields. In the process of cultivating fields, the choice of crops planted on cultivated land should be more based on market demand, but in some places, the market regulation is unbalanced, which leads to the decline of farmers' income, and the choice of crops planted is subject to human regulation.

3.4. Lack of Experience Exchange and Practical Innovation between Villages

In the process of implementing the system of intellectual protection of cultivated land, each village only carries out the practice within its own scope, and there is a lack of effective experience exchange and cooperation between different regions. This situation has led to the failure of some effective practices to be widely popularized and applied, resulting in a waste of resources and poor results.

What's more, the current long-term farmland protection system lacks the mechanism of practical innovation and experience summary, which makes it impossible for us to find and solve possible problems in time, and to improve the effect and benefit of the system through continuous improvement and progress. This situation not only restricts the further development of the system, but also hinders the continuous improvement and optimization of the system.

4. Suggestions on better Improving the System of Intellectual Protection of Cultivated Land

Problems are inevitable in the process of system operation. After fully understanding the problems existing in the process of implementing the farmland tenure system, the team

members put forward a series of suggestions to improve the development of farmland tenure system based on the research results and various materials, in order to better promote and carry forward the farmland tenure system and help rural revitalization.

4.1. Improve the Function of APP and Popularize the Use Method

Aiming at the problem that the function of APP is not perfect, we should develop and improve the related functions of APP, so as to make the processes such as point punching and route planning more intelligent. For the phenomenon that some farmers can't use APP to punch in and report the problems existing in the land, special training sessions should be held to explain the use of APP for farmland protection in detail, and at the same time, the communication internet infrastructure should be improved so that every village has the infrastructure conditions to realize intelligence.

4.2. Improve Publicity Efforts

Carry out innovative publicity in diversified ways, improve publicity efforts and expand publicity. For example, hold a publicity meeting to publicize and popularize the farmland tenure system for farmers, so that they can understand the system, implementation methods and effectiveness, or actively spread the importance of farmland protection and related policies and measures for farmland tenure system by means of social media and online and offline publicity, so as to improve farmers' awareness and participation in the system.

4.3. Improve the Articles of Association and Relevant Regulations

In view of the lack of incentive measures, government departments should give inspectors and other staff a certain amount of subsidies or public praise, do a good job in the corresponding salary and subsidies, and enhance their enthusiasm for using the field director system and digital APP for management. For the lack of special personnel for the field director, a unified and standardized field director system should be formulated, and trained professionals should be hired to engage in inspection and other related positions.

4.4. Develop Economy and Pay Attention to Market Demand

Support the economic and industrial development of each village, so that each village can have sufficient funds to equip relevant infrastructure and hire relevant talents for the long-term farmland protection system. At the same time, let the market fully participate in the village economic regulation, actively participate in agricultural product market research, understand market demand, advocate the establishment and improvement of market regulation mechanism, promote the reasonable and stable price of agricultural products, and reduce the influence of artificial regulation on farmers' planting decisions.

4.5. Enhance Experience Exchange, Relevant Cooperation and Innovation

Promote exchanges and cooperation among villages, guide villages to actively participate in the exchange of experience in farmland protection, let demonstration villages take the lead in sharing successful experiences, communicate and cooperate with farmers, experts, policy makers and other aspects, promote the sharing of successful experiences among villages around the country, and jointly explore and solve problems in farmland protection. At the same time, technical support can be provided. Some relevant people can apply their professional knowledge and technology to farmland protection, such as establishing agricultural science and technology demonstration bases, imparting advanced agricultural production technologies, and helping farmers improve the efficiency of farmland utilization.

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