

Dilemma and Breakthrough of Agricultural Eco-tourism Development in Jishishan County, Gansu Province

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ABSTRACT

Under the background of rural revitalization strategy, agricultural eco-tourism, as an emerging industry integrating eco-agriculture and tourism, is of great significance to economic transformation and ecological protection in rural areas. Taking Jishishan County as the research object, this paper uses qualitative research to analyze the dilemma and breakthrough path of its agricultural eco-tourism development. It is found that although Jishishan County has Yellow River ecology, Baoan culture and characteristic agricultural resources, there are some problems, such as low resource conversion rate, weak infrastructure, lack of market entities and talents, insufficient policy coordination and unbalanced distribution of benefits. In this regard, it is proposed to integrate resources with the help of immersive projects and theme routes such as Baoan Cultural Workshop and Yellow River ecological study tours; Improve facilities with highway planning, boutique homestays and smart platforms; Introduce leading enterprises to build an enterprise + cooperative + farmer model and cultivate talents; Set up a special working group, establish a guaranteed rent + profit dividend mechanism and delineate ecological red lines to promote sustainable development. This study provides schemes for cultural empowerment, ecological protection and community co-construction of agro-eco-tourism in other regions.

KEYWORDS

Jishishan county; Agroecotourism; Development dilemma; Breakthrough path

I Introduction

Under the background of the implementation of the rural revitalization strategy, the value of ecological environment, as an important potential indicator of local economic development, has become increasingly prominent. Good ecological environment has become the urgent requirement of governments at all levels for the transformation and upgrading of economic and social development, and people's eager expectation for a better life and living environment^[1]. In this process, agro-eco-tourism, as a new cross-industry integrating eco-agriculture and tourism, presents agricultural production, modern agricultural technology, local scenery and local customs through scientific planning^[2], not only injecting new momentum into tourism, but also bringing better development opportunities to agriculture^[3]. Its essence is a key area of rural revitalization based on the concept of sustainable development^[4]. It is also an important way to promote the harmonious coexistence between man and nature^[5].

However, the development of this industry is facing serious problems. Developing countries are bound to face many problems due to economic and natural conditions^[6]. In Chinese rural practice, homogenization phenomenon is particularly prominent. Most rural landscapes are similar, lack of unique attraction, and it is difficult to establish private brand^[7], leading to the decline of the value of tourism experience. Jishan County, as a characteristic inhabited area in Gansu Province, relies on terraced landscape and Bao'an cultural resources to develop agricultural eco-tourism, which has the dual mission of ecological barrier and rural revitalization. At present, there are few studies to deeply analyze the deep structural dilemma of agricultural eco-tourism in this area, especially the lack of solutions to the pain points such as the contradiction between protection and development, the lack of community empowerment, and the lack of cultural activation.

Focusing on the case of Jishishan county, this paper reveals the dilemma of its agricultural eco-tourism development by qualitative research methods, explores the breakthrough path of co-existence of culture, ecology and community, and provides a model for other similar areas.

2 The development status of agricultural ECO-tourism in Jishishan county

Jishishan County has magnificent natural landscape and rich ethnic customs. Jishishan County is located in the southwest of Gansu Province, with a total area of 910 square kilometers. Jishishan County is a famous hometown of pepper. The walnut with egg skin has a long-standing reputation, and its skin is thin and sweet, which is the top grade of gifts^[8].

Jishishan county is rich in natural ecological resources, and the main stream of the Yellow River flows through 40 kilometers, connecting historical sites and natural landscapes such as Jishi Xiongguan and Dadunxia (4A scenic spot) in series, which breeds the Yellow River culture. Dadunxia is a canyon landform (1800-3300m above sea level, with a

waterfall drop of more than 80m); The Huangcaoping is 20,000 acres of alpine meadow (2,300-2,600 meters above sea level); In 2022, the forest coverage rate will be 19% and the grassland coverage rate will be 26.7%; In 2023, the excellent rate of air quality was 85.5% (The average annual average of PM 2.5 was 31 μ gm).

Table 1 Statistics of core natural ecological resources in Jishishan county

Resource type	Specific indicators	Quantized data	Core composition
Yellow river basin resources	Length of main stream of the Yellow River	40 kilometers	It flows through Jishi Xiongguan, Dadunxia and Diaoshuixia Waterfall.
	Core historical sites	4 places	
	Main natural landscape	6 places	
Canyon landform	Core canyon scenic spot	Dadunxia	The altitude of the area is 1800-3300m, and the waterfall in the Bay Mount falls more than 80m, with an average annual temperature of 7.8°C.
Meadow	Alpine meadow on Huangcaoping	About 20,000 acres	
steppe			At an altitude of 2,300-2,600 meters, it is a typical alpine meadow ecosystem.
Ecological background	Forest coverage (2022)	19%	Mainly distributed around Gaixinping State-owned Forest Farm and Dadunxia Ecological Reserve.
	Grassland coverage rate (2022)	26.7%	
			Mainly Huangcaoping alpine meadow.
Air quality	Average annual excellent rate of air quality	85.5% (2023)	The annual average value of PM2.5 is 31 μ gm.

Data sources: (1) The length of the Yellow River and the distribution of its landscapes: "Why Is It Magnificent?" published by Gansu China Network in the column "Internet Celebrities Visit Linxia"; (2) Canyon landform data: Dadunxia Scenic Area of Jishishan by Linxia Tourism Bureau. (3) Meadow area of Huangcaoping: Jishishan Mountain: Aacressement in Suburbs issued by Jishishan County People's Government. (4) Forest coverage and grassland coverage: Emergency Plan for Forest and Grassland Fire Prevention and Extinguishing in Jishishan County in 2022 (1) by Jishishan County Emergency Management Bureau. (5) Air quality: Bulletin of Ecological Environment in Gansu Province in 2023 (Atmospheric Environment, Ambient Air Quality, Linxia Prefecture) issued by the Department of Ecological Environment of Gansu Province.

Agricultural resources are rich in characteristics. In the planting industry, 300,000 acres of *Zanthoxylum bungeanum* is planted, with an annual output of 4.6 million kilograms and an output value of 300 million yuan. Walnut 15,000 acres, distributed in towns and villages; There are 68,000 acres of Chinese herbal medicines, including astragalus and angelica, with an output value of 383 million yuan. Agricultural infrastructure has been gradually improved, drying plants and cold chain storage centers have been built, and water and fertilizer integration technology has been promoted. *Zanthoxylum bungeanum* has obtained national geographical indications, and agricultural products are sold through orders from e-commerce and pharmaceutical companies.

Table 2 Statistics of agricultural resources in Jishishan county

Agricultural product category	planting area	annual output	Annual output value	Core producing area
Sichuan pepper	300,000 acres	4.6 million kilograms	300 million yuan	Yinchuan Town is the core production area and the key area of Baili <i>Zanthoxylum</i> Gallery.
walnut	15,000 acres	200,000 kilograms	5 million yuan	All towns and villages have cultivation.
Chinese herbal medicine	68,000 acres	The estimated annual output is over 17,300 tons.	The total output value reached 383 million yuan, and the average net income per acres reached more than 4,000 yuan.	Contains astragalus root, angelica root, etc. Building a demonstration site of 10 thousand acres of Chinese herbal medicine in Zhaizigou Township

Data source: (1) The related data of *Zanthoxylum bungeanum* comes from Jishishan County: Yinchuan *Zanthoxylum bungeanum* is full of getting rich red published by official website, the people's government of Jishishan County on July 9, 2025. (2) Walnut data comes from Egg-skinned Walnut published by Jishishan County Media Center on August 25th, 2022. (3) The data of Chinese herbal medicines were released by Jishishan County Rong Media Center on August 9, 2022.

Jishishan county: Chinese herbal medicine planting broadens the road of enriching the people. On September 4th, 2024, official website, the people's government of Jishishan County, published The Road of Getting Rich with Medicine Fragrance.

As a multi-ethnic community, it has national-level intangible heritage, such as Bao 'an broadsword forging, Hezhou Hua'er and other traditional houses and costumes. Tourism development is mainly based on pastoral sightseeing, rural

tourism and B&B+projects. After the earthquake, Dahejia Town rewarded farmhouse access, and traffic and facilities gradually improved.

Agricultural eco-tourism in Jishishan county has a certain foundation, but there is still room for development in terms of deep development of resources and improvement of service quality.

3 The development dilemma of agricultural ECO-tourism in Jishishan county

3.1 Low conversion rate of core resources, serious product homogeneity

3.1.1 The transformation efficiency of core resources is low, and no brand effect is formed

The core resources such as Bao'an culture, the scenery of the Yellow River Gorge and characteristic crops are not transformed enough, and the cultural display is simplistic. Ecological development stays in sightseeing and agricultural utilization is limited to low value-added picking, which has not formed brand competitiveness.

3.1.2 The product is highly homogeneous and has a single structure

At present, the competition in the rural tourism market tends to be homogeneous. At present, the threshold for entering the rural tourism market is not high, which leads other villages in the same area to follow the example of neighboring villages with better development in this industry in order to obtain benefits^[9]. The format relies heavily on primary farmhouse access and seasonal picking, and the innovation is insufficient.

3.1.3 Insufficient integration of resources and no linkage pattern

Cultural scenic spots, ecological scenic spots and rural tourist spots are scattered, lacking theme lines in series, and failing to form agglomeration effect and overall image, resulting in short stay time of tourists, single consumption chain and unreleased collaborative value of resources.

3.2 Infrastructure and public services outstanding problems

3.2.1 The bottleneck of transportation infrastructure is obvious and the external accessibility is insufficient

Rural tourism infrastructure is the prerequisite for the development of rural tourism. Rural tourism infrastructure can be roughly divided into hardware facilities, auxiliary facilities and service facilities, and can be divided into six aspects: eating, living, traveling, shopping and entertainment. For consumers, in the process of rural tourism, the quality of infrastructure will directly affect the feelings of tourists^[10]. Jishishan county is far from the main tourist market and lacks high-speed rail and convenient highway connection. The internal transportation network is not perfect, and the roads connecting the core scenic spots and characteristic villages are mostly county-level highways, with poor road conditions and incomplete signs; There are few special tourist lines, which affects the convenience of tourists.

3.2.2 The tourist reception facilities are of low grade and the service facilities are not perfect

Low-end farmhouses have poor hygiene and comfort, and the lack of high-end homestays integrated with Bao'an culture or ecological concepts can not meet the needs of some tourists. The function of tourist center is weak, there are not many ecological parking lots, the coverage rate of Class A toilets is low and the maintenance is not good, aresltilingual navigation and emergency facilities are missing, and the network signal in remote areas is poor.

3.2.3 The degree of intelligence is low

Lack of official tourism information platform and reservation system, online marketing, guide and service capabilities are almost blank, and information asymmetry hinders passenger flow.

3.3 Weak market entities and lack of professional talents, and weak operational capabilities

3.3.1 The scale of market operating entities is small and their competitiveness is weak

Most of the business entities are individual farmers or loose cooperatives, which have problems such as traditional ideas, extensive management, weak marketing, etc., and lack the integration and guidance of leading enterprises.

3.3.2 The structural shortage of professional talents is prominent

Lack of compound talents who understand agriculture, tourism, cultural marketing and e-commerce. The quality of grass-roots service personnel needs to be improved, and local farmers lack systematic training in service standards, professional skills and safety awareness. It is difficult to attract and retain talents, limited by the region and development stage, and it is difficult to attract and retain high-level planning and management talents.

3.3.3 The regional brand system is not yet perfect, and the marketing comacresnication efficiency is insufficient

Lack of unified regional brand image, single marketing methods, reliance on traditional festivals and word-of-mouth, insufficient utilization of modern channels such as short videos and OTA platforms, low market visibility, and low reach rate of target customer groups.

3.4 Poor policy coordination and interest linkage mechanisms, and unstable foundation for sustainable development

3.4.1 Poor cross-departmental coordination mechanism and insufficient policy implementation efficiency

The coordination between agriculture, cultural tourism, transportation and other departments is insufficient, the planning connection is not tight, the resource integration is weak, and there are many examination and approval links. The higher-level support policies have a low degree of integration at the county level, and the last mile of landing is not smooth, resulting in no joint force.

3.4.2 Imperfect interest linkage mechanism and shallow community participation

Farmers have limited benefits, are at the low end of the industrial chain, have little value-added income and low enthusiasm; His participation and voice in tourism planning and decision-making are low, and he has not become a master. The loose interest mechanism is easy to lead to contradictions and weaken the power of ecological and cultural protection.

3.4.3 Ecological protection pressure is looming

The growth of potential tourists makes vulnerable areas such as Yellow River water sources and forest areas face the pressure of garbage, sewage and vegetation destruction, and the balance mechanism between protection and development is not perfect.

Table 3-1 Comparison of core dilemmas of agricultural ECO-tourism in Jishishan County

Dilemma category	Core Performance	Key impacts
Low conversion rate of core resources and serious product homogeneity	Farmhouses account for a large proportion, tourists stay for a short time, cultural experience is shallow, and there is no theme route	Lack of core competitiveness and short consumption chain
Prominent issues in infrastructure and public services	The external traffic distance is long, the internal county and township roads account for a large proportion, the gap of boutique homestays is high, and the smart tourism platform needs to be built	Poor accessibility and weak experience
Weak market entities and a shortage of professional talents	Individual farmersloose cooperatives account for a large proportion, compound talents are scarce, and modern marketing channels are few.	Weak operational ability and low brand awareness.
Policy coordination and interest linkage mechanism is not smooth	The ecological protection mechanism is not perfect when the department approves complicated farmers' value-added sharing.	Insufficient community participation and poor sustainability.

4 The breakthrough path of agricultural ECO-tourism development in Jishishan County

4.1 Deepen the transformation of resources and create a differentiated product system

4.1.1 Activation of cultural experience

The Bao 'an broadsword forging and family banquet production will be transformed into immersive projects, and a Bao 'an Cultural Workshop will be set up, where visitors can participate in the production and festival interaction.

4.1.2 Product structure upgrade

Reduce the number of primary farmhouses, develop high-end formats such as ecological study tours+Yellow River exploration, introduce gifts such as pepper essential oil, and extend the consumption chain.

4.1.3 Resource integration and series connection

With the theme of Yellow River Ecological Corridor and Baoan Ethnic Style Villages, cross-regional tourist routes are designed, which connect Dadunxia, Huangcaoping and other scenic spots in series, with guided maps and theme stories to prolong the stay time of tourists.

4.2 Improve infrastructure and enhance service experience

4.2.1 Traffic network optimization

Promote the planning of Lanzhou-Jishishan Expressway, open special tourist lines, upgrade county and township roads and signs, and build ecological parking lots to solve the problem of difficult access.

4.2.2 Improvement of reception capacity

Introduce social capital to build boutique homestays and resort hotels that integrate Baoan culture, transform the sanitary conditions of farmhouses, and support aresltilingual navigation systems and emergency rescue stations.

4.2.3 Intelligent construction

Build an official travel platform, integrate online booking and intelligent navigation functions, and use the short video platform to carry out the theme marketing of Yellow River Pearl Security Style to accurately reach customers such as self-driving passengers and cultural enthusiasts.

4.3 Strengthen the cultivation of talents and market entities, and enhance operational capabilities

4.3.1 Empowering market players

Introduce leading enterprises in cultural tourism, integrate decentralized business entities through the mode of enterprise+cooperative+farmer, unify management standards and marketing channels, and enhance the ability to resist risks.

4.3.2 Construction of talent system

Cooperate with universities to set up agricultural tourism management training courses to cultivate compound talents; Hire a professional team to train farmers in service standards and e-commerce operations to improve the level of grassroots services.

4.3.3 Brand marketing innovation

Create a unified regional brand, jointly launch the live broadcast of Exploring Baoan Culture with KOL, and launch customized travel packages in cooperation with OTA platform to enhance market awareness.

4.4 Improve the policy coordination and interest mechanism to ensure sustainable development

4.4.1 Inter-departmental collaboration

Set up a special working group to co-ordinate multi-sectoral resources, simplify examination and approval, focus on funding, and form a policy synergy.

4.4.2 Benefit distribution optimization

Establish a mechanism of guaranteed rent+profit sharing, guide farmers to participate in tourism management with land and houses as shares, set up villagers' councils to participate in planning and decision-making, and enhance the sense of community gain.

Table 3 Comparison between guaranteed rent+profit dividend mode and traditional mode

Contrast dimension	Traditional mode	Guaranteed rent+profit sharing model	Innovation advantage
Composition of farmers' income	Fixed rent or labor wages	Guaranteed rent+dividend per share/labor	Income is directly linked to industrial benefits.
Depth of participation	Shallow participation (landlord/employee)	Share+decision-making power of villagers' council	Enhance the consciousness of master and the right to speak
Enthusiasm and responsibility	Low (weak connection with business)	High (actively maintaining brand and ecology)	Enhance endogenous motivation and community cohesion
Risk taking	Farmers bear little risk of market fluctuation and have limited room for appreciation.	Enterprises bear the main risks and share the results.	Balance risks and benefits and promote long-term cooperation.
Sustainability impact	It is easy to cause contradictions, and the power of ecological and cultural protection is insufficient.	Establish a community of interests and promote ecological protection and cultural inheritance.	Realize the triple sustainability of economy, society and ecology

4.4.3 Ecological protection mechanism

Delineate the red line for the protection of ecologically sensitive areas such as the water source of the Yellow River, introduce the garbage sorting and processing system, and implement the ecological points system, linking tourists' behavior with environmental protection rewards, and balancing development and protection.

5 Conclusion

Jishishan county has great potential to develop agricultural eco-tourism relying on the Yellow River Gorge, Baoan culture and characteristic agriculture, but it faces difficulties such as low resource conversion rate, weak infrastructure, lack of market entities and talents, insufficient policy coordination and unbalanced interest distribution. The key to the breakthrough lies in deepening the transformation of resources and creating differentiated products and theme lines; Improve transportation, accommodation and intelligent services; Improve operational capacity through leading enterprises and talent cultivation; Improve the inter-departmental coordination and benefit distribution mechanism, strictly protect the ecology, and finally embark on the road of sustainable development with culture as the soul, ecology as the foundation and community as the foundation, providing an example for rural revitalization in other regions.

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