Research on the Status and Development of Cultivated Land Quality Inspection Technology System

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Abstract. The quality inspection of arable land plays an important role in agriculture and is the premise for evaluating the quality of arable land. In recent years, with the country's emphasis on agricultural work and the continuous development of arable land quality inspection technology, China has gradually established an arable land quality inspection system. The development of agriculture has produced a greater impetus. Cultivated land quality inspection technology and management are the basis for the development of the industry. This article systematically discusses the development status and existing problems of arable land quality inspection, and points out corresponding countermeasures and methods to promote the further development of arable land quality inspection.

1. Preface
The construction of high-standard farmland is an important measure for the management of arable land in China. Based on the quality management of arable land in the construction of high-standard farmland, it is necessary to monitor the quality of arable land across the country, and based on the investigation of the quality of arable land, then put forward improvement strategies and measures. Cultivated land quality testing can provide land support, provide data support, and provide guarantee for high-standard farmland construction. This article explores the development ideas and countermeasures of the current problems and future development of the current cultivated land quality inspection system, thereby ensuring the quality of cultivated land and promoting agricultural modernization [1].

2. Arable land quality inspection technology system
The cultivated land quality inspection system is the data source for cultivated land quality monitoring, cultivated land quality assessment, and the reliability of the test results directly affects the cultivated land quality grading results. Without the data of cultivated land quality inspection as support, cultivated land management will also face difficulties.
In order to promote the protection of cultivated land quality, the Ministry of Agriculture has specially set up the cultivated land quality monitoring and protection center, so as to comprehensively promote the construction of cultivated land quality surveys, monitoring and evaluation, and other cultivated land protection and data platforms. Through the continuous expansion of quality system construction and monitoring outlets, land level investigations have been steadily advanced, and the scale of cultivated land quality construction has been continuously expanded. These achievements are inseparable from the support of cultivated land quality inspection systems.

3. Problems in the development of cultivated land quality inspection technology

3.1. Insufficient understanding of the importance of cultivated land quality inspection system
Due to the lack of effective publicity of the cultivated land quality monitoring system, some grassroots workers lack sufficient awareness of the importance of cultivated land quality testing, lack of enthusiasm and initiative in their work, and even individual units hand over land data testing and processing tasks. The completion of a third-party monitoring agency has led to a lack of accumulation of detection technology in agricultural systems and the possibility of further development.

3.2. Lack of response to integration of agricultural quality inspection agencies
The integration of agricultural quality inspection agencies and third-party quality inspection agencies is an important development trend in the future. Due to the nature of the work and the mechanism of operation, after the integration of quality inspection agencies, the work on soil testing of cultivated land is often weakened. Therefore, in the context of future integration of agricultural quality inspection agencies, how to determine the development direction of the agricultural cultivated land quality monitoring system and determine the fundamental functions to provide data support for cultivated land quality is one of the topics for future development.

3.3. Insufficient funding at the grassroots level and backward conditions make it difficult to meet future development needs
For the quality inspection of cultivated land, most provinces, cities, and counties at the current level have no corresponding special funding support for quality inspection institutions. In the operation of schedule funds, most of them need to rely on their own project funds to maintain the operation of the institution. Many grass-roots experiments the lack of special funds for the purchase of equipment in the laboratory affects the normal quality inspection work. On the other hand, due to the lack of sufficient promotion conditions at the grass-roots level, and the low salary of grass-roots workers, it is difficult to raise professional titles. Therefore, it is difficult to introduce high-education talents, leading to the problem of staff turnover at the grassroots level. In terms of equipment and instruments, due to less capital investment, slower equipment updating, and the equipment also has aging damage, extended service and other phenomena, which has brought difficulties to grassroots quality inspection.

3.4. Detection of imbalance between normative and system implementation
Although various regions have gradually established a quality inspection system for cultivated land, in the process of development, due to the lack of standard laboratories with strong technology, management practices and reliable data, the current inspection norms and systems are facing increasing tasks of cultivated land quality inspection. There is an imbalance in the degree of implementation. At present, the standardization of cultivated land quality is still far from the requirements. Regardless of the coverage of cultivated land testing and the number of laboratories, it cannot meet the requirements of high-standard farmland construction, and it cannot meet the growing demand for cultivated land quality assessment and testing tasks.
4. Suggestions for the development of cultivated land quality inspection

In order to ensure that the farmland quality monitoring system can comply with the development requirements of high-standard farmland construction, do a good job of collecting and organizing basic data for farmland quality assessment, and improve the scientific and technological level and management level of the farmland quality inspection system, so as to provide basic support for high-standard farmland construction. Make the following development suggestions.

4.1. Strengthen the top design of cultivated land quality inspection

In the context of the comprehensive implementation of the rural revitalization strategy, it is necessary to strengthen the top-level design of the quality inspection of cultivated land to ensure the normal operation of the quality monitoring of cultivated land. It is necessary to check the quality control of the inspection unit through quality monitoring inspection and supervision, urge the quality inspection unit to provide high-level and high-quality quality supervision work, clarify the standardization assessment mechanism of cultivated land quality, and connect the quality monitoring, investigation and evaluation and construction of cultivated land. Work steps. At the same time, in accordance with the actual situation in each region, supervise the formulation of the regional inspection system, improve the construction of the inspection system, and lead the supervision and inspection summary to promote the continuous monitoring of the quality of cultivated land.

4.2. Continuously promote standardized management of cultivated land quality inspection system

Through investigation, it is found that the current standardization of management and assessment of cultivated land quality still needs to be further standardized and improved in the future. In the future, standardized management systems will still be required to build standardized laboratories that meet high quality standards and form typical experiments. It is a model for the construction of laboratories to promote the standardized construction of cultivated land quality monitoring system management in a point-by-point manner, thereby promoting the overall improvement of national quality inspection management and technology [2].

4.3. Strengthen the construction and support of the detection system

In the future, government departments and agencies should play the role of technical guidance and management to promote and strengthen the construction of basic-level laboratories. In terms of talent reserves, through basic theoretical research and testing practice, we will strengthen the training of relevant personnel to build a testing technical team that meets high quality standards. In terms of test quality, strengthen the spot check and assessment mechanism, introduce effective methods and systems to strengthen test quality control, establish a sound management personnel training, and expert introduction mechanism to stabilize the testing system talent team [3]. Optimize the fund management mechanism in laboratory construction, improve testing service capabilities, and improve corresponding rules and regulations to establish a sound quality management system.

4.4. Strengthening Cultivated Land Quality Inspection and Propaganda

The cultivated land quality monitoring project is closely related to the development of agriculture. In order to gain more attention from the society, to ensure the construction of the cultivated land quality monitoring system, to obtain more policy guarantees and financial support, the publicity of cultivated land quality monitoring should be strengthened. Through the establishment of an active and effective publicity work mechanism, all departments should take the initiative to undertake the related work of cultivated land quality inspection and publicity, and do a good job experience summarization, and clarify the cultivated land quality information release system, thereby arousing social support for cultivated land quality inspection work [4].
5. Conclusion
Cultivated land is the foundation on which agriculture is developed. With the process of urbanization and industrialization, the amount of cultivated land, the quality of cultivated land, and its ecology have been threatened. At present, it has become a consensus to evaluate the quality of cultivated land and the quality inspection of cultivated land. In order to meet the needs of high-standard farmland construction, in view of the development of cultivated land quality inspection system, this article discusses the development background of cultivated land quality inspection and discusses the quality of cultivated land quality inspection Importance, and in accordance with the current problems of cultivated land quality inspection, propose specific solutions and suggestions, provide theoretical guidance for the future construction and development of cultivated land quality, and thereby promote the orderly development of cultivated land quality inspection. In the future, it is necessary to use high-tech means to carry out effective technical promotion for high-standard farmland quality inspection, and at the same time seek construction funds and invest in cultivated land quality inspection projects to meet the continuous progress and development of cultivated land quality inspection technology.

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