

Study on the Integration Development of Agricultural Science and Technology Parks and Leisure Tourism Based on SWOT Analysis

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Abstract: Agricultural tourism plays an important role in driving farmers to get rich, optimizing industrial structure, enhancing regional image and meeting tourists' tourism demand. At present, tourists who pay attention to life experience take agricultural tourism as an important choice for leisure and vacation. Taking Tai'an National Agricultural Science and Technology Park as an example, this paper adopts SWOT analysis method to systematically analyze the advantages, disadvantages and opportunities and challenges faced in the development of leisure agricultural tourism in modern agricultural parks. It also puts forward countermeasures and suggestions for the development of leisure agricultural tourism in agricultural science and technology parks, in order to provide reference for the sustainable development of modern agricultural science and technology parks.

Keywords: Agricultural science and technology park; agricultural tourism; industrial integration

1. Introduction

With the improvement of people's quality of life and the change of values, people have changed from high consumption and high enjoyment tourism activities to low emission and environmental protection tourism activities. In this context, the new model of "agricultural culture + tourism industry" such as agricultural sightseeing garden, planting and picking garden and agricultural culture-based farm carnival has emerged^[1]. Since 2015, the Central Document No. 1 has proposed to vigorously develop leisure agriculture and rural tourism for four consecutive years. The promulgation and implementation of national policies have created a good atmosphere for the development of agricultural tourism and promoted the deep development of agricultural tourism products^[2]. Grasping the opportunity of the development of the whole area of tourism in Mount Tai, Tai'an National Agricultural Science and Technology Park in order to vigorously develop agricultural leisure tourism projects, the park has focused on creating agricultural leisure tourism and special agricultural tourism industry. However, due to the lack of agricultural tourism products with high experience value, the existing market development mode is single, the development content is conservative and other problems are prominent, the development of agricultural tourism is not optimistic. Taking Tai'an National Agricultural Science and Technology Park as an example, based on the analysis of the advantages and disadvantages of developing agricultural leisure tourism in the park, this paper discusses the development of agricultural tourism in the park and related improvement measures to improve the visibility of Tai'an's agricultural and cultural heritage sites and increase the number of visitors. In this way, while achieving operational benefits, the agricultural cultural heritage can be better protected and inherited.

2. An overview of the park

Shandong Tai'an National Agricultural Science and Technology Park is one of the 46 national agricultural science and technology parks approved by the Ministry of Science and Technology in 2013. According to the layout of "core area - demonstration area - radiation area", the park is located in Tai'an City, Mount Tai District, the core area of the park contains 28 administrative villages and covers an area of 54.51 square kilometers. Since its establishment, the park has insisted on taking the road of

technological innovation to lead the development of special industries, accelerated the gathering of innovative elements to the park, and focused on the development and growth of modern agricultural industry clusters led by seedlings and flowers, Mount Tai tea, organic vegetables, modern dairy industry and agricultural leisure tourism. In recent years, the park insists on "grasping innovation, making up for shortcomings, strengthening foundation and promoting integration", and creates a kind of agricultural science and technology park "Mount Tai model" which is jointly built and shared by universities and localities, connected with innovation and industry, docking and conveying of resources and elements, and mutual promotion and integration of culture and tourism. The "Mount Tai Model" has been created. Thanks to the steady improvement of its development indexes and increasing innovation capacity, the park has finally achieved a high level of opening and high-quality development. Relying on the excellent source market and tourism environment of Mount Tai Scenic Area, the park focuses on the construction of Mount Tai Fancy Scenic Area, YAOT sightseeing area, Mount Tai Blueberry Manor and Mount Tai Tea Culture Experience Park. The creation of local characteristics of agricultural tourism park and the development of special tourism agricultural products have formed the interaction and complement of agricultural tourism and Mount Tai tourism, creating a landscape of "Mount Tai agricultural tourism culture".

3. SWOT analysis in the Tai'an National Agricultural Science and Technology Park

3.1. Advantages

3.1.1. Location advantage

Located in the middle of Shandong Province, the park is surrounded by Mount Tai Mountain in the north, Wen River in the south, Taiyue District in the east, west and south, and Jinan City in the north. It is 67km and 416km away from Jinan and Beijing respectively, and 66km away from Jinan Yaowang International Airport, with Beijing-Shanghai Railway and Beijing-Shanghai High-speed Railway running north and south, and Tai'an (Mount Tai) Station; Beijing-Shanghai Expressway and 104 National Highway passing through the territory. With convenient transportation, the park has obvious location advantages, which provides a convenient channel for domestic and international exchange of agricultural high and new technologies, and for regional characteristics and advantages of agricultural products to the domestic and international markets.

3.1.2. Resource Advantage

(1) Ecological Resources

Relying on Mount Tai Scenic Spot, the park is striving to show the appearance and characteristics of an international famous tourist city, and its various environmental quality indicators have met or exceeded the corresponding national standards. The environmental quality of surface water in the park has reached the tertiary standard of National Environmental Quality Standard for Surface Water (GB3838-2002) with a 100% compliance rate, and the environmental quality of its air has reached the secondary standard of National Ambient Air Quality Standard (GB3095-1996). The forest coverage rate of the region is 41.94%, and the urban greening coverage rate is 33.6%. The agricultural products in the region have basically passed the certification of pollution-free, green and organic agricultural products, which provides a good ecological guarantee for the production and processing of pollution-free, green and organic agricultural products.

(2) Cultural Resources

Relying on Mount Tai, the park has formed a typical natural landscape rich in beauty and a regional spatial complex permeated with the beauty of humanistic landscape. According to the traditional Chinese view of landscape, the park organically combines the natural landscape with aesthetic and scientific values with the long-standing national culture, thus forming a higher and richer landscape of Mount Tai. The ancient architecture of Mount Tai is mainly preserved in the style of the Ming and Qing dynasties, and its value lies not only in the fact that the architecture and paintings, carvings, rocks and trees are integrated into an example of ancient Chinese culture, which preserves a huge sequence of feudal rituals and a three-dimensional picture scroll documenting history. Moreover, the park has left us a model of architecture that responds to nature, harmonizes and enhances natural beauty with its unique artistic image, and expresses and deepens the natural environment.

3.2. Disadvantages

3.2.1. Insufficient integration of resources

Due to the short development time of leisure tourism, the park's foundation is relatively weak. The park mainly focuses on agricultural science and technology, extension services and agricultural production development in the early stage, and starts leisure agricultural tourism development in the later stage. Due to its late start, tourism resources have not yet formed a systematic and effective integration. On the other hand, from the perspective of tourism, more agricultural science and technology parks are still mainly for visiting and touring, with relatively less experience and interaction, education and culture, ecological recreation, etc. Therefore, the depth and breadth of application of agricultural science and technology resources are not enough.

3.2.2. Infrastructure needs to be enhanced

With the rapid development of leisure agricultural tourism in science and technology parks, the conditions of tourism infrastructure such as vending offices and restrooms are not yet able to meet the growth of customer demand. Some of the entertainment facilities are very old and their types are single, which cannot meet the entertainment needs of tourists. As well as around the tourist landscape with high traffic such as budding pet paradise, plant greenhouse and flower exhibition area, the tourist supporting facilities still need to be further increased.

3.2.3. Unremarkable brand features

Similar to most agricultural parks, science and technology parks are facing problems such as similar tourism projects, lack of innovation in content and unexceptional product brands. Although the agricultural products of the park, such as chicory and pumpkin, have been combined with catering to form special dishes and impress customers, they have not yet formed a real brand to spread to more people. Although many of the highlights presented by the plant study are very popular with families and school students, other than that other product features and brand value are still not outstanding.

3.3. Opportunities

3.3.1. Market opportunities

China's economy has fully converged with the world. The rapid progress of science and technology, the deepening of reform and opening up, and the continuous promotion of economic system reform have put forward new requirements for the construction of parks, and provided excellent development opportunities for agricultural science and technology parks to move forward in the direction of modernization, marketization and internationalization. At present, the organic vegetable industry, the bio-microecological preparation industry and the orchid industry have initially formed an international production and marketing market system, integrated into the international market competition environment and opened up a new development path for local agriculture. However, their market scale needs to be further expanded, and product quality and product production and operation efficiency need to be further improved. In the huge international market and domestic market competition environment, these have to rely on scientific and technological progress to further develop and grow.

3.3.2. Policy opportunities

The 2018 Central Document No. 1 proposed the implementation of leisure agriculture and rural tourism boutique projects, the construction of a number of leisure tourism parks with complete facilities and diverse functions, forest homes, recreation bases, rural lodging, and special towns, and strong support for the development of leisure agriculture tourism. Shandong Province "eight development strategies", "ten advantageous industrial clusters" proposed to vigorously develop high-quality tourism, intelligent tourism, Tai'an City, the 14th Five-Year Plan proposed in the cultural tourism, high-quality tourism and other aspects of the forefront of the province, built a cultural and tourism mecca, science and innovation, the Industry highland.

3.4. Challenges

3.4.1. Increased demand for experience

With the gradual improvement of people's living standard conditions, the quality of leisure life and service level is increasingly demanding. Not only should they be satisfied with monotonous activities

such as eating farm meals, staying in farmhouses and experiencing farming, but they are also eager to experience novel and fashionable modern entertainment projects in leisure agricultural tourism. Based on their satisfaction with the overall tourism environment, accommodation, leisure and entertainment, and hospitality services, it is required to comprehensively improve the internal facilities of agricultural parks as well as comprehensively improve the overall quality of personnel.

3.4.2. Fierce competition among the same industry

In Tai'an City, there are dozens of agricultural parks or tourist attractions for sightseeing and picking and leisure tourism, such as Sun Tribe Theme Park with culture as the theme, Tai'an Underground Rift Valley with cave as the theme and Jiuyu Peak with comprehensive leisure tourism. The park tourism projects have their own characteristics, dispersing a large number of visitors, including the expansion training base will also divert a large number of visitors. Coupled with the thousands of leisure agriculture parks around Tai'an such as Jinan, Qufu and Weifang, the competition in the whole leisure agriculture tourism market is more intense.

4. Path analysis of developing leisure tourism in Tai'an National Agricultural Science and Technology Park

4.1. Improvement of tour service facilities

Under the premise of ensuring the safety of hardware facilities without failures, the infrastructure in the park and scenic spots should focus on the spiritual needs and satisfaction of tourists. Set up more scenic area signs and plan clearer tourist routes, such as timely updating of various obsolete guidance signs, printing various types of public information materials, and increasing public rest facilities for tourists to meet the needs of peak tourism periods. In addition, the park should increase the modern service means, such as online ticket booking, cell phone guide, wireless interpretation machine, etc^[3].

4.2. Integration of tourism resources in the park

4.2.1. Make full use of the natural biological resources of the park

There are more than 40 kinds of ornamental trees, 11 kinds of rare trees and 16 kinds of famous and ancient trees in the park; more than 140 kinds of birds, more than 50 kinds of fish and more than 1,000 kinds of insects. Among them, rare animals include the black stork, which is protected by the state, and the red-horned osprey and golden eagle, which are protected by the state. The red scaled fish, which is born in the deep streams of Mount Tai, is a rare species of fish unique to Tai'an City and is listed as an endangered animal under provincial protection. All these biological resources can be used as natural attraction for sightseeing tourism.

4.2.2. Rational development of agricultural science and technology research resources

Focusing on modern agricultural tourism and tourism as well as agricultural high-tech research and development and product promotion of seedlings and flowers, modern dairy industry, organic vegetables, crop breeding and farming, the park cooperates closely with Shandong Agricultural University, Shandong Academy of Agricultural Sciences, and other universities and research units, and actively carries out scientific and technological collaboration and research, scientific and technological development, and declares many new plant varieties. The integration of agricultural science and technology resources and the development of projects such as agricultural study tours with park characteristics will help build the brand of agricultural tourism^[4].

4.3. Improvement of tourism service quality

4.3.1. Cultivation of service consciousness and improvement of professional service level

With professional service concept and way to give tourists professional service enjoyment; strengthen the service attitude transformation, the implementation of the service thrust; strengthen the management of scenic spots way to improve the quality of scenic services, for the management of scenic spots, need to implement the scenic business assessment on the basis of fair and just. For the development of scenic spots and policy development to brainstorming, both to focus on consulting the masses, but also to focus on the scientific design.

4.3.2. Pay attention to tourists' complaints and establish information feedback system

As a park manager, besides focusing on improving hardware facilities, beautifying the environment, service attitude and other important factors, we should pay more attention to the service process and after providing services, by dealing with tourists' dissatisfaction, complaints and grievances about the quality of services, and making timely, steady and reasonable handling of the problems and mistakes in the services^[5]. At the same time, the park should establish an information feedback system in order to reduce or avoid the recurrence of similar mistakes in the next service process.

4.4. Strengthen propaganda efforts

4.4.1. Increase network propaganda efforts

With the advent of the network era, more and more people get to know the world through the network. Therefore, in tourism planning, it is especially important to improve the quality of tourism services and satisfaction through the network. For example, nowadays, the hot short video platforms such as Tiktok, WeSee, and Kwai apps, make some relatively novel film and television animations for the park and publish them in the above platforms to get the attention of potential users.

4.4.2. Increase the publicity of Tai'an tourism service quality with the help of Tai'an tourism logo and mascot

In the propaganda, how to make customers' eyes and ears fresh, thus adding attraction to the tourist destination, thanks to the more eye-catching logo and characteristics of the scenic spot. For example, more unique tourism logos can be designed, as well as more distinctive mascots, to increase the customer experience.

5. Conclusions

Under the background of comprehensively promoting the implementation of rural revitalization strategy and innovation-driven development in China, and taking Tai'an National Agricultural Science and Technology Park as an example, this paper expounds the advantages and disadvantages of developing leisure tourism in agricultural science and technology parks in China, and draws the following conclusions: first, the tourism development of agricultural science and technology parks should adhere to the principle of agriculture and make full use of agricultural high-tech technology. Secondly, in the tourism development of agricultural science and technology park, we should adhere to diversified development, speed up industrial integration, improve service quality, strengthen publicity, and create well-known brands.

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