

Problems and Countermeasures for the Protection of Agricultural Heritage in China

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Abstract With the rapid development of modern agriculture, China has increasingly attached importance to the protection and development of agricultural cultural heritage, but it has encountered severe challenges in reality. By analyzing the connotation and current situation of agricultural cultural heritage, to address the issues faced by China, such as imbalanced theoretical and practical development, difficulty in grasping the boundaries of protection and development, inadequate research and management mechanisms, large funding gaps, lack of talent, and insufficient international influence, targeted solutions are proposed based on relevant information and literature. This aims to strengthen the protection, activation, and inheritance of agricultural cultural heritage.

Keywords Agricultural cultural heritage, Ecological protection, Sustainable development, Rural revitalization

DOI 10.16785/j.issn 1943-989x.2023.4.014

With the rapid development of agricultural industrialization, modern agriculture brings convenience to people. Meanwhile, people have gradually discovered that with the rapid development of agricultural technology and the increasing demand for increased production, people are eager to pursue yield and variety diversification, and excessive use of chemical substances such as pesticides and fertilizers in agricultural production has led to the risk of decreased product quality and species reduction in the agricultural industry. In response to this situation, the Food and Agriculture Organization of the United Nations (FAO) launched the project of “Global Important Agricultural Heritage” (GIAHS) in 2002, and the protection of agricultural heritage has gradually received attention from countries and people around the world. The organization believes that agricultural heritage refers to the land use system and agricultural landscape formed by rural areas and their environment in the process of long-term dynamic adaptation and collaborative progress, with rich biodiversity and agricultural forms that can meet the sustainable development of economy, culture, and region in the area.

Although people are increasingly valuing the protection of agricultural heritage, there are still enormous challenges in practice. As a form of agricultural heritage, traditional agriculture also has the characteristics of agricultural heritage, reflecting the economic, social and cultural development process in the region over a long period of historical development. With the rapid development of society and the transformation of people’s consumption patterns, traditional agriculture has gradually fallen behind the pace

of social development, and has been replaced by modern industrialized agriculture. Therefore, protecting agricultural heritage is of great importance. In practice, it has been found that due to the late start and slow progress of China’s agricultural heritage protection, there are not only significant theoretical shortcomings, but also many problems in practical operation. So, how to protect agricultural heritage while meeting the needs of social development and being accepted by people is an important issue.

1 Literature review

With the gradual rise of agricultural cultural heritage protection, the connotation of agricultural heritage is gradually improving and expanding. The connotation of agricultural cultural heritage can be divided into narrow and broad meanings. Yuan Li^[1] defines agricultural heritage in a narrow sense as the agricultural experience accumulated by people from the past to the present. Wang Siming et al.^[2] believe that agricultural heritage should include a collection of valuable material and intangible components that people have acquired and inherited through long-term agricultural labor. Min Qingwen et al.^[3] regard agricultural heritage as a broad agricultural heritage in their research, including agricultural sites and agricultural landscapes, and further emphasize the systematic nature of agricultural heritage. Currently, scholars generally agree that China’s agricultural cultural heritage resources can be divided into 10 main types: agricultural site, agricultural species, agricultural engineering, agricultural landscape, agricultural settlement, agricultural tool, agricultural technology, agricultural literature, agricultural

specialty, and agricultural custom, and each type includes many forms of categories^[3]. Landscape agricultural cultural heritage includes agricultural land (farmland) landscape, forestry landscape, animal husbandry landscape, fishery landscape, composite agricultural system, etc^[4].

In the protection of agricultural heritage, “what to protect” and “how to protect” are issues that run through the protection of agricultural heritage. In the protection of major agricultural cultural heritage, Min Qingwen think that it should not only focus on revealing the formation process, connotation, and importance of such cultural heritage, but also pay attention to the theoretical development and practical exploration of agricultural cultural heritage protection. The above research mainly focuses on the overall understanding of the disciplinary connotation and concepts of agricultural cultural heritage^[5]. At the same time, there are studies that point out potential problems in the protection of agricultural cultural heritage from a practical perspective, focusing on the process and difficulties of China’s agricultural cultural heritage protection, and further sorting out the eight groups of relationships that should be paid attention to in agricultural cultural heritage^[6]. In response to these challenges, some studies have proposed adopting corresponding evaluation systems based on different agricultural heritage resources^[7]. Some scholars start from the perspective of development adaptability, and believe that improving the protection and development effectiveness of agricultural cultural heritage should be based on analyzing its value^[8]. He Siyuan et al.^[9] attempted to explore effective tools for protecting traditional agriculture from

a community perspective. Despite extensive research on the protection of agricultural cultural heritage, due to its short development time and diverse types, there are still many unresolved issues in the protection of agricultural cultural heritage.

2 Current situation of agricultural cultural heritage protection in China

In the protection and development of agricultural cultural heritage, China has made certain achievements. From past research and analysis of actual situations, it can be concluded that the current status of protection and development of agricultural cultural heritage in China is as follows:

2.1 Strong policy support

Many regions with agricultural cultural heritage have established specialized working groups to manage the protection and development of agricultural cultural heritage, which have been quite effective. For example, Xiuning in Anhui Province has established a dedicated working group to manage agricultural development in the region since it successfully declared and became an agricultural cultural heritage in 2015. In the protection of agricultural cultural heritage, China actively participated in and responded to the call of the United Nations. In 2012, standards for the recognition of agricultural cultural heritage were formulated, and nationwide selection began. Relevant documents such as the *Management Measures for Important Agricultural Cultural Heritage* were successively issued, and relevant census work was carried out. In recent years, it has been repeatedly mentioned in important documents that it should actively carry out and strengthen the protection and development of important agricultural cultural heritage. The introduction of these policies and documents has provided strong policy support for the protection of agricultural cultural heritage.

2.2 Robust protection process

The protection of agricultural cultural heritage should be steadily promoted, combine with national policies on the basis of sustainable development, and adapt to local conditions. Based on this, China has pioneered the selection of agricultural cultural heritage, and increased support and investment in agricultural cultural heritage demonstration. In the development and protection of Duotian agriculture, the local government actively coordinates and cooperates with villagers, and attempts to introduce professional tourism companies and local state-

owned enterprises for management. It is actively exploring a form of protection and development that can not only meet the demands of local people, governments, and enterprises, but also achieve sustainable development.

2.3 Extensive scientific popularization

In the promotion of agricultural cultural heritage protection work, scientific popularization can enable people and enterprises to better understand and support government related work, so scientific popularization also occupies an important position. In practice, various regions actively implement relevant requirements and promote the knowledge and importance of agricultural cultural heritage protection through exhibitions, lectures, and other forms in the protection of agricultural cultural heritage. They also promote the protection and development achievements through filming. In the science popularization activities, the formation of columns and related promotional materials such as the *Enlightenment of Agricultural Heritage* has made significant contributions to the protection and development of China's agricultural cultural heritage.

3 Problems

3.1 Unbalanced development

In the protection of agricultural cultural heritage, it is necessary to balance both theory and practice, as well as benefits and protection. In the actual protection of agricultural cultural heritage, on the one hand, due to China's late start and the lack of exploration and improvement of theories and policies, understanding and grasping the theory requires a process. In interviews with farmers and management departments, scholars found that only half of the respondents are aware of the connotation and protection requirements of agricultural cultural heritage. When people's cognition deviates or falls behind the scale of development, lacking corresponding theoretical guidance, it can lead to errors or failures in protection and development measures. On the other hand, in the process of development and protection, with the continuous expansion of development scale, the original industrial structure is no longer able to meet the needs of commercialization. As a result, problems such as environmental pollution and ecological damage have emerged in some regions due to the excessive development and misuse of pesticides, antibiotics, and other chemical substances in agricultural cultivation; in the process of commercialization, due to the introduction of modern agricultural technology, production

methods have changed, resulting in significant differences from traditional local agricultural forms. In fact, this is contrary to the original intention of protecting agricultural cultural heritage. For example, in the Xiuning area of Anhui Province, with the continuous deepening of development and commercialization, local fish farmers have introduced modern intensive fish farming technology to meet the needs of development. They have expanded yield by feeding modern feed, using modern drugs, and expanding the scale of farming. Although this method is suitable for commercialization, it is far from the original pond fish farming model, and traditional fish farming methods are gradually being replaced. In fact, this has had a negative impact on the protection of agricultural cultural heritage. Similarly, the development of agricultural heritage in some regions overemphasizes protection and restoration, emphasizing protection over utilization, neglecting the development needs of the local area and people, resulting in a lack of infrastructure and spare parts construction.

3.2 Unclear mode

Although many scholars have conducted research on agricultural cultural heritage, there are currently no authoritative and reasonable protection and development requirements and models due to differences in actual situation among different regions. Based on this situation, many deviant behaviors have emerged in the protection of agricultural cultural heritage in various regions. For example, in the protection and development of Duotian cauliflower, due to the neglect of the essential requirements for the protection of agricultural cultural heritage, the introduction of tourism management companies focused on economic efficiency and neglected the agricultural essence of Duotian, resulting in poor utilization of Duotian during the off-season of tourism^[10]. Throughout the protection and development of agricultural cultural heritage in China, there is often a homogenization model. Although this highly homogenized business model lack of innovation can achieve certain results in the short term, it will pose certain obstacles to the development of tourism resources and development transformation in the long run.

3.3 Insufficient funds

Due to the characteristics and connotations of agricultural cultural heritage, a large amount of funds need to be invested in the protection of agricultural cultural heritage. The recognized important agricultural cultural heritage in China covers multiple poverty-stricken areas and deep

poverty-stricken areas of ethnic minorities, which lack development facilities and face difficulties in promoting heritage protection. Although the Chinese government has introduced relevant policies, the protection and development of agricultural cultural heritage largely rely on sustained government funding subsidies, and the high expenses have led to a decrease in the enthusiasm of local governments for excavation and declaration of agricultural cultural heritage. In economically difficult areas, the government, which is already lacking in funds, finds it more difficult to take into account the protection of agricultural cultural heritage, and there are significant financial issues with agricultural cultural heritage in most regions.

3.4 Incomplete mechanism

This involves two aspects, one is the inadequate protection mechanism, and the other is the inadequate operational mechanism. Currently, the protection of agricultural cultural heritage mainly relies on local governments. As a grassroots government, it is relatively backward in management, funding, technology, and other aspects, and the investment mechanism is not sound. Most governments have not yet introduced detailed protection regulations for agricultural cultural heritage, and the management and monitoring mechanisms are not sound, and a normalized mechanism has not been formed^[11]. At present, government departments still play a leading role in developing and protecting agricultural cultural heritage. It has not fully realized the role of farmers as the main body of agricultural cultural heritage in the protection and development process, and advanced social experience has been rarely introduced, and a sound long-term management mechanism has not been formed.

3.5 Insufficient influence

The concept of protecting agricultural cultural heritage has been recognized by the international community and many countries. In the protection and development of agricultural heritage, there is still a lack of international conventions. Whether it has a significant international influence will determine whether it has a greater voice in the formulation of international conventions in the future. Currently, countries such as Japan and South Korea are fiercely competing for international discourse in the international community. As a country with a long history of agricultural civilization, China should also play its role in the field of agricultural heritage^[12].

3.6 Incomplete talent

Currently, research on agricultural cultural

heritage mainly focuses on independent disciplines, lacking comprehensive research across multiple disciplines and academic integration among scholars. This leads to incomplete research on agricultural cultural heritage. The protection and development of agricultural cultural heritage involves not only the protection of agricultural cultural heritage, but also various issues such as driving regional economic growth and environmental and ecological protection. It requires comprehensive and interdisciplinary theory and comprehensive talent support. Additionally, the current practitioners in agricultural cultural heritage are mostly local migrant farmers, who often lack systematic and comprehensive training on relevant knowledge and skills, and there may also be certain obstacles in the protection and development activities. In addition, due to insufficient fund in the aforementioned heritage sites, it is also difficult for the region to cultivate practical and comprehensive heritage management and technology talents.

4 Suggestions for continuously promoting the protection of agricultural cultural heritage

4.1 Maintaining balance and achieving comprehensive development

As an agricultural heritage project, there is no doubt that agricultural production is the essence and starting point of agricultural heritage. In the protection and development of agricultural cultural heritage, it is not only necessary to comprehensively integrate the issues between protection of heritage and economic, social benefits, but also to pay attention to the inheritance and utilization of traditional agricultural activities in the development of tourism, actively combining tradition with modernity, and promoting long-term balance of agricultural ecosystems. At the same time, attention should also be paid to promoting the joint development of theory and practice. Governments and research institutions should pay attention to the combination of practice and theory, forming a development model that theory guides practice and feedback theory from practice.

4.2 Actively exploring and innovating model

The reasonable utilization of agricultural cultural heritage is related to the realization of its economic and ecological value. In the current research on the development of agricultural cultural heritage, most of it focuses on tourism development models such as tourist resorts and

“farmhouses”. However, as a carrier of regional civilization with a long history and profound cultural heritage, agricultural cultural heritage can be developed from more aspects, such as from the perspectives of “research” and educational bases. In addition, in order to protect the agricultural experience and ecological wisdom of ancestors, promote regional economic development, and increase people’s income, it should further explore development models and requirements that are more adaptable and have a wider degree of development.

4.3 Increasing investment and introducing capital

In the protection of agricultural cultural heritage, the central government has provided certain financial support for the protection and development of these projects. In order to better protect and develop, local government departments need to strengthen their attention to agricultural cultural heritage, increase financial investment, and encourage development; the central government should also increase its support and assistance to impoverished areas. At the same time, it should actively encourage the investment of social capital in the protection and development process, and actively explore new models of cooperative development with social capital based on the PPP (Public-Private Partnership) model.

4.4 Establishing sound mechanism and making reasonable use of them

Heritage sites should establish specialized management agencies for various aspects of heritage protection and development, provide stable economic and talent protection for project protection and development, establish and improve relevant management regulations and protection and development requirements, and also develop monitoring and evaluation mechanisms. It should clarify the main position of farmers in heritage protection and development, actively guide them to find employment in project development, introduce advanced management experience and models from society and enterprises, integrate various resources and advantages, and promote the development of agricultural brands and agricultural characteristics.

4.5 Cultivating talents and integrating scientifically

On the basis of fully grasping the connotation of agricultural cultural heritage, it should actively absorb the advanced achievements and research methods from other fields, and gradually form a research system for the protection and development of agricultural cultural heritage.

Agricultural cultural heritage projects should be established in key research plans, and it should encourage interdisciplinary and multi-dimensional integration of research, and form long-term research mechanisms through platforms such as workstations and cultural centers. At the same time, it is also necessary to actively integrate with the achievements of the world agricultural cultural heritage, actively build a world cultural heritage community, and enhance China's influence in the field of world agricultural cultural heritage. Demonstration zones for the protection and development of agricultural cultural heritage should be developed in areas with good development levels, to exchange experiences in protection and development. Scientific and systematic education should be conducted for grassroots management personnel and practitioners to improve their professional skills and management abilities.

5 Conclusions

Agricultural cultural heritage, as a product of social development and a carrier of civilization inheritance, occupies an important position in the long history of China. Today, with the rapid development of modern agriculture, retaining the imprints of these times and preserving the memories of these times make the protection and development of agricultural cultural heritage particularly important. The protection and development of agricultural cultural heritage is not the work of any individual or government. It requires everyone to actively make their own contributions and the attention of society.

In the current protection and development of agricultural cultural heritage, there are many problems such as imbalanced development, insufficient funds, and talent shortage, which hinder the protection and development process of agricultural cultural heritage. These problems put forward higher requirements, and it requires more efforts to face these challenges. People are required to actively explore the disciplinary system and protection and development models of agricultural cultural heritage protection in the process of continuous exploration. It is worth noting that it should always adhere to promotion in the essence of agricultural cultural heritage when guarding innovation, and always prioritize protection in the process of protection and development.

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data due to its high demand for data^[9]. Multi-source data is used to study the current situation of slow traffic system in urban areas, and corresponding solutions are proposed, further proving the feasibility and effectiveness of using multi-source data analysis methods. It could provide suggestions for planning and improve the level of planning services.

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