



## **New Aspects of Leisure Agriculture within Smart Tourism Era**

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### **Author's contribution**

*The sole author designed, analysed, interpreted and prepared the manuscript.*

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### **ABSTRACT**

With the development of China's economy, tourism has become an essential necessity of ordinary people's lives, and rural tourism has also been receiving more and more attention from all quarters. The development of leisure agriculture is a market need, a development need of the times, and human civilization, as well as the inevitable trend of development. Therefore, this study aims at providing some recommendations based on literature reviewed previous studies related to smart tourism and leisure agriculture. Findings report that the prospects of technology for farm manager, the technicalization for facilities and equipment, and the immediate response should be concerned by the owners of the farm and managers of farm business of leisure agriculture within smart tourism era.

*Keywords: Smart tourism; leisure agriculture; rural tourism.*

### **1. INTRODUCTION**

The concept of leisure agriculture/farming is a product of the development of the economy of a region or nation when the industrial structure was changed and the agriculture has been transformed from a primary industry into a

diversely managed industry. Fundamentally, leisure agriculture is a special type of agriculture which its operation comprised two parts, traditional agriculture operation and leisure/tourism operation [1]. A total of 330,000 operators for leisure farming and rural tourism yielding a revenue of 620 billion RMB has been

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reported in China in 2017 [2]. Leisure agriculture is a booming industry in the coming decade. Traditional agriculture consists of traditional production (e.g. planting, fertilizing, cultivation, feeding, harvest, etc.), processing, and marketing of the agri-products/agro-products as well as the forest products and animal products. And leisure/tourism operation means the operator of the farm or village makes profits by providing such experience activities including food and beverage, lodging, site watching, agricultural activities, etc. Its role playing is multifunction. However, Internet and relevant information technologies have changed consumer behavior as well as the operation of the firms. Here, this means both supply and demand sides should be redefined. In this case, this study aims at introducing the definition, nature, and functions of leisure agriculture, defining the concept of smart tourism, and verifying new aspects of leisure agriculture within smart tourism era.

## **2. THE CONCEPT OF LEISURE AGRICULTURE**

### **2.1 The Definition of Leisure Agriculture**

In west countries, leisure agriculture is a form of farm diversification, and the main feature is that farmers actively provide tourists with accommodation and other tourism services. In this case, the original intention of developing leisure clothing industry is to protect agricultural land and rural life from the rapid phagocytosis of urbanization. There are different views on the definition of leisure agriculture at home and abroad, including producer's view, consumer's view, agriculture, rural viewpoint and so on. For example, Veeck et al. [3] defines leisure agriculture as this: "leisure agriculture is an activity that visits agricultural farming, cultivation horticulture or clothing operations for the purpose of recreation, Educate or experience agricultural labor." The definition is defined from the point of view of the needs of the payer. Sonnino [4] is defined in terms of producers and supplies: "leisure agriculture is a kind of reception provided by agricultural operators and their families, which must be linked to agricultural activities." McIntosh & Bonnemann [5] believe that leisure farms (farm tourism) are a form of operation in which farmers actively cooperate with small tourism enterprises as owners. Deroi [6] that leisure farms have long developed in Europe and in recent years. The importance of being a source of tourism resources and profits for rural communities is

increasingly evident. The leisure farm is based on the farm production, reception, entertainment facilities to carry out leisure or vacation activities, tourists can enjoy the rural life in the farm.

In the domestic part, Taiwan issued the "Leisure Agriculture Guidance Management Measures" in 1989, which is an early area in China with a specific definition of leisure agriculture and official food. The method clearly defines leisure agriculture as: the use of pastoral landscape, natural ecology and environmental resources, combined with agriculture, forestry, fishing and animal husbandry production. Agricultural management activities, rural culture and rural life, provide national leisure, enhance the national experience of agriculture and rural agricultural management. Secondly, some domestic scholars have put forward different opinions that sightseeing agriculture (or leisure agriculture or tourism agriculture) is a new kind of agriculture based on agricultural activities and combining agriculture with tourism A cross-type industry; is based on agricultural production, modern tourism combined with an efficient agriculture. The basic attributes of leisure agriculture are: on the premise of fully developing agricultural resources and agricultural products with tourism and tourism value, integrating agricultural production, agricultural technology application, art processing and tourists' participation in agricultural activities, etc., for tourists to a kind of agricultural tourism activity which is characterized by nature's strong interest and modern new agricultural art which cannot be appreciated in other scenic spots.

In conclusion, the definition of leisure agriculture abroad is more inclined to farm tourism and rural tourism. The definition of leisure agriculture in China covers agricultural production, rural ecology and the life of farmers, and has the meaning of agriculture, countryside and life. In other words, leisure agriculture is an industry that uses the resource attraction of agriculture, rural areas and farmers and rural areas (production, ecology and life) to meet the tourism needs of tourists.

### **2.2 The Nature of Leisure Agriculture**

Most scholars believe that leisure agriculture is agriculture and tourism, which is not fair to leisure, agriculture and tourism, and there seems to be room for supplementary explanation. Therefore, exploring the significance of leisure agriculture based on the nature of leisure

agriculture will clarify the above doubts more clearly.

### **2.2.1 Leisure agriculture is a part of the leisure industry**

Leisure industry refers to the industry field closely related to people's leisure life, leisure behavior and leisure demand (material and spiritual), especially the economic form and industrial system formed with tourism, entertainment industry and service industry as the leading industry, which has become an important pillar industry of national economic development. Leisure agriculture makes use of the resources of agriculture, rural areas, and rural areas to provide tourists with experience fields and meet the needs of tourists. There is no doubt that it belongs to the leisure industry. However, in addition to providing leisure experience for tourists, leisure agriculture can also meet the leisure needs of farmers when there is no tourist experience. Secondly, different types of leisure agriculture meet different types of leisure needs, not only for tourists. In other words, on the mean body of leisure, leisure agriculture not only meets the needs of foreign leisure people, but also meets the leisure needs of rural farmers.

### **2.2.2 Leisure agriculture is a part of the tourism industry**

Due to the diversified management styles of leisure agriculture, from small farmhouses and folk villages to leisure agriculture (industrial) parks, the operating area ranges from less than 100 square meters to 10,000 square meters and millions of square meters, operating area gap is very large. From simple farming experience and catering experience to complex accommodation experience and special activities and travel experience, the contents of the business projects also vary greatly. However, tourists (tourists) regulated by the tourism industry are mostly tourists who leave the life circle. However, the tourists in the face of leisure agriculture are far from each other according to the project scale, including local residents and one-day tourists in small scale. Large-scale operators may be more widely, including local and nonlocal villagers and tourists a day, multi Day holiday tourists as well as the type of long stay guest long (long stay). From a tourism perspective, these local residents and people who have lived long-term (over 180 days in a place) are not classified as tourists (tourists), but are real customers in the leisure

agriculture industry. Therefore, leisure agriculture has many characteristics of the tourism industry and is a part of the tourism industry, but it is still somewhat different from the tourism industry.

### **2.2.3 Leisure agriculture is still a family member of agriculture**

Farm is the main operation part of the leisure agriculture. The management of the farm, before receiving tourists, this belongs to agriculture. The farm must carry out production activities such as spring ploughing, summer hoeing, autumn harvesting and winter storage in accordance with the season. Furthermore, the farms on the countryside also maintain the existing rural ecological environment in accordance with the rhythm of the agricultural season. Therefore, farmers regularly follow the farming life and rest. When the whole agricultural sector has not transformed into leisure agriculture, it is operating just according to the existing rhythm. For smallholders, when agriculture begins to transform into leisure agriculture, they need to learn the way of receiving and entertaining guests and the way of operation and management. When tourists visit the venue, they play the roles of both host and farmer, waiter and manager. In the tourist season, the income from receiving tourists belongs to the income of leisure agriculture. However, they subsist on the income of traditional agricultural and part-time jobs while there are no tourists. Therefore, their income includes leisure part and agricultural part. When the income of leisure agriculture is greater than agricultural one, these small farmers can be positioned as leisure farm operators; on the contrary, they are still operators of leisure agriculture with the status of farmers.

For large-scale agricultural groups (or enterprise groups), the income generated by the business projects and revenue scale of leisure agriculture may only be a part of the entire group. For them, leisure agriculture is only a sideline to their original agriculture, or an ancillary industry to their industry. At this time, when the income of the leisure agriculture sector is less than that of other sectors, the ownership of the parent enterprise group still belongs to the original industry. On the contrary, it belongs to leisure agriculture.

Accordingly, leisure agriculture should be defined as leisure/tourism or agriculture, according to whether its main business income comes from leisure/tourism or agriculture, it can be self-

evident. Therefore, for most small farmers, we believe that they live in the countryside, and they are both farmers and leisure/travelers most of the time. They are engaged in agricultural activities and tourism reception activities. In the identification of their industry, leisure agriculture is still a family member of agriculture.

### **2.3 The Functions of Leisure Agriculture**

Leisure agriculture is a part of agriculture, so it also has the functions of agriculture, including political function, economic function, social function and scientific and technological function.

#### **2.3.1 Political function**

The political functions of agriculture include sufficient food supply and the protection of national territory. In economics, the three factors of production are land labor and capital, which are also necessary for agricultural production. The main function of agriculture is to provide national food. When a country's residents have food to eat and can eat enough, the domestic political stability is relatively high. In the history of China, in the era of war and turmoil, apart from the political factors (eunuch relatives, etc.), many of the causes of the turmoil were caused by famine and the lack of enough food for the people. Therefore, instead of agriculture providing food, it is better to say that agriculture provides food stable politics, which has the function of stabilizing politics.

#### **2.3.2 Economic function**

The economic function of agriculture is reflected in the following aspects, as follows.

1. Efficient food production includes low-cost and stable food supply, living and housing supplies.
2. The supply of fine food includes fresh, delicious, rich varieties and perennial supply.
3. Develop national economy includes labor, land and capital, contribution to economic growth, food security, stable economic growth, pressure relief valve in crisis, etc.
4. The revitalization of regional economy includes the diversity and stability of regional economy, providing employment opportunities for the elderly population, and improving energy production efficiency.

For leisure agricultural operators, the management of leisure agriculture not only meets the needs of tourists to eat, live, travel, buy and entertain, but also stimulates the leisure consumption of urban residents. For rural areas, the management of leisure agriculture can create a lot of jobs, but also bring a lot of entrepreneurial opportunities, provide income channels for rural residents, improve the economic level of rural residents. In addition, the development of leisure agriculture will also promote the development of related industries, such as accommodation industry, catering services, transportation industry, entertainment industry, etc., which has a positive contribution to the revitalization of rural areas. Therefore, leisure agriculture has economic function.

#### **2.3.3 Social function**

The economic function of agriculture is reflected in the following aspects, as follows.

1. The basic functions include social diversity, stability and sustainability, the maintenance of urban society, overcoming specialization and simplicity, social stability and cohesion, etc.
2. Communication function includes urban-rural communication, direct marketing of agricultural products, returning from industry to agriculture and farming.
3. The welfare function includes the life contents of the elderly in the aging society, the expansion of the rural occupational space, the agricultural work suitable for all ages, and the life security of the disabled population in rural areas.
4. Educational functions include educating citizens to understand nature, cultivating coordination spirit, endurance, sentiment and creativity, establishing school agricultural parks and developing agricultural experience.
5. Recovery function includes the provision of places (natural recuperation forest, experience farm, leisure farm, villa, citizen farm), the recovery of human nature (recuperation and comfort, improvement of interpersonal relationship, abundance of non-material desire, freedom and independence of agriculture, change and diversification of life), physical therapy effect (Nature and health, relaxation of tension, treatment of modern diseases).

For leisure agricultural operators, leisure farms provide tourists with a field of leisure, a platform

and opportunity for communication, interaction and learning, so that tourists have specific space to restore humanity, and some also have physical therapy effect. Therefore, leisure agriculture has social functions.

### 2.3.4 Technological function

In order to better serve human beings, provide better quality agricultural products and processed products, and meet the diversified needs of human beings for agricultural products and agricultural by-products, agricultural scientific research institutions must constantly improve and develop new varieties, put forward new production concepts, and invent new technologies for production and processing. Therefore, agriculture has the function of scientific and technological research and development. For leisure agriculture, operators must conduct research and development better and provide tourists with better catering, accommodation, agricultural experience and other activities, so leisure agriculture has scientific and technological functions.

## 3. THE CONCEPT OF SMART TOURISM

Smart tourism is a new business model of tourism enterprises, facing the future to serve the business organizations, public, and government sections [7]. It is characterized by human-oriented, green, scientific and technological innovation. It facilitates the improvement of the quality of tourism services by applying information technologies, such as cloud computing, networking and high-speed communication technology. The emergence of smart tourism has changed people's consumption habits and tourism experience, and it became a popular trend to combine tourism development with scientific and technological progress [8,9].

Smart tourism is beneficial to tourist, firms, and the government manager. For example, tourists can easier purchase a travel product through an OTA online travel agency) by a phone, a mobile phone, or a computer. This travel product might be a group packagetour (GPT), airline/train/bus ticket and hotel, ticket of a tourist site, ticket for dining, or the combination of the above. This means tourist can easier obtain tourism information and conduct to the tourism service provider from a public platform (e.g. e-store or tourism company's web site, or OTA's web site, etc.), or a private platform (e.g. social network

service of Facebook, Twitter, WeChat, etc.). Consequently, tourists can take a trip with a relatively low cost and the process and the results of the decision making and journey could be efficiency and effectiveness.

For tourism firms, they can easier collect information of those tourists/visitors/travelers by the platform established by the government or internet technology company. Then, they analyze the data, verify the needs of those ones, well design the products and provide them to satisfy tourist needs, and finally make profits. For example, the managers of a scenic area can adapt the IT approach to reduce the cost of interpretation. They can build a sensor within acceptable distance to a famous site in the scenic area. It run automatically when the tourists close to it. They can also put the QR code at the right place of the site which can provide the interpretation service when tourist need and scan it. Moreover, firms can well prepare for the materials management and risk management. They understand when and how many tourists will visit in the coming days. They can precisely make a plan to prepare the materials and manpower, and smoothly adjust the service procedurals to match the coming booms. Hence, they can use the resources well and avoid the waste of materials and manpower. Consequently, the operational risk could be adequately control in time.

Furthermore, it is beneficial to the government on the policy making, and the management of traffic transportation and safety issue. For example, managers of transportation can monitor the flows of the traffic on the highway and important pot and send some warning messages to tourists in time. To let them know which section of the traffic now is jammed and the possible directions of the alternative can be selected by the tourists. Moreover, some adjusted projects could be drawn by the government after the big data was analyzed. Hence, the infrastructure and facilities can be reformed or improved. Consequently, the government can provide a better public service and well prepare and response to the emergency events.

## 4. NEW ASPECTS OF LEISURE AGRICULTURE WITHIN SMART TOURISM ERA

For most of the owners of farm and the managers of farm business which involving in leisure agriculture, they need to shift their

thought from traditional model to information technological model within smart tourism era. At least the following suggestions of the prospects of technology for farm manager, the technicalization for facilities and equipment and the immediate response should be concerned.

#### **4.1 The Prospects of Technology for Farm Manager**

In the era of smart tourism, both the supply and demand sides can obtain trading information through technology platforms, evaluate market opportunities, and even provide or purchase travel services. Therefore, the farmer should have a scientific and technological outlook. The so-called concept of science and technology here means that we can make good use of technology platforms to manage leisure agriculture. For example, farm operators can engage in advertising and promotional activities through the sharing function of the community platform, and upload farm activities and interesting pictures with short comments or instructions to upload to the online platform for sharing. In this way, in addition to improving the visibility of the farm, it also increases the chance of contact with potential tourists. Similarly, farm operators can also collect other farm activities from the community platform, or visit activities of tourists in other places. Collect information through community platforms to formulate farm marketing strategies, such as main products/ events, pricing, channels, and promotional methods.

#### **4.2 The Technicalization for Facilities and Equipment**

In the era of smart tourism, the more tourists pay more attentions to convenient issue of their traveling to rural area in terms of engaging in leisure agriculture. Therefore, the farm should plan to gradually improve on-site facilities and equipment, and introduce technology-based facilities and equipment. For example, the entrance impression of traditional farms is mostly displayed by billboards. In the technological era of smart tourism, LED marquee can be used, which not only has the function of information notification, but also changes the information in time. Another example is the reception and interpretation hall of the farm, which traditionally uses agricultural product stacks, and the farm uses broadcasters to display and promote products and activities. In the era of smart tourism, the farm can add LED TV broadcast and

commentary, and the QR code can also be set to allow tourists in need to choose according to their own preferences. In this way, it can not only reduce manpower, but also improve efficiency for farm or farm business of leisure agriculture.

#### **4.3 The Immediate Response**

In the era of smart tourism, tourists highly use technology products while taking a trip to rural area. Therefore, service personnel should remain on standby and deal with the problems of tourists in a timely manner when tourists are traveling on the farm. The farm can make good use of the customer service system of the community platform to respond to the needs of tourists in a timely manner. For example, the farm is located in a large rural area. Rest, recreation, and accommodation often face mosquito and fly problems. The farm can inform the handling method at reception and set up a customer service area on the farm's exclusive community platform. Information, the farm can respond in time and send someone to deal with it. In this way, not only can human resources be reasonably allocated to reduce operating risks, but also the needs of tourists can be quickly met, and the satisfaction and reputation of tourists can be obtained.

### **5. CONCLUSION**

It is concluded that the prospects of technology for farm manager, the technicalization for facilities and equipment, and the immediate response should be concerned by the owners of the farm and managers of farm business of leisure agriculture within smart tourism era.

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### **COMPETING INTERESTS**

Author has declared that no competing interests exist.

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