

Discussion about Tourism Development of Agricultural Cultural Heritage in Xiajin County of Shandong Province

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Abstract [Objectives] To discuss the protection and utilization of agricultural cultural heritage in Xiajin County in the context of deep integration of culture and tourism. With the advancement of the process of revitalizing villages through culture and tourism, agricultural cultural heritage has gradually attracted wide attention from all walks of life. This paper is intended to provide new ideas and strategies for the development of local cultural tourism through in-depth analysis of agricultural cultural heritage resources in Xiajin County. [Methods] Using the method of literature research, this paper systematically sorted out the historical background, current situation and value of agricultural cultural heritage in Xiajin County. Besides, the agricultural cultural heritage resources in Xiajin County were comprehensively evaluated using the 3-3-6 evaluation method. On this basis, combined with the theory of industrial convergence and sustainable development, it came up with some specific suggestions on the tourism development of agricultural cultural heritage in Xiajin County. [Results] Through the in-depth evaluation of agricultural cultural heritage resources in Xiajin County, it is found that it has rich historical and cultural heritage and unique tourism value. However, there are still some problems in protection and utilization. In view of the problems, it recommended to attach importance to the inheritance of Xiajin agricultural cultural heritage, develop characteristic heritage tourism and improve relevant supporting facilities. [Conclusions] Deeply excavating the essence of agricultural cultural heritage in Xiajin County and organically combining it with modern tourism is an important way to realize the sustainable development of local cultural tourism. The recommendations are expected to provide reference for the development of agricultural heritage tourism in Xiajin County and other regions, and help to promote the deep integration of culture and tourism, and promote rural revitalization and cultural inheritance.

Key words Integration of culture and tourism, Agricultural cultural heritage, Tourism resources evaluation

1 Introduction

As one of the birthplaces of agricultural civilization in the world, China has a long history of farming, which has produced rich and colorful agricultural cultural heritage with unique charm. Protecting these precious agricultural cultural heritages is not only of far-reaching significance for maintaining biodiversity and cultural diversity, but also of respect and continuation for the historical inheritance of the Chinese nation. *The Report of the 20th National Congress of the Communist Party of China* clearly stated that it is necessary to adhere to the culture to shape tourism, promote culture with tourism, and promote the deep integration and development of the cultural and tourism industry. In this context, agricultural cultural heritage, as an important link between history and modernity, culture and ecology, is gradually entering people's vision and attracting wide attention from all walks of life.

On April 19, 2018, the ancient mulberry trees in the ancient course of the Yellow River in Xiajin County, Shandong Province, were awarded the brand of the world's important agricultural and cultural heritage, which not only highlights the unique value of agricultural and cultural heritage in Xiajin County, but also makes it a world-renowned fruit town. As the oldest and largest group of ancient mulberry trees in the world, these ancient mulberry forests

have high scientific research value and cultural significance. Therefore, the in-depth evaluation and development of agricultural cultural heritage resources in Xiajin County will not only help to excavate and highlight the intrinsic value of agricultural cultural heritage, but also promote the development of tourism and achieve win-win economic, social and ecological benefits.

2 Overview of agricultural cultural heritage resources in Xiajin County

2.1 Overview of Xiajin County Xiajin County is located in the intersection of Shandong and Hebei provinces, with a long history of more than two thousand years. Jinxian County has jurisdiction over 10 towns, 2 townships and 2 subdistricts, and also a provincial economic development zone, with a total area of 882 km² and a total population of 540 000. The terrain here is flat and open, the climate is suitable, and there are 60 000 ha of arable land, which provides a unique growth environment for agricultural products, and the types of agricultural products are rich and diverse. Therefore, Xiajin County has also won the reputation of "China's famous cotton textile city", "China's flour county" and "China's fruit town".

2.2 Classification of agricultural cultural heritage in Xiajin County According to Wang Siming's division of agricultural cultural heritage, agricultural cultural heritage can be divided into tangible and intangible heritage. Among them, tangible heritage

mainly includes: agricultural landscape, land use system, farm tools, agricultural animals and plants, agricultural engineering, *etc.*, while intangible heritage mainly refers to various cultural phenomena derived from the agricultural cultural heritage system,

such as agricultural knowledge, agricultural technology, local agricultural folklore, singing and dancing, handicraft, diet, and so on^[1]. The classification of agricultural cultural heritage resources in Xiajin County is listed in Table 1.

Table 1 Classification of agricultural cultural heritage resources in Xiajin County

| Type | Main contents | |
|--|---------------------------|--|
| Agricultural tangible cultural resources | Agricultural landscape | Xiajin Yellow River Ancient Course Forest Park, Xiangxue Garden, Pear Orchard and Mulberry Orchard |
| | Agricultural products | Xiajin mulberry, Xiajin apricot, cotton, Silver Thread Noodles, Zhenzhuqi (traditional famous snack), Songlou Huoshao (burger), Yihecheng Cake, Kushui Mutton Ball, Pocket Chicken |
| | Agricultural works | Huijin Lake Reservoir and Baima Lake Reservoir |
| Agricultural intangible cultural resources | Agricultural technologies | Layering, mixed planting, hole fertilization, adobe fertilization around trees |
| | Folk customs | Four Strings, Madi Chuiqiang (folk chant), Xiajin Folk Song, Drum Music, Cuilou Minor |

3 Evaluation of agricultural cultural heritage resources in Xiajin County

Qualitative evaluation methods have a long history, the main methods are Liu Yaolong's aesthetic quality evaluation method, Huang Shihui's "six words and seven standards", Lu Yunting's "3-3-6 evaluation method"^[2]. In this study, we adopted Lu Yunting's "3-3-6 evaluation method". The "3-3-6" is three values, three benefits and six development conditions, namely, historical culture, artistic appreciation and scientific investigation value, economic, social and environmental benefits, geography and transportation, landscape combination, environmental carrying capacity, tourist market, investment capacity and development difficulty^[3]. We used this method to evaluate the agricultural cultural heritage resources in Xiajin County, and prepare for the development and utilization of resources in the later period.

3.1 Three values (i) Historical and cultural values. Xiajin County has a long history and culture, and has formed a cultural system composed of the Yellow River culture, mulberry culture and drum culture for more than two thousand years. Among them, mulberry culture not only has a long history but also has a high value, which has made important contributions to the cultural and economic exchanges between the East and the West and the dissemination of Chinese culture. The special cultural system of Xiajin County provides a foundation for the current cultural research and the deep integration with tourism.

(ii) Artistic ornamental values. The artistic ornamental values of Xiajin County are mainly reflected in the fact that Xiajin County is known as a natural oxygen bar and an ecological county. There are many scenic spots with good ornamental value in the county. In addition, Xiajin County is located in the warm temperate semi-humid continental monsoon climate zone, with four distinct seasons. Many ancient pear trees, apricot trees and other northern deciduous fruit trees bring different landscapes in the four seasons, presenting different scenery for tourists and having good ornamental value.

(iii) Scientific investigation value. The ancient mulberry trees in the ancient course of the Yellow River in Xiajin County, an important agricultural and cultural heritage in the world, cover an area of 400 ha, with more than 10 000 ancient persimmon trees, apricot trees, hawthorn trees and pear trees, many of which

also grow wild *Lentinula edodes*, *Pyropolyporus fomentarius* and other fungi. Furthermore, it is also an important seed bank for mulberry and related fruit industries, and as a "living" complex heritage, it has great scientific investigation value and is conducive to the further development of agricultural heritage tourism.

3.2 Three benefits (i) Economic benefits. Relying on the influence of the world's important agricultural cultural heritage, Xiajin County has developed a series of products in combination with its unique agricultural resources. For example, the unique mulberry tea, purple wine, dried fruit and drinks developed in Xiajin County with mulberry as the center have increased the added value of agriculture. In addition, by further promoting the combination of agriculture and tourism and holding the Mulberry Eco-cultural Festival in the ancient course of Yellow River, the agricultural cultural heritage will be transformed into tourism attraction to promote the development of local economy.

(ii) Social benefits. During the development of agricultural cultural heritage tourism in Xiajin County, the improvement of infrastructure such as accommodation and transportation not only improves the living standards of the people in Xiajin County, but also creates more jobs for the residents of Xiajin County and absorbs surplus labor force.

(iii) Environmental benefits. In the agricultural cultural heritage system of Xiajin County, agricultural landscape presents great ecological value, and agricultural technology also promotes the green and sustainable development of the county. The total area of forest land in the county has reached 10 180 ha, and the forest land resources are very rich, providing a good ecological environment for the development of tourism.

3.3 Six development conditions (i) Geographical location and traffic conditions. Xiajin County is located in the northwest edge of Shandong Province, at the junction of two provinces, three cities and five counties, with superior geographical location. National Highway 308, National Highway 240 and Provincial Highway 315 run through the whole county. Qingdao – Yinchuan Expressway and Deshang (Dezhou – Shangqiu) Expressway intersect on the north side of the county seat. National Highway 105 passes through the eastern boundary of the county. The external transportation is convenient for tourists to visit.

(ii) Conditions of scene area combination. Xiajin County has

a good combination of scenic spots and geographical conditions, and has a perfect combination of natural and cultural tourism landscape. The most representative traditional arts and culture in Xiajin County are stilts, drum music, lion dance, drum and stilts are the most widely spread, in addition to Wuzi, Taiji, Shaolin, Bagua and other martial arts activities^[4]. Rich and distinctive human resources, as well as the county's old Yellow River Forest Park, Jiulong Wetland and many other natural landscapes, make the local landscape combination conditions better, which is conducive to the development of agricultural cultural heritage tourism.

(iii) Tourism environmental capacity conditions. There are various types of tourism resources in Xiajin County. It not only has a large number of agricultural and cultural heritages, such as the Forest Park of the Ancient Course of Yellow River and Xiangxue Garden, but also holds a press conference on spring tours, the Fruit Eco-cultural Festival of the Ancient Course of Yellow River in Xiajin, and the Golden Pear Picking Festival. These can satisfy the agricultural tourism experience of most tourists and provide better tourism experience for tourists. In addition, Xiajin County pays attention to the protection of ecology in the process of development, formulates corresponding measures to develop eco-tourism, stabilizes the ecosystem, and has a good tourism ecological capacity.

(iv) Tourist market. In addition to the advantages of tourism resources, the traffic convenience has also become an important reason for tourists to choose their destinations. Affected by the convenience of transportation, people from the surrounding areas are the main visitors. Furthermore, the lack of comprehensive and systematic publicity in Xiajin County has further affected the number of tourists.

(v) Investment capacity. At the opening ceremony of the tourism development conference held in Xiajin County in 2021, the project of Sangmian Cultural Village Pastoral Complex won a total investment of 2.2 billion yuan, indicating that Xiajin County has made remarkable achievements in the field of tourism investment. In 2023, Xiajin County has shown great strength in tourism investment and investment promotion, with initial results. In recent years, under the investment introduction measures carefully implemented by the local government, the funds for tourism development in Xiajin County have been significantly increased, which has injected a strong impetus into the vigorous development of the tourism industry.

(vi) Development difficulty. Xiajin County was once famous for its rich agricultural products and was a typical agricultural county. However, Xiajin County is lagging behind in the development of tourism. The tourism industry chain in this area is insufficient, the infrastructure is relatively backward, the types of tourism landscape are relatively single, mainly relying on pure forest resources, and the product categories are limited, so it is very difficult to stand out in the highly competitive tourism market. Therefore, the development of tourism in Xiajin County is difficult.

4 Current situation of agricultural cultural heritage tourism development in Xiajin County

Relying on its unique agricultural cultural heritage, Xiajin

County actively promotes the deep integration of agriculture and tourism. In recent years, with the development of agricultural cultural heritage tourism, many stakeholders have been attracted to participate in it. Under the guidance of the government, all stakeholders will coexist in harmony and jointly promote the healthy development of agricultural heritage tourism under scientific planning.

4.1 Number of tourists and development of tourism income

According to the statistical yearbook of the People's Government of Xiajin County, from 2018 to 2023, the total number of tourists received by Xiajin County was 2.6 million, 2.932 8 million, 1.8 million, 2.485 2 million, 1.708 5 million, and 3.216 million, respectively, as shown in Fig. 1. Since the Forest Park of the Ancient Course of Yellow River in Xiajin County won the title of Globally Important Agricultural Heritage Systems (GIAHS) in 2018, the number and income of tourists in Xiajin County have increased. However, due to the impact of the COVID-19 epidemic at the end of 2019, the number of tourists and income decreased for a while, but they recovered slightly during the epidemic, but the overall trend was downward. It is gratifying to see a significant rebound in 2023, reflecting the positive effect of the Globally Important Agricultural Heritage Systems (GIAHS) business card in attracting tourists.

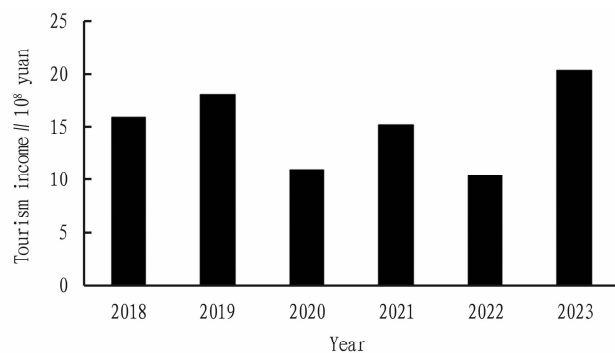


Fig. 1 Tourism income of Xiajin County from 2018 to 2023

4.2 Development status of infrastructure construction

For the vigorous development of agricultural cultural heritage tourism in Xiajin County, the construction of infrastructure has played a decisive role. Taking traffic as an example, Xiajin County had 586.94 km of roads open to traffic (excluding rural roads) by 2022, with a total of 28 operating routes, which provides great convenience for tourists and greatly improves the accessibility and convenience of traffic. Xiajin County takes the brand operation of ancient course of Yellow River in Xiajin County as the core, not only creates an industrial chain integrating mulberry product experience, but also integrates elements such as health care and eco-tourism into it, forming a diversified tourism experience. In addition, in order to further improve the industrial chain, Xiajin County has also planned and constructed supporting facilities such as the Gusang Agricultural Culture Museum, the Experience Museum and the boutique residential quarters, which not only enrich the experience of tourists, but also make the village an "Ancient Village of King Mulberry Tree" full of folk characteristics in Northwest Shandong. Through the construction and development of these infrastructures,

Xiajin County has initially formed a diversified governance model integrating tourism, fruit picking, leisure and entertainment, recreation and industrial processing, which greatly improves the experience of tourists and injects new vitality into the sustainable development of agricultural and cultural heritage tourism in Xiajin County.

4.3 Publicity and marketing The Forest Park of the Ancient Course of Yellow River in Xiajin County is a bright pearl of agricultural heritage tourism in the county. In 2014, the Forest Park of the Ancient Course of Yellow River in Xiajin County won the title of China's Important Agricultural Heritage Systems issued by the Ministry of Agriculture. In 2018, it was awarded "Globally Important Agricultural Heritage Systems (GIAHS)" by the Food and Agriculture Organization of the United Nations, making Xiajin County stand out in the world, showing the great effect and far-reaching influence of its brand. Xiajin County also knows how to make full use of this advantage to publicize. Every year, Xiajin County will hold colorful activities such as "Ancient Course of Yellow River in Xiajin County Fruit Eco – Culture Festival" and "Ancient Course of Yellow River in Xiajin County Cultural and Creative Product Fair", which not only attract the attention of many tourists, but also enhance the popularity and influence of Xiajin County.

5 Investigation and analysis of agricultural cultural heritage tourism in Xiajin County

In order to further explore the development status of agricultural cultural heritage tourism in Xiajin County, we carried out detailed research and interviews. Through communication with local residents and tourists in scenic spots, we obtained valuable information about tourists' travel behavior and satisfaction, and then analyzed the problems of agricultural cultural heritage tourism in Xiajin County.

5.1 Analysis of tourists' travel behavior In the analysis of tourist travel behavior, we mainly investigated from six aspects, including the number of visits, the understanding of agricultural cultural heritage in Xiajin County, the number of days of stay and the way of obtaining information (Table 2). The results show that first-time visitors account for the highest proportion, up to 58% ; the tourists' understanding of Xiajin County's agricultural cultural heritage is generally low, only 9.76% of the tourists say they know it very well, which reflects that the publicity in this area needs to be strengthened. The main purpose of tourists coming here is leisure and sightseeing, accounting for 53.66%. It is worth noting that the return rate of tourists is low, which may mean that the attraction of agricultural cultural heritage tourism in Xiajin County needs to be improved, or the satisfaction of tourists' experience is not high.

5.2 Tourist satisfaction analysis In order to deeply understand the satisfaction of tourists to Xiajin County's agricultural cultural heritage tourism, we have made a detailed analysis from four aspects: tourism products, tourism resources, tourism environment and tourism facilities. In terms of tourism products, tourists are more satisfied with the experience, innovation, cultural connota-

tion, price and quality of the products. It is worth noting that the innovation of tourism products is relatively low, so in the future development process, we should pay attention to improving the innovation and uniqueness of products to meet the diverse needs of tourists. In terms of tourism resources, tourists give a high appraisal to the richness of agricultural cultural heritage resources and the longevity of agricultural culture in Xiajin County. However, the evaluation is relatively low in terms of protection and development status. From the perspective of tourists' evaluation, it reflects that Xiajin County's agricultural cultural heritage resources themselves have high development value, but there are still some problems and shortcomings in the actual development process. In terms of tourism environment, tourists are highly satisfied with the ecological environment protection and agricultural cultural atmosphere. However, in terms of hygiene, tourist satisfaction is relatively low. Therefore, in the development of agricultural heritage tourism, it is necessary to strengthen the supervision of local health, improve the level of hygiene, and provide tourists with a more comfortable and healthy tourism environment. In terms of tourism facilities, tourists' satisfaction with leisure and recreational facilities and transportation facilities is relatively low. Therefore, in the future development, we should pay attention to improving the construction and management of leisure and entertainment facilities and transportation facilities, and improve the travel convenience and experience of tourists.

Table 2 Survey results of tourists' travel behavior

| Question items | Options | Percentage % |
|--|----------------------------------|--------------|
| Travel times | 0 time | 18.00 |
| | 1 time | 58.00 |
| | 2 times | 18.50 |
| | 3 times and more | 5.50 |
| Understanding of agricultural cultural heritage in Xiajin County | Know well | 9.76 |
| | Generally know | 34.76 |
| | Know little | 37.80 |
| | Never known | 17.68 |
| Number of days to stay | 1 d | 14.02 |
| | 2 d | 29.27 |
| | 3 d | 34.15 |
| | 4 d and longer | 22.56 |
| Ways to obtain information | Introduced by a friend | 35.37 |
| | Books and magazines | 4.27 |
| | Tourism promotion | 26.83 |
| | Network (Weibo, Tik Tok, etc.) | 28.66 |
| | Others | 4.88 |
| Main purpose of travel | Agricultural cultural experience | 17.07 |
| | Visit relatives and friends | 20.73 |
| | Popular science research | 6.71 |
| | Leisure and sightseeing | 53.66 |
| | Others | 1.83 |
| Willing to recommend this travel | Very unwilling | 3.66 |
| | Unwilling | 29.88 |
| | Generally | 21.34 |
| | Willing | 29.27 |
| | Very willing | 15.85 |

6 Recommendations for the development of agricultural cultural heritage tourism in Xiajin County

The effective utilization and development of agricultural cultural heritage resources in Xiajin County is of great significance to promote the development of agricultural cultural heritage tourism in Xiajin County. Through the in-depth evaluation of agricultural heritage resources in Xiajin County and the feedback analysis of tourists, it is found that there are some problems to be solved in the development of agricultural cultural heritage tourism in Xiajin County, such as the lack of innovation in tourism products, the relatively low satisfaction with health conditions, and the lack of publicity. In order to promote the better development of agricultural cultural heritage tourism in Xiajin County, based on the current situation and problems, we came up with following recommendations.

6.1 Attaching importance to the inheritance of agricultural cultural heritage and creating characteristic heritage tourism in Xiajin County After the successful declaration of Xiajin County as one of the Globally Important Agricultural Heritage Systems (GIAHS), its agricultural and cultural heritage tourism has been increasingly favored by people. In the process of developing agricultural heritage tourism, the primary task is to attach importance to the inheritance of agricultural cultural heritage. It is recommended to organize relevant popular science publicity activities, special lectures and other forms, to enhance the awareness of inheritance of participating developers. Besides, it is necessary to make full use of the local unique agricultural cultural heritage resources and avoid simple copying and pasting. Xiajin County can learn from the successful experience of other 21 agricultural cultural sites with world significance in China, dig deeply into the local agricultural cultural characteristics of ancient mulberry trees, and design the agricultural cultural heritage tourism Logo and mascot with Xiajin County characteristics with the theme of ancient mulberry trees. In addition, advanced technologies such as AR and VR can be used to enhance tourists' visiting experience, so that the cultural connotation and characteristics of agricultural cultural heritage tourism in Xiajin County can be better demonstrated.

6.2 Improving relevant supporting facilities to enhance tourists' experience The perfection of supporting facilities is an important factor to determine the satisfaction of tourists. Therefore, Xiajin County should pay attention to strengthening the construction of transportation facilities and leisure and entertainment facilities when developing agricultural and cultural tourism. In the core area of agricultural cultural heritage tourism, it is recommended to ensure that the guided facilities are perfect and the traffic is convenient, and scientifically plan travel routes, parking lots and toilets. In addition, special lines for agricultural cultural heritage

tourism can also be designed and opened, such as taking the famous forest park of the old Yellow River as the core, connecting the surrounding agricultural cultural heritage in series to form a special line for "Xiajin Agricultural Cultural Heritage Tourism", and improving the supporting facilities of the special line to improve the overall service quality. Through the implementation of these measures, the experience and satisfaction of tourists will be greatly enhanced.

6.3 Broadening marketing and publicity channels and enhancing the popularity of scenic spots In view of the insufficient popularity of agricultural cultural heritage tourism, Xiajin County should pay attention to the comprehensive publicity of online and offline in the process of developing agricultural cultural heritage tourism. First of all, in the process of promotion, we should make full use of various channels such as government websites, official websites of the Bureau of Culture and Tourism, and WeChat official accounts to carry out publicity. Well-known Internet influencers and streamers can be invited to promote through new media platforms such as WeChat, Weibo, and Tik-Tok. Through the operation of new media, the characteristics and strategies of agricultural cultural heritage tourism in Xiajin County are thoroughly publicized, so as to enhance the public's interest and attention to the local area. For example, in the season of mulberry picking from May to June every year, we can take "mulberry" as the theme, combine mulberry picking, hand-made mulberry juice with other local agricultural cultural experiences and sightseeing projects to form unique agricultural tourism products. Furthermore, the popularity of agricultural cultural heritage tourism in Xiajin County can be enhanced by holding corresponding festival activities. Through a series of colorful festival activities, the public will have a deeper understanding of the unique value of Xiajin County's agricultural and cultural heritage resources, thus stimulating their enthusiasm and motivation to spend time and energy to understand and experience the local culture.

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