Scholar Publishing Group
Academic Journal of Agricultural Sciences
https://doi.org/10.38007/AJAS.2023.040101
ISSN 2789-8415 Vol. 4, Issue 1: 1-12

Protection of Agricultural Cultural Heritage: A New Opportunity for the Development of Ecological Agriculture

Qinwen Peng and Bin Zhang*

Jilin Business and Technology College, Changchun, China

**corresponding author*

Keywords: Ecological Agriculture Development, Agricultural Cultural Heritage Protection, Analytic Hierarchy Process, Value Evaluation Framework

Abstract: Ecological agriculture is a complex system involving biology, society and economy. It has unique advantages in providing ecosystem services, producing a variety of ecological agricultural products and protecting the environment. The researchers gradually realize the importance of protecting traditional agricultural technology, biological resources and agricultural landscape in the process of developing ecological agriculture. The protection of agricultural cultural heritage cannot only promote the development of ecological agriculture to preserve biological diversity, but also provide material basis and technical support for the development of ecological agriculture. Based on the analysis of the development of China's ecological agriculture and the composition of the value of agricultural cultural heritage, this paper takes the protection of agricultural cultural heritage in an ecological area as the research core, and constructs the value evaluation framework of its agricultural cultural heritage by using the analytic hierarchy process. This paper chooses index weight from different value dimensions of agricultural cultural heritage, such as economy, ecology, history, technology and culture. The results show that the weight value of "economic value" in the value framework of agricultural cultural heritage protection in this paper is the maximum value of 0.271, and the weight of "culture value" is a minimum of 0.151. The protection and development planning of eco-tourism development and industrial development based on the research results, which is suitable for the characteristics of the ecological area, is of certain significance to the protection of agricultural cultural heritage and the development of eco-agriculture.

1. introduction

Ecological agriculture has been widely accepted. Countries around the world have chosen

different strategies, paths and conditions for agricultural ecological transformation according to their social background [1-2]. The development of ecological agriculture has become a research hotspot. Efficient ecological agriculture cannot only alleviate the pollution of modern agriculture to the environment, but also meet the human demand for food and health with high-quality and high-yield food [3-4]. Serban A C [5] believes that agricultural transition is an inevitable requirement of Romania's sustainable development society. The author studies and determines the current situation and progress of the integration process of organic agriculture in Romania and the main factors restricting the development of the sector. The research results show that there is convergence in ecological agriculture, emphasizing the importance of continued efforts of the private and public sectors. Srivastava P [6] thinks that it is necessary to think from the "overall level" to achieve sustainable agricultural ecosystem, and proposes to establish a "commercial ecological agriculture" combining with sustainable agricultural practice, which is gradually coordinated and supported by all stakeholders through participatory learning and time adaptation. Senlin Zhu [7] studied the development model of ecological agriculture of "shigu mushroom for controlling edible fungus in Rocky Desertification", analyzed the cultivation effect of shigu mushroom in rocky desertification land, and prospected its application prospect in rocky desertification area of Guizhou Province. Zhang J [8] constructed the dynamic mechanism model of Fujian Taiwan eco agriculture collaborative innovation according to the different effects of internal and external factors. He proposed the path selection of full communication and sharing of innovation knowledge from the perspective of integration and interaction, mutual coordination and optimization of resource allocation, mutual cooperation and seeking the optimal synchronous behavior, etc. to achieve comprehensive cooperation and high-level system matching. However, the development of ecological agriculture in China has entered a bottleneck period. Zhang [9] analyzed the characteristics of ecological agriculture and the problems existing in the sustainable development of ecological agriculture economy, and designed the ecological economic symbiosis mode to improve the economic benefits of ecological agriculture. The long history of agriculture has left China rich agricultural heritage. The protection of agricultural heritage is of great significance to the sustainable development of agriculture and rural areas in China. The protection of agricultural cultural heritage has become a serious and urgent issue [10-11]. Based on the analysis of the advantages and challenges of China's agricultural ecological transformation, Shi Ming [12] put forward the strategies and Strategies of China's agricultural ecological transformation. Li [13] analyzed the function and value of AHSAECs, discussed the essence of AHSAECs sustainability, and put forward the countermeasures against the current unsustainability of AHSAECs. The results show that AHSAECs system has strong ecological stability, rich cultural connotation and good comprehensive benefits. Based on a review of the development of agricultural heritage system in China, Jiang w [14] discussed the challenges faced by the agricultural heritage system in China, with a view to providing suggestions for the protection and management of the agricultural heritage system in the future.The global important agricultural heritage system designated by the FAO since 2002, and the national important agricultural heritage system certified by the Ministry of agriculture of China since 2012 have faced the problems of why to protect, what to protect and who to protect [15]. The protection of agricultural cultural heritage has gradually attracted the attention of ecological agricultural researcher. India is one of the oldest agricultural civilization heritages in the world. Singh AK [16] briefly introduces 48 agricultural heritage systems distributed in different agricultural ecosystems in India, and appraises, characterizes and evaluates the scientific and economic potential of these agricultural heritages. Sun Y [17] discussed the problems in the field of agricultural cultural heritage tourism, the uniqueness of agricultural cultural heritage tourism, and the enthusiasm and lack of the development of agricultural cultural heritage tourism in China. Zhang A [18] studies the attitude of residents towards agricultural cultural

heritage by establishing a relationship model between residents' perception of impact and participation attitude. The results of the model show that the perception of the impact of agricultural livelihoods has a significant positive impact on the residents' attitude towards heritage protection, while the perception of the impact on non-agricultural livelihoods has a significant positive impact on the residents' attitude towards heritage protection and tourism development. Based on the study of the current situation of agricultural cultural heritage in Wuhan, Lei [19] put forward some suggestions for the existing problems in the protection of species agricultural cultural heritage in Wuhan. Wei C[20] put forward the countermeasures and suggestions to promote the coordinated development of tourism development and protection of Longji terrace, providing a reference for the tourism development of Longji terrace and the protection of agricultural cultural heritage. Wei j [21] analyzes the internal relationship between the construction of beautiful villages and the protection of agricultural heritage, discusses the adverse effects of the construction of beautiful villages on the protection of agricultural heritage from the aspects of government performance, land policy, planning level, etc., and finally puts forward the Countermeasures for the development of beautiful villages based on the protection of agricultural heritage to realize the coupling of the two. From the perspective of farmers' behavior, Yang l [22] investigated farmers' planting situation and factors influencing farmers' planting selection in the Honghe Hani terrace system of the global important agricultural heritage system, and established an incentive mechanism to increase the proportion of red rice planting from farmers, communities and local governments, so as to realize the dynamic protection of red rice planting. Liu Q [23] divides various traditional agricultural implements from four dimensions: use function, historical period, agricultural geographical characteristics and application object, and establishes a coherent and reasonable classification system, which is an important support for the evaluation of agricultural cultural heritage.

AHP can be used to quantify the experts' experience judgment and finally combine the qualitative and quantitative methods to increase the correctness of the evaluation analysis, which has been widely used in various fields. In order to explore the methodology of the value evaluation of the earth buildings of non-world heritage sites, Ma H [24] applied the analytic hierarchy process to the value evaluation of the earth buildings of Pinghe River, providing the basis for the reuse of the earth buildings. In order to determine the strategy and ethics for the sustainable development of Iran's agricultural and food systems, Veisi H [25] adopted the analytic hierarchy process to establish a hierarchical network for selection based on utilitarianism, rights and virtue models. The results show that the standards of resilience, supporting policies, self-reliance and equity of agricultural system are the most important standards for sustainable agriculture in Iran. Gao P [26] proposes an ahp-fmadm method for comprehensive evaluation of urban ecological security by combining fuzzy multi-attribute decision making with analytic hierarchy process. This method reduces the impact of low importance attributes and increases the impact of high importance attributes. It can help decision makers to determine alternative adaptation schemes and management schemes according to their preferences.

In order to solve some problems faced by ecological agriculture, this paper first discusses the development of ecological agriculture from the perspectives of production, ecology and culture; and extracts the elements of the value of agricultural cultural heritage based on the analysis of the connotation and characteristics of the value of agricultural cultural heritage. Then, AHP is used to classify the agricultural cultural heritage and determine the weight value of each index, so as to build a scientific and reasonable structure framework of agricultural cultural heritage protection from different dimensions.

2. Method

2.1. The Development and Influencing Factors of Ecological Agriculture in China

Providing various supports for food and nutrition security and livelihood, the global agricultural system and agricultural landscape have been sustainably maintained and developed among generations of farmers since ancient times. China's ecological agriculture has become more and more perfect in both connotation and practice methods through the practice and research in recent decades,, forming a theoretical and technical system with China's characteristics for the development of ecological agriculture. The development of China's agriculture for thousands of years has formed a rich and diverse agricultural region, which has strong socio-economic and natural regional characteristics. It promotes the development of ecological agriculture in modern society to the direction of agricultural diversification. Researchers began to pay attention to the value of ecosystem services of agricultural production. In order to promote the effective integration of agricultural production and industrial development and finally form a virtuous cycle of ecological economy, the theory of ecological economics is used to develop ecological agriculture in the process of practice. In the process of implementing ecological agriculture, we should take the protection of ecology as the prerequisite, and optimize the resource allocation of agricultural production. The factors that affect the development of ecological agriculture include internal and external factors, including ecological resources, human resources, industrial development level and other factors. External factors include social economy, market demand, management factors, etc. The richness of ecological resources and the types of ecological resources play a decisive role in the type and spatial layout of agricultural ecological development. Abundant ecological agricultural resources can provide raw materials for high-quality production for the development of ecological agriculture and provide the basis for the development and design of ecological agricultural products. Human resources include the quality and quantity of labor force. The resources are the main input factors for the development of ecological agriculture, the status of human resources affects the output efficiency of ecological agriculture and the protection and coordinated development of ecological agriculture. The approaches to the development of ecological agriculture can be summarized as follows:

1) To realize the development of ecological agriculture by expanding the production function of ecological agricultural products: The quality of agricultural products and the pollution of production environment are two important issues concerned by ecological agriculture. It is necessary to take healthy, high-quality and safe agricultural products as the core in the process of the development of ecological agriculture, give full play to the production advantages of green agricultural products, and combine the negative benefits of pollution with the traditional china's agricultural cultural heritage as the positive benefits of resources. Based on a good ecological environment and product standardization as the main means, the ecological security, resource security, agricultural product security and agricultural comprehensive benefits are integrated.

2) Through the expansion of ecological functions, we can realize the win-win of ecological and economic benefits, improve the product development of the added value of the quality of ecological agricultural products, reasonably optimize the agricultural structure and form a virtuous industrial chain among the production links, and further improve the economic benefits of ecological agriculture, so as to reflect the rich and colorful service functions of China's agricultural natural resources and ecosystem.

3) To realize the development of modern ecological agriculture through the expansion of agricultural culture functions, to make rational use of the culture regional characteristics of agricultural products and the resources of national culture, historical geography and culture

background, to effectively develop local economy and inherit and spread the agricultural cultural heritage, and to provide the basis for the protection of the diversity of modern ecological agricultural culture and the development of agricultural culture industry.

An important aspect of the development of modern ecological agriculture is the protection of agricultural cultural heritage based on the analysis of the development and characteristics of ecological agriculture in China. On the basis of the protection of agricultural cultural heritage, we can fully tap the potential of ecological agriculture, especially the expansion of its ecological and culture functions, which can continuously provide impetus for the development of ecological agriculture in China.

2.2. The Value Analysis of the Agricultural Cultural Heritage

China has been a traditional agricultural country since ancient times, the agricultural cultural heritage is one of the important materials to support China's agricultural civilization. Agricultural cultural heritage is to express the living agricultural cultural heritage for some agricultural projects representing the characteristic or profound significance of agricultural culture. Agricultural cultural heritage is the main body of the earth ecosystem, which plays an important role in regulating the ecological environment of the whole world. Agricultural cultural heritage includes not only agricultural culture and knowledge technology, but also traditional agricultural landscape and agricultural ecosystem. All kinds of agricultural tools mark the continuous inheritance and sustainable development of agricultural production technology. Once the agricultural biodiversity and traditional agricultural knowledge and technology in agricultural cultural heritage disappear, the unique environment and cultural benefits of agricultural cultural heritage will disappear.

Agricultural culture heritage protection cannot only protect the agricultural biodiversity, but also preserve the traditional agricultural landscape for the development of modern ecological agriculture, and further maintain the recoverable ecosystem. The protection of agricultural cultural heritage is mainly to protect the sustainability of agricultural ecosystem, multi-functional services and traditional cultural services. Therefore, the protection of agricultural cultural heritage is not only to protect traditional culture, but also to provide opportunities for the sustainable development of agriculture. The protection of agricultural cultural heritage mainly focuses on the realization of the technical value of agricultural culture and the preservation of the existence of agricultural production mode. Among them, agricultural instruments, agricultural farming methods and production experience all represent the technical value of agricultural cultural heritage and provide stable guarantee for the livelihood of farmers. At the same time, the direct and indirect economic value brought by agricultural and sideline products, related tourism income and the employment and urbanization income brought by the related agricultural industrial structure. The main values of agricultural cultural heritage are as follows:

1) The culture functions formed by human beings are the unique spiritual characteristics and culture genes formed in agricultural activities in the long-term agricultural activities. The cultural functions of agricultural cultural heritage protection are the basis of forming national consciousness and national culture.

2) Agricultural cultural heritage has the characteristics of biodiversity, so one of the most distinctive functions of agricultural cultural heritage protection is to expand the ecological functions of the complex ecosystem. The protection of agricultural cultural heritage can realize the continuity of different species and the transmission of biological genes; at the same time, it can promote the optimization of ecological environment, and finally realize the harmonious coexistence of human and nature.

3) The agricultural production mode and agricultural culture passed down from generation to

generation reflect the characteristics of agricultural cultural heritage in different historical periods. The protection of agricultural cultural heritage is conducive to people's understanding of the history of agricultural development, as well as research on the development level of social economy and politics related to agriculture.

4) The corresponding agricultural products such as agriculture, animal husbandry and fishery can be obtained through the animal and plant resources, land and other resources of the agricultural cultural heritage site. The relationship between the protection of the agricultural cultural heritage and the utilization of the agricultural culture can be handled. The ecological balance of the protection of the agricultural cultural heritage can be realized by strictly controlling the resources.

An important direction of the development of modern ecological agriculture is to develop multi-functional agriculture, and the most important one is to expand the cultural and ecological functions of agricultural cultural heritage protection.

2.3. Construction of Agricultural Cultural Heritage Protection Value Evaluation Framework

The evaluation index system of agricultural cultural heritage protection established in this paper is a multi-level structure framework of value evaluation, which is composed of interrelated evaluation factors. AHP is used to decompose the evaluation factors of the value of agricultural cultural heritage layer by layer in this paper, and then the internal logical relationship between the evaluation factors is taken as the standard to further classify and arrange the specific hierarchy structure framework of the protection value of agricultural cultural heritage. The specific construction steps are as follows:

1) Establish the evaluation framework of agricultural cultural heritage value, and use AHP analytic hierarchy process to layer the evaluation framework of agricultural cultural heritage value, which is generally divided into the target layer for specific evaluation objects; the criteria layer combining the basic value types of various agricultural cultural heritage attributes; the indicator layer directly carrying out quantitative calculation for the specific evaluation of the criteria layer.

2) According to the evaluation framework of agricultural cultural heritage value, the value weight of the indicators is specified, and the evaluation index value which is clear-cut and can be directly quantitative is selected on the basis of stratification. Confirm the index system by describing the value characteristics of the evaluation object without crossing each other.

3) The multi-objective linear weighting function is used to carry out comprehensive evaluation and establish the evaluation model of agricultural cultural heritage protection in this paper. The function expression of the evaluation model is: $A = \sum_{j=1}^{m}(\sum_{i=1}^{n} D_i C_i)B_j$

In this expression: the total evaluation score is represented by A; the score value of the ith indicator is represented by D_i; the weight of the ith indicator is represented by C_i; the weight of the jth criterion level indicator is represented by B; the number of indicators in the indicator level is represented by n.

4) By quantifying each evaluation index and refer to relevant national standards and industry standards, establish a corresponding evaluation index scoring standard.

Guided by the various values of agricultural cultural heritage, AHP is used to get the hierarchical framework in this paper, combined with the characteristics of the agricultural cultural heritage value connotation, and other evaluation indicators are selected. Finally, an evaluation framework of agricultural cultural heritage value is established, which provides some strategies for the realization of ecological development.

3. Practice of the Agricultural Cultural Heritage Value Evaluation Framework

In view of the problems existing in the development of ecological industry in an ecological

agricultural area, this paper combines the internal and external factors of ecological agriculture, and obtains the corresponding data of each factor from the perspective of ecology, human resources, industrial development level and market demand, combined with the five dimensions of agricultural cultural heritage existing in the ecological agricultural area as the data basis for further analysis.

3.1. The Steps to Build the Value Model of Agricultural Cultural Heritage Based on AHP

1) Index selection, agricultural culture heritage is divided into four layers generally: target layer, one criterion layer, sub criterion layer and index layer. The decision-making results are obtained through the hierarchical analysis finally. The protection of agricultural cultural heritage in eco-agricultural area is regarded as the goal of the model in this paper, and "the value of agricultural cultural heritage in eco-agricultural area" is selected as the target layer of the analysis model; Then, analyzing from the internal and external factors of the development of eco-agricultural industry, the cultural value, ecological value, historical value, economic value and technical value existing in the protection of agricultural cultural heritage in this ecological agricultural area are taken as the criterion layer of the model in this paper; Each factor of the first level index layer is specified and used as the second level evaluation index; The decision results are obtained through analysis finally.

2) Selection of evaluation indicators, select evaluation factors according to the evaluation indicators of agricultural cultural heritage value in the previous step, and classify and rank the internal logical relationship between evaluation factors.

3) Select the evaluation indicators of each dimension of agricultural cultural heritage value evaluation framework.

3.2. Establishment of Agricultural Cultural Heritage Value Indicators

According to the analytic hierarchy process, through literature review and on-the-spot investigation of the eco-agricultural area, this paper selects the agricultural culture sites in the industrial development of the eco-agricultural area, and establishes the value index of the agricultural cultural heritage of the eco-agricultural area.

1) Economic value, the direct use value of the agricultural cultural heritage in this eco-agricultural area mainly reflects the tourism development level of eco-agriculture, so the tourism development of this eco-agricultural area is selected as the evaluation index level of economic value.

2) Historical value, the historical value of the eco-agricultural area is evaluated from two aspects: historical connection and historical continuity, that is, carried by the agricultural cultural heritage in the eco-agricultural area from the close relationship between the eco-agricultural area and the important history and the evolution ability of the agricultural cultural information.

3) Cultural value, the cultural value of the ecological agricultural area is evaluated from two aspects: the diversity of agricultural culture and the uniqueness of agricultural culture.

4) Ecological value, it refers to that the ecological agricultural area adapts to the surrounding environment and improves the adaptability with the changes of the environment, so as to ensure the survival of the agricultural cultural heritage ecosystem; it takes the ecological self-healing, risk resistance and biodiversity as the sub criteria layer.

5) Technical value, as an indispensable part of the evaluation of agricultural cultural heritage, the genetic and symbiotic technology among various organisms in the ecological agricultural area is selected; the technical demonstration function for ecological agriculture and the contribution to cross field research are taken as sub criteria level.

The hierarchical index system of the agricultural cultural heritage protection value model in this ecological agricultural area is shown in Figure 1.

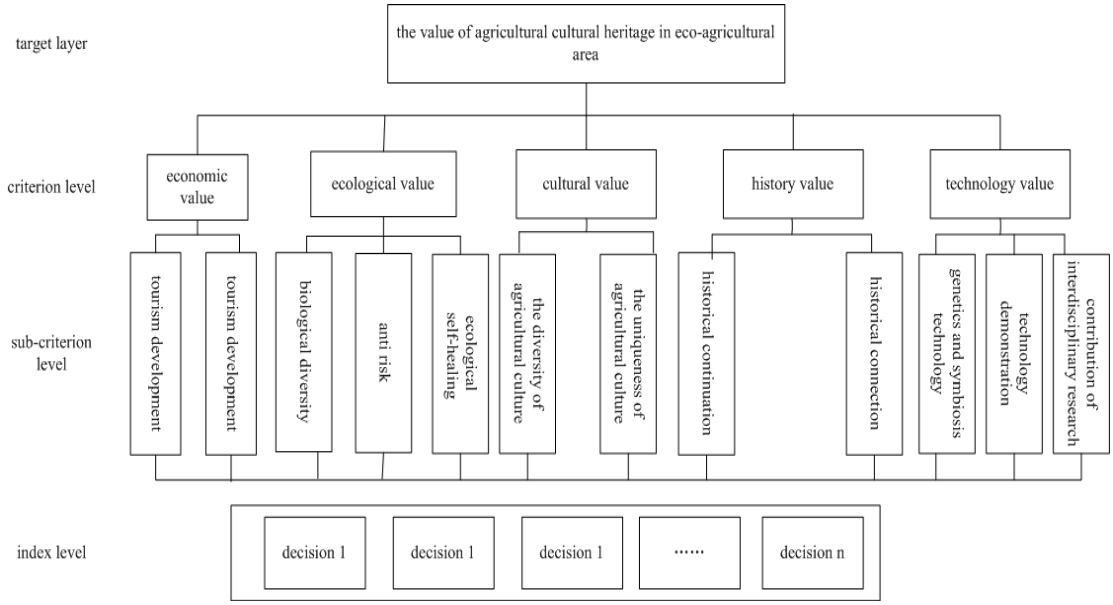

Figure 1. The evaluation index system of agricultural cultural heritage value

3.3. The Construction of Judgment Matrix

The significance of constructing the weight vector of the judgment matrix is to find the regularity of things and extract useful information from the judgment matrix, so as to provide scientific basis for decision-making. Using the 1-9 scale rule proposed by Saatty et al. in this paper, we compare two factors of the same layer subordinate to each factor of the upper layer, and take the arithmetic mean to get the pairwise comparison matrix. Then the maximum eigenvalues and corresponding eigenvectors of each pair of comparison matrices are calculated, and finally the consistency test is done. The normalized eigenvector is the weight vector, otherwise the contrast matrix is reconstructed. According to the research objectives of this paper, after five experts who have been engaged in the development of ecological agriculture for a long time construct the judgment matrix and carry out the consistency test on all judgment matrices through repeated correction, it is concluded that the consistency results of all matrices are CR < 0.1, and the matrix passes the consistency test, so the results of model analysis are desirable which is shown as table 1.

Table 1. The results of matrix consistency of the model

CR	Matrix1	Matrix2	Matrix3	Matrix4	Matrix5
Expert 1	0	0	0.0935	0.0631	0.0818
Expert 2	0	0	0.0683	0.0666	0.0944
Expert 3	0	0	0.0085	0.0941	0.0804
Expert 4	0	0	0.0897	0.0782	0.0982
Expert 5	0	0	0.0842	0.0857	0.0884

3.4. Confirm the Weight of Each Determined Index

The appropriate value in the analysis of index weight should be saved and the bad value in the analysis of index weight should be eliminated in order to make a better strategy of agricultural culture protection. The weights of each value factor are obtained through the calculation of the weights of different layers, then the value factors of the heritage are sorted to find out the key points and problems of the current agricultural and cultural heritage protection in the ecological

agricultural area through the comprehensive evaluation and analysis, and formulate the development plan for the protection of agricultural and cultural heritage in the ecological area, so as to adapt to local conditions and target the target.

4. The Analysis of the Results

There are 37 evaluation indexes in the evaluation framework of agricultural cultural heritage value in this ecological agricultural area, according to the Delphi expert questionnaire survey results, the weight of each value evaluation index is calculated, and the weight of each layer according to the value model framework is as follows:

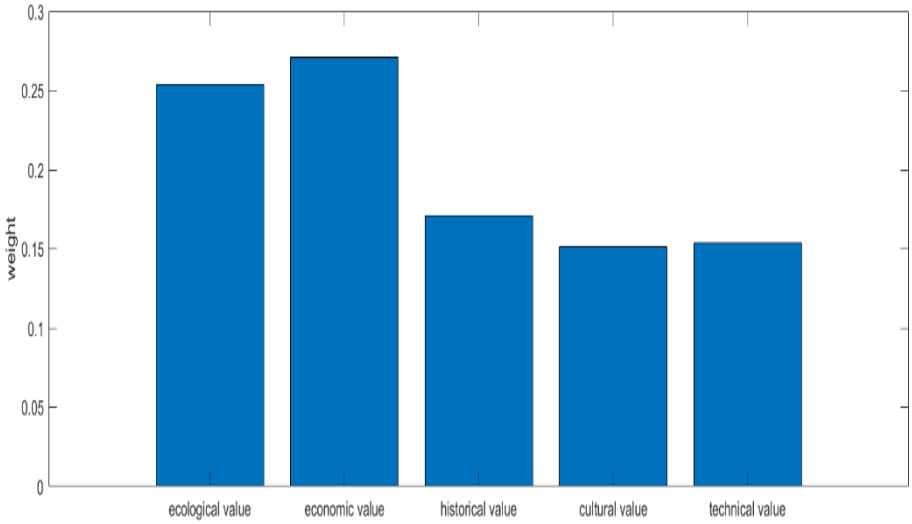

Figure 2. The value weight composition of agricultural cultural heritage

1) In the criteria layer, the maximum weight is 0.271 for "economic value"; the second weight is 0.254 for "ecological value"; the minimum weight is 0.151 for "cultural value"; the weight values of "technological value" and "historical value" are 0.154 and 0.171respectively, which is shown as figure 2.

It can be seen that the economic and ecological values are the main values of the agricultural cultural heritage in this ecological area from the above figure 2.

2) In the sub criteria layer, the maximum weight is 0.0952 of "tourism development"; the minimum weight is 0.0335 of "agricultural culture diversity". Combined with the representativeness and ranking of the criteria layer in each value attribute (which is shown as Table 2), it is concluded that the focus of agricultural cultural heritage protection in this ecological agricultural area is to focus on the realization of the economic value and ecological value of the ecological area.

Table 2. The value weight of agricultural cultural heritage in the ecological agricultural area

Serial number	1	2	3	4	5
Value attribute	Economic value	Ecological value	Historical value	Technical value	Cultural value
Weight	0.271	0.254	0.171	0.1541	0.154
Composite score	2.151	1.831	1.128	0.671	0.281

3) In the target layer, the maximum weight value is 0.1822 for "production utilization"; the minimum weight value is 0.012 for "technology demonstration" which is shown as Table 3.

Table 3. The weight of index layer

Serial number	Evaluation index	Index score	Value attribute
1	Production and utilization	0.182	Economic value
2	Diversity of agricultural products	0.173	Ecological value
3	Promoting employment	0.162	Economic value
4	Ecological self-healing	0.131	Ecological value
5	Product structure adjustment	0.105	Economic value
6	Genetics and symbiosis	0.077	Technical value
7	Historical connection	0.062	Historical value
8	Agricultural cultural diversity	0.051	Culture value
9	Historical continuity	0.040	Historical value
10	Anti-risk	0.023	Ecological value
11	Contribution of interdisciplinary	0.021	Technical value
12	Technology demonstration	0.012	Technical value

It can be concluded from the above analysis and evaluation results of agricultural cultural heritage value that economic value is the main value of agricultural cultural heritage in this ecological agricultural area, which is mainly reflected in the level of production and utilization, so its weight value is the largest. Therefore, the strategy of cultural heritage protection in its eco-agricultural area should be from two aspects: the value evaluation of agricultural cultural heritage and the development of ecological protection.

1) The value evaluation of agricultural cultural heritage: We should pay attention to its economic value and promote employment through the development of ecotourism when we recognize the protection of agricultural cultural heritage in ecological agriculture. We must combine the development of product value and economic value to realize the optimization of industrial structure at the same time.

2) Protection and development of agricultural cultural heritage: We should protect the technical characteristics and biodiversity of tradition agricultural cultural heritage on the basis of obtaining economic benefits and combining with the characteristics of agricultural cultural heritage, and improve the risk resistance of the ecosystem to ensure the livelihood safety of residents finally.

5. Conclusion

The agricultural cultural heritage and traditional agricultural practice experience promote the development of ecological agriculture in China, and provide valuable models and experience for the development of existing agricultural system coordination and recycling. At present, there is little research on the protection and development of agricultural cultural heritage. In order to find the main task and direction of the development of modern ecological agriculture, this paper uses exploratory analysis method to analyze the current situation and task of modern ecological agriculture and agricultural cultural heritage in China, and analyzes the value of the agricultural cultural heritage protection in its ecological area. The results show that the main tasks of the development of modern ecological agriculture are: increasing the development of eco-tourism

gradually; adjusting the industrial structure and industrialization of agricultural products to improve the protection of ecological culture and industrial development significantly. The development of these measures is suitable for the protection and development planning of agricultural cultural heritage with its own characteristics, and provides new ideas for the development of efficient ecological agriculture in the new era.

Funding

This article is not supported by any foundation.

Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Conflict of Interest

The author states that this article has no conflict of interest.

References

[1] Liu Y, Li J, Yang Y. Strategic adjustment of land use policy under the economic transformation. Land Use Policy, 2018, 74: 5-14.

[2] Zhang L, Lin M, He C, et al. Development of" traditional Chinese medicine agriculture" to establish ecological agriculture with the Chinese characteristics. Journal of Medicinal Plants, 2018, 6(6): 95-99.

[3] Ruizhen Y, Yinjun C. Development Trend And Key Tasks Of Modern Ecological Agriculture In China. Chinese Journal of Agricultural Resources and Regional Planning, 2017 (5): 25.

[4] Ramankutty N, Mehrabi Z, Waha K, et al. Trends in global agricultural land use: implications for environmental health and food security. Annual review of plant biology, 2018, 69: 789-815.

[5]Serban A C, Aceleanu M I, Saseanu A S. Constraints Of Transition To Ecological Agriculture In A Sustainable Development Society. Romanian Perspective. Transformations in Business & Economics, 2017, 16(3).

[6] Srivastava P, Singh R, Tripathi S, et al. An urgent need for sustainable thinking in agriculture–An Indian scenario. Ecological indicators, 2016, 67: 611-622.

[7]Senlin Z H U, Zhang A, Shanyuan W E I, et al. Preliminary Study on the Ecological Agriculture Development Model of" Pennisetum sinese Roxb-Rocky Desertification Control-Edible Mushrooms" in Guizhou Province. Agricultural Science & Technology, 2017, 18(12).

[8] ZHANG J, LIU X. Dynamic Mechanism and Route Choices of the Cooperative Innovation of Ecological Agriculture Between Fujian and Taiwan. Taiwan Agricultural Research, 2017 (2): 3.

[9] Zhang, J. (2019). Strategies for Promoting Economic Benefits of Eco-agriculture from the Perspective of Sustainable Development. Revista de la Facultad de Agronomia de la Universidad del Zulia, 36(6).

[10] Su M M, Sun Y, Wall G, et al. Agricultural heritage conservation, tourism and community livelihood in the process of urbanization–Xuanhua Grape Garden, Hebei Province, China. Asia Pacific Journal of Tourism Research, 2020, 25(3): 205-222.

[11] Jiao W, Min Q. Reviewing the progress in the identification, conservation and management of China-Nationally Important Agricultural Heritage Systems (China-NIAHS). Sustainability, 2017, 9(10): 1698.

[12]Shi-ming L U O. Agroecology transition and suitable pathway for eco-agricultural development in China. Chinese Journal of Eco-Agriculture, 2017, 25(1): 1-7.

[13] Li M, Zhang Y, Xu M, et al. China Eco-Wisdom: A Review of Sustainability of Agricultural Heritage Systems on Aquatic-Ecological Conservation. Sustainability, 2019, 12(1): 1-18.

[14] Jiao W, Min Q. Reviewing the progress in the identification, conservation and management of China-Nationally Important Agricultural Heritage Systems (China-NIAHS). Sustainability, 2017, 9(10): 1698.

[15] Min Q, Zhang Y, Jiao W, et al. Responding to common questions on the conservation of agricultural heritage systems in China. Journal of Geographical Sciences, 2016, 26(7): 969-982.

[16]SINGH A K, Rana R S. The Nationally Important Agricultural Heritage Systems in India: Need for Characterization and Scientific Validation. Proceedings of the Indian National Science Academy, 2019, 85(1): 229-246.

[17] Sun Y, Timothy D J, Wang Y, et al. Reflections on agricultural heritage systems and tourism in China. Journal of China Tourism Research, 2019, 15(3): 359-378.

[18] ZHANG A, HOU B, MA N. Community residents' perception of tourism impacts and their participation attitude in agricultural heritage sites: a case study of Hani Terraces. Human Geography, 2017 (1): 20.

[19]Lei, S., Wang, R., Feng, X., & Xia, Y. (2018). Present Situation and Protection of Agricultural Cultural Heritage of Species in Wuhan City. Asian Agricultural Research, 10(1812-2019-427), 22-26.

[20]Wei C, Xiang G. Study of the Impact of Tourism Development on the Protection of Agricultural Cultural Heritage——Taking Guilin Longji Terrace as an example. Journal of Guilin Normal College, 2016 (4): 3.

[21] WEI J, JIANG W, WU T. On the Impacts of Beautiful Rural Construction on the Protection of Agriculture Heritage. Agricultural History of China, 2017 (1): 15.

[22] Yang L, Liu M, Lun F, et al. An analysis on crops choice and its driving factors in agricultural heritage systems—a case of Honghe Hani Rice Terraces System. Sustainability, 2017, 9(7): 1162.

[23]LIU Q, WANG S, HU Y. The Classification of Chinese Utility Classes Agro-cultural Heritage from Multidimensional Perspective. Journal of Yunnan Agricultural University (Social Science), 2016 (5): 21.

[24]Gao P P, Li Y P, Sun J, et al. Coupling fuzzy multiple attribute decision-making with analytic hierarchy process to evaluate urban ecological security: A case study of Guangzhou, China. Ecological Complexity, 2018, 34: 23-34.

[25] Ma H, Li S, Chan C S. Analytic Hierarchy Process (AHP)-based assessment of the value of non-World Heritage Tulou: A case study of Pinghe County, Fujian Province. Tourism management perspectives, 2018, 26: 67-77.

[26]Veisi H, Liaghati H, Alipour A. Developing an ethics-based approach to indicators of sustainable agriculture using analytic hierarchy process (AHP). Ecological Indicators, 2016, 60: 644-654.