Development Model of Agricultural Characteristic Tourism Resources in Rural Areas

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Abstract

The central and southern part of Liaoning Province belongs to the northeast area in economic regionalization, is the heavy industry agglomeration area in China, and belongs to the intersection of the temperate zone and the warm zone in natural regionalization, with rich products. Then it can be mined as a unique tourism resource, laying a foundation for the development of tourism industry in the region. This paper explores the development and utilization of characteristic tourism resources in central and southern Liaoning to promote the development of tourism industry and industrial transformation and upgrading, and to realize the revitalization of northeast China. Starting from the relationship between agricultural sustainable development and ecological environment, this paper expounds the process of the theory of agricultural sustainable development. Ecological environment is the basic condition for human survival and development, and the material basis for sustainable agricultural development. Agricultural sustainable development and ecological environment are closely related. The fragility of the ecosystem and the deterioration of the environment lead to the decline of the ability of agricultural sustainable development. The irrational use of resources in agricultural production and its own pollution seriously affect and destroy the ecological environment.

Key words: Sustainable Development in Rural Areas; Central and Southern Liaoning; Rural Characteristics; Tourism Resources Development.

1. Introduction

The central and southern areas of Liaoning Province refer to the central and southern areas of Liaoning Province, namely the most part of the Liaodong Peninsula, which is located near mountains and seas. These include Shenyang, Fushun, Dalian, Yingkou, Anshan and Dandong. The central and southern part of Liaoning province belongs to the northeast area in economic regionalization, and belongs to the intersection of the temperate zone and the warm zone in natural regionalization. The natural climate characteristics are distinct in four seasons, which is suitable for the growth of a variety of animals and plants. In recent years, there have been many studies on the sustainable development of agriculture, but on the whole, most researchers mainly emphasize the restriction of land resources, especially cultivated land, on the sustainable development of agriculture. Water resources have been neglected. Now it seems that China's agricultural development will face serious water shortage in the 21st century. Moreover, the restrictive effect of water resources shortage on the development of agriculture and rural economy may exceed that of cultivated land and become an important factor that hinders the sustainable development of agriculture and rural economy. Water is the lifeblood of agricultural production. Without solving the serious shortage of water resources, it will be a difficult dream to realize the sustainable development of agriculture and even the whole social economy. This is also the birthplace of Manchu language in China, which objectively forms a unique national and natural integration and is different from other regional characteristics. China's Manchu population totaled 10.682 million (2000), ranking second among 55 ethnic minorities in China, with Manchu scattered all over the country. Manchu has its own language and writing, most of which live in Liaoning province, accounting for 51.26% of the Manchu population, especially in the central and southern Liaoning province. The current situation of tourism in central and southern Liaoning has not formed a complete system. We hope that through the study of regional culture, natural resources and characteristic agriculture, we can protect and develop the landform, existing resources and cultural characteristics of the region. Gradually form a complete tourism system and make a contribution to the revitalization of the old northeast industrial base.
2. Manchu Sports and Cultural Tourism Based on Manchu Traditional Sports

2.1. Manchu Sports Cultural Background and Characteristic Resources

Manchu is a fishing and hunting nation with rich and colorful ethnic culture. Manchu ancestors lived in the "white clouds and black soil" in northeast China, and gradually created many traditional sports with Manchu cultural connotation and characteristics in their long-term wars, production and life. Faced with the constraints of resource shortage and environmental deterioration, the traditional way of supporting agricultural development by extensive and inefficient use of natural resources is unable to achieve sustainable agricultural development. Only relying on scientific and technological progress, through advanced technology to transform traditional agriculture, scientific, rational and efficient use of existing resources, relying on advanced science and technology to protect natural resources and ecological environment, through the application of high-tech. Only by exploiting the rich resources that have not been utilized to replace the scarce resources that have been exhausted, can the sustainable development of agriculture get out of the predicament. Agricultural irrigation water accounts for 70% of the total water consumption of the whole society, but at present most of farmland irrigation is carried out through the general ridges and furrows without any seepage control function, using large-water flooding irrigation or small-border flooding irrigation, and the effective utilization rate of water is very low. The development of Manchu traditional sports is mainly integrated into the productive labor, festivals and religious sacrificial activities in Manchu rural areas. With a strong life and production, with a strong cultural dependence [1]. This is not only the "living fossil" of history of manchu culture, but also an important component of the sports culture of all ethnic groups in China [2]. The culture of a nation is the label that distinguishes it from other nations. If it loses its unique cultural attributes, the nation will no longer exist. Under the background of the report of the Nineteenth National Congress, Manchu traditional sports culture, as the cultural carrier of Manchu people's production and life, has important significance in its inheritance and development. In the process of the construction of Manxiang area, the traditional sports culture of Manchu nationality has broken down in inheritance, which promotes the revival of the sports culture of Manchu nationality. It is a beneficial attempt to revive Manchu culture and a supplement to Chinese sports culture.

At the Nineteenth National Congress, the strategy of Rural Revitalization was put forward. In the report of the Nineteenth National Congress, the future direction of rural development is to adhere to the line of "harmonious coexistence between man and nature" and "implement the strategy of rural revitalization". In addition, in the "Notice on Promoting the Construction of Sports and Leisure Characteristic Towns", the State General Administration of Sports explicitly pointed out that by 2020, a number of sports and leisure characteristic towns with distinctive sports characteristics, strong cultural atmosphere, good ecological environment, benefiting people's health and industrial agglomeration and integration will be supported nationwide [3].

The more national, the more world. I am used to watching all kinds of modern sports in the world, and sometimes I like things with national characteristics. The traditional national sports activities can make people contact with the national culture affectionately and experience the real in depth, which is more intuitive than the cold museum exhibits to let people feel the national culture.

### Table 1. Characteristic Resources of Manchu Traditional Sports and Cultural Events

<table>
<thead>
<tr>
<th>Classification</th>
<th>Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive sports</td>
<td>Wrestling, Pearl Ball, Seville Call, Hunting Ball, Double Swallow</td>
</tr>
<tr>
<td>Military royal sacrifices</td>
<td>Riding and shooting, wrestling, crossbow dancing, horse-vaulting, camel-vaulting, ice-frolicking, stone-lifting, stone-locking and snow-frolicking</td>
</tr>
<tr>
<td>Religious sacrifices</td>
<td>Liu, Taiping Drum, Cuo Kao, Tile, Qinglong Dance, Bronze Gong</td>
</tr>
<tr>
<td>Games and entertainment</td>
<td>Snowwalk, Hawk Hunting, Shegalaha, Sick and Sick, Bow Pulling, Horse Riding, Palm Spinning, Seville Call, Bumping, Animal Jumping, Manchurian Chess, Rope Ripping, Stone Throwing, Trapping, Horse Racing City</td>
</tr>
<tr>
<td>Dance performance class</td>
<td>Northeast Yangko, Ergui Wrestling, Shaman Divine Dance, Butterfly Dance, Step on Cunzi, Taiping Dance</td>
</tr>
</tbody>
</table>

2.2. Difficulties in the Development of Manchu Culture

(1) Lifestyle changes. The traditional life style of farming, fishing and hunting, which starts at sunrise and ends at sunset, has developed into semi-agriculture, service industry and processing industry. Manchu traditional
sports culture has lost its supporting platform, which makes its inheritance link appear fault, breaking the original national inheritance model from generation to generation.

(2) Impact of foreign culture with the acceleration of world globalization and the holding of the Olympic Games, China has been impacted by various sports cultures, and Manchu traditional sports have gradually lost its own uniqueness. In addition, due to people's expectation for the improvement of living standards, the national characteristic culture is impacted by the urban mass culture. The water requirement of different crops and the same crop at different growth stages is different. In order to improve the utilization efficiency of agricultural water, we should not only adopt advanced irrigation technology, but also study and determine the water demand of different crops and their different growth stages and the optimal irrigation timing. In order to formulate a scientific irrigation system and realize the organic combination of scientific irrigation system and advanced irrigation technology. In order to solve the problem of water shortage, especially in the arid, semi-arid and semi-humid arid areas, which account for more than 2/3 of the land area, we must pay attention to improving the utilization rate of precipitation and vigorously develop catchment agriculture. And make it gradually unable to maintain its traditional culture in the process of integration with other ethnic cultures [4].

(3) Can't keep pace with the times in today's society, traditional festivals, sacrifices and other activities of Manchu people have been cancelled, and traditional sports of Manchu people have lost the platform they depend on. However, the Manchu traditional sports culture has not improved with the change of people's life style, which makes the Manchu traditional sports culture gradually separated from the modern social life and almost lost.

2.3. Development and Application of Full-body Cultural Tourism Resources

Transition of diversified tourism consumption demand. The author hereby puts forward the following suggestions for the revival of Manchu traditional sports:

- The establishment of Manchu traditional sports culture experience center, by the local residents responsible for teaching tourists to learn Manchu traditional sports culture, and accompanied them to exercise.
- Restore some Manchu traditional festivals and hold corresponding competitions during different festivals and celebrations. According to the characteristics of local climate, geography and agricultural production conditions, all localities should proceed from reality and make scientific plans according to local conditions. Technological backwardness is one of the main causes of environmental pollution caused by industrial and agricultural production activities. In the long run, the eradication of water pollution problems ultimately depends on scientific and technological progress. For example, modern biotechnology opens up broad prospects for the cultivation of resistant varieties, the application of natural enemies and the development of biological pesticides, which will eventually solve the problem of residual pollution of chemical pesticides. In the future, we should vigorously strengthen the research and popularization of water resources protection and pollution prevention technology, rely on scientific and technological progress, reduce industrial "three wastes" and residual pollution of pesticides and fertilizers, and rely on scientific and technological progress to improve the ability of water resources pollution prevention and control. For example, marathons will be held during the spring festival of "walking all diseases", pearl ball competitions will be held during the summer festival of "worm king", riding and shooting competitions will be held during the autumn festival of "mountain cutting" and skating competitions will be held during the winter festival of "gold certification". Sports events with different characteristics are held on different festivals to expand local popularity and activity.
- Combine with the surrounding tourist attractions and develop together. For example, the marathon race, the route through the surrounding famous scenic spots, so that the local and surrounding close ties and common development.
- Combine with education. Introducing Manchu traditional sports culture into school education can not only strengthen students' understanding of traditional sports, but also cultivate students' national pride and spirit. For example, Manchu traditional physical education should be popularized in local sports schools or primary and secondary schools. Wrestling, Saiweihu and other events will be carried out in class, or traditional Manchu sports festivals and events will be combined with school games and group activities. While exercising and relaxing, the students also learned the Manchu traditional sports culture so that the Manchu traditional sports culture can be inherited.

The development of sports tourism industry needs both the content basis of sports activities and natural resources as the spatial basis. The Web server is responsible for loading map resources and displaying the data in the database to the map, and the management personnel can query the information of the personnel on the map. The database is responsible for recording basic personnel information and track information obtained through Beidou tour guide cards. The Beidou data acquisition architecture is shown in Figure 1.
3. Winter Ice and Snow Tourism Based on Ice and Snow Resources

3.1. Characteristic Ice and Snow Resources in Central and Southern Liaoning

There are abundant ice and snow resources in central and southern Liaoning, and the development of ice and snow tourism projects is one of the best areas. In recent years, the use of ice and snow resources to develop ice and snow tourism projects has suddenly emerged and has become the leading tourism industry in northeast China in winter. However, from the overall environment of the ice and snow tourism project, there are still deficiencies.

3.2. Existing problems of ice and snow characteristic tourism

(1) Slow economic development has an impact on the ice and snow industry. In recent years, as China's old industrial base, the economy of Northeast China has slowed down due to economic restrictions on other aspects of development. For example, the construction of roads, the construction of ice and snow sports venues, the processing of ice and snow equipment and other industries are lagging behind, directly affecting the development of ice and snow tourism. [5]

(2) Traditional ice and snow projects and local culture have not been protected and developed. The ice and snow project in Liaoning province has always been a dominant project in China, and it is also a region where Manchu people gather. All ethnic minorities have their own national ice and snow projects, but the existing traditional projects and culture in our country are slowly disappearing, and there is no complete system to protect these intangible cultural heritage.

(3) Lack of funds and insufficient publicity. Lack of publicity leads to inadequate social influence and cannot stimulate people to want to play. Investment in ice and snow industry related facilities and equipment is also far from enough.

3.3. Development and Application of Ice and Snow Sports Tourism

(1) Seize the historical opportunity of revitalizing the old industrial bases in Northeast China and use the economic development to drive tourism. Revitalizing the old industrial base in northeast China is the goal of northeast China's recent development, which is a rare opportunity for ice and snow tourism. Increasing investment is the material basis for realizing sustainable utilization of water resources and sustainable development of agriculture. Without adequate capital and material input, only relevant policy ideas and plans are available, the protection of water resources and the treatment of pollution can only be discussed on paper. The same is true of scientific and technological progress. Whether it is the research and promotion of water-
saving irrigation technology, the cultivation and promotion of drought-resistant varieties, or the development and application of water pollution control equipment, etc., a large amount of capital investment is indispensable. Since the reform, the national investment in agricultural capital construction has not only been insufficient in total amount, but also declined year after year in proportion to the national capital construction investment. Especially, the share of agricultural investment in local government capital construction investment has decreased sharply since the Sixth Five-Year Plan. Through this opportunity, we should reform the original tourism mode, develop our own characteristic ice and snow tourism, and introduce new foreign technology to make ice and snow tourism a characteristic industry of tourism.

(2) Protecting local minority ice and snow projects and guiding their development. Ethnic minority ice and snow projects should be protected and guided. Some festivals of minority nationalities are in winter. We can combine ice and snow tourism projects with special festivals of minority nationalities. And then form a new travel experience, while carrying out ice and snow tourism, feel the unique festive atmosphere of the local ethnic minorities. [6] For example, the Spring Festival happens to be during our long Spring Festival holiday, which is the peak period for ice and snow tourism. Many people choose to experience the ice and snow project during the long Spring Festival holiday.

(3) Overcoming the seasonal problems of ice and snow tourism. Due to the seasonal nature of ice and snow events, only one third of the time each year is the best travel time. With this in mind, investors are sceptical about ice and snow tourism. Apart from outdoor venues, efforts should be made to develop some indoor ice and snow projects so as not to be affected by seasons.

(4) Connect with the international community, enhance competitiveness and expand influence. Undertaking some ice and snow sports, learning from foreign advanced ice and snow sports experience, while attracting a large number of tourists. While creating benefits, it also increased the popularity of the ice and snow tourism projects in the region, forming a virtuous circle. Let more and more people understand and participate in ice and snow tourism [7].

4. Rural Tourism Based on Characteristic Agricultural Products Resources

4.1. Characteristic Agriculture Concept

Characteristic agriculture is to develop agricultural industry with local characteristics on the basis of regional advantages, and to choose projects around the "special" of products. Based on the advantages of regional resources, geography, climate, humanity and historical conditions, we should pay attention to the benefits and sustainable development of agriculture.

4.2. Characteristic Agricultural Characteristic Resources in Central and Southern Liaoning

The area of facility agriculture in Liaoning Province has been ranked second in the country, and the area of greenhouse vegetables and vegetables is the first in the country, mainly concentrated in the central and southern Liaoning. Its featured products have a wide range of influence.

(1) Shenyang area. Shenyang promulgated the "Ten Agricultural Brands Implementation Plan of Shenyang". Shenyang will give priority to ten agricultural brands of Shengjing rice, Hanfu apple, Shenyang dairy products, Xiaoliang Shanxi melon, Liaoyu white cattle, Shenyang miscellaneous grains, Shenyang celery, Shenyang edible fungi, Huamei livestock and poultry, and Fulaidou products. We will focus our efforts on brand planning and design, product quality standards and creating an atmosphere for promotion. By 2020, Shenyang's top ten agricultural brands will be worth 20 billion yuan.

(2) Dalian area. In addition to the well-known cherry planting industry in Dalian, Dalian's celery, tomatoes, prickly cucumbers and other crops have also become important brands in Dalian's characteristic agricultural development. Pickled and ready-to-eat vegetables are exported to domestic and foreign markets.

(3) Anshan area. Five characteristic industries were selected in Anshan area and developed into industries with market competitiveness and brand influence through rational planning. They are: Nanguo pear industry, edible fungi industry, tussah industry, gentleman orchid industry and ornamental fish industry. Nanguo pear is the first of the four famous pears and its place of origin is Anshan. We will increase investment in research and extension of water-saving agriculture and catchment agriculture technologies. Relying on technological progress to replace the constraints of scarce resources to promote agricultural development is the major trend of agricultural development in the world today. Material input is the basis of agricultural technology progress, because agricultural technology is always materialized in some specific factors of production, any new agricultural technology research, promotion, popularization and application. Inevitably, the corresponding increase of agricultural investment is required. One of the main reasons for the slow progress of agricultural technology in China is the lack of investment in agricultural science and technology for a long time. Therefore, in order to develop water-saving agriculture and catchment agriculture, it is necessary to increase investment in
the research and extension of water-saving agriculture and catchment agriculture technology, including increasing investment in water-saving irrigation technology, water-saving irrigation project, water-saving and high-yield tillage technology, water-saving crop breeding, water-collecting agricultural technology research and promotion. As well as increasing investment in demonstration areas and demonstration projects as comprehensive bases for water-saving agriculture and catchment agriculture experiment, demonstration, technology introduction, extension and personnel training. Xiuyan is the main production base of Anshan edible fungus industry as “the first county of shiitake mushroom”. Tussah industry is mainly distributed in Xiuyan and the eastern mountain area of Haicheng. Judging from the industrial scale, Anshan has the largest clivia cultivation base in China and the largest ornamental fish cultivation base in northern China.

(4) Dandong area. The special crops in Dandong area include small berries (strawberries, blueberries, etc.), wild vegetables, flue-cured tobacco, melons, Liao five flavors, etc. Due to the large number of specialty products, the plan to promote economic transformation through characteristic industries has been implemented.

(5) Yingkou area. The main development of Yingkou City is leisure agriculture, making full use of local tourism resources, forming a natural scenery characteristic leisure agriculture tourism area centered on Chishan and Huangyakou. Most of them are four-season fruit gardens with the theme of picking grapes, cherries, apples, cantaloupes, strawberries, etc. Bayuquan, Gaizhou as the center of the seaside leisure tourism area. There are also hot spring leisure tourist areas centered on Xiong Yue and Shuangtaizi.

4.2. Existing Problems in the Development of Characteristic Agriculture in Southern Liaoning

First of all, although the special agricultural products of various regions have already created their own distinctive brands in a few years, these brands are currently using the regional product agglomeration and product differentiation. [8]

Secondly, the degree of deep processing of products with special crops is not enough, and the characteristic agricultural products are stagnant in the primary processing stage.

Moreover, the construction of agricultural informatization lags behind, and farmers still obtain information in the traditional way. Nowadays, the agricultural information system is still imperfect. Some agricultural websites only analyze the policies of the authorities, and there is not much effective information available to farmers, and the update cycle is long. [9] Lagging information and inadequate scientific and technological services have seriously restricted the adjustment of agricultural structure and the development of characteristic agriculture.

4.3. Development of characteristic Agricultural Resources in Southern Liaoning

(1) Further enhance brand effectiveness. Local governments in southern Liaoning should establish local domain name cards as soon as possible, strengthen the local brand protection of featured agricultural products, and promote the branding of speciality products.

(2) Increase the degree of deep processing of products. The degree of deep processing is not enough, the industrial chain of characteristic agricultural products is relatively short, and extending the industrial chain is to strengthen the establishment of an integrated chain in the middle reaches of the industry. Bring greater benefits to farmers.

(3) Strengthen information promotion. Governments at all levels should give priority to improving market information service systems and optimizing local agricultural market information exchange networks. Update the information on the circulation quantity and price of agricultural products on the official website in time to guide farmers to determine their production behavior reasonably. Broaden the sales channels of specialty agricultural products, and carry out various channels of publicity, including official microblogging interactive forwarding, official website announcements, WeChat public number publishing articles and other services.

4.4. Development of Characteristic Agricultural Resources Tourism Resources in Southern Liaoning

Vigorously develop leisure and sightseeing agriculture, and use the pastoral landscape, natural ecology and environmental resources to plan, design and develop. Combining agriculture, forestry, animal husbandry and fishery production, agricultural business activities, rural culture and farm life. To enhance residents’ experience of agriculture and rural areas for the purpose of agricultural business forms, effectively meet the psychological needs of consumers, while promoting the stable development of agriculture.

4.5. Create Leisure Tourism Based on Characteristic Agricultural Products

Idyllic Agricultural Tour: Develop and appreciate the pastoral scenery. Watch agricultural production activities, taste and purchase green food, learn agricultural technology knowledge and other tourism activities to achieve the purpose of understanding and experiencing agriculture.
Garden Sightseeing Tour: Develop tourism activities such as picking, viewing, flower viewing, greening, and purchase of fruit, so that visitors can watch the green landscape and get close to the beautiful nature.

Agricultural science and technology tour: develop and watch high-tech agricultural technologies and varieties in the park, facility agriculture and ecological agriculture in greenhouse, so that tourists can increase their knowledge of modern agriculture.

5. Gather characteristic tourism resources and build regional brands

5.1. Optimize the Allocation of Resources for Economic and Social Development in the Whole Region, and Give Full Play to Tourism.

The requirement of global tourism should not stay in the allocation of scenic spots, hotels and hotels, but pay more attention to the effective re-allocation of various resources and public services for economic and social development. Combined with special resources: full body sports, ice and snow tourism, special agricultural picking and sightseeing, to achieve aesthetic recreation value and leisure vacation functions.

The online module of the travel route recommendation system can provide online browsing recommendation service for users. The advantages and disadvantages of this part of the design directly affect the level of the entire travel route recommendation system and the application effect. Optimization complexity such as:

\[
E(x, y, z) = \frac{xL_{LED}A_{LED}}{[(x-x_0)^2 + (y-y_0)^2 + (z-z_0)^2]^{3/2}}
\]  

When the number of attractions reaches 100, the running time of the algorithm reaches 3117826ms. It can be seen from the experiment that the optimization of the lower bound check is the best. Combining the two optimization strategies, we can see from Figure 2 that the algorithm using the two optimization strategies performs best in time.

![Algorithm performance time comparison](image)

5.2. Overall Planning and Construction According to the Scenic Spot Standards

Taking the tourist experience as the center, aiming at improving the satisfaction of tourists, according to the construction and service standards of global scenic spots. Promote multi-integration, optimize the overall environment, beautiful landscape, and optimize the whole process of tourism services. In order to understand the tourists' personal considerations, attitudes towards self-service tours, problems encountered and solutions adopted. Before doing the demand analysis, I made a questionnaire in the survey network. According to the questionnaire of 200 people randomly collected from the website, the data on the causes of distress during the trip was obtained as one of the references for demand analysis. The data are shown in Table 2.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Meal arrangement</th>
<th>Accommodation arrangement</th>
<th>Traffic arrangement</th>
<th>Attractions opening hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>28</td>
<td>122</td>
<td>108</td>
<td>31</td>
</tr>
<tr>
<td>Proportion</td>
<td>14%</td>
<td>61%</td>
<td>54%</td>
<td>16.5%</td>
</tr>
</tbody>
</table>

Table 2. Distress cause data during the trip
5.3. **Build a Comprehensive Tourism Management System for the Whole Region**

In areas where tourism resources are concentrated and the tourism industry has a strong advantage, the management system design of the entire region should have a tourism concept. Eliminate the management bottlenecks and institutional obstacles that restrict the development of tourism resources, better play the leading role of the government, and give full play to the decisive function of market allocation of resources.

5.4. **The Tourism + Function of the Whole Region Will Enable Tourism to Be Deeply Integrated with Other Related Industries. It Will Be in Harmony and form New Productivity and Competitiveness.**

In the region, through tourism + new urbanization, promote the development of characteristic tourist towns and play a leading role in tourism for new urbanization. Through tourism + new industrialization, we will promote the development of tourism equipment manufacturing, outdoor products, special tourism commodities, development of industrial tourism, innovative corporate culture construction and new forms of sales. International experience shows that a breakthrough in solving environmental problems is to increase investment in environmental protection. In the future, we should increase investment in scientific and technological development, research and transformation for the development of environmental protection industry, water resources conservation, treatment of "three wastes" and modern agricultural biotechnology. We should also increase investment in the treatment of industrial "three wastes" and residual pollution of pesticides and fertilizers in combination with tackling key scientific and technological problems. Corresponding scientific investment mechanism should be established to ensure the all-round growth and orderly operation of investment. Establishing the evaluation index system of agricultural sustainable development and ecological environment in China can only proceed from the actual situation of our agriculture and consider the practical problems existing in our agriculture according to the goal of agricultural sustainable development. Establishing a model can not only fully reflect the degree of achieving the goal of sustainable agricultural development in China, but also quantify and compare different regions. Through tourism + agricultural modernization, we will promote the development of new forms of modern agriculture such as rural tourism and leisure agriculture. Through tourism+informatization, the tourism industry will be cultivated as the most active frontier industry in informatization and armed with informatization. By promoting tourism+ecologization, vigorously developing eco-tourism and promoting ecologization of tourism, the development of tourism will be transformed from "building surrounding areas and collecting tickets by setting up gates" to "integrating areas with scenery and industry". To promote the integration of tourism and other industries, industry chain globalization, tourism industry global radiation drive.

Statistics on the overall popularity and average popularity of each region. Take three regions as examples, list their overall popularity and average popularity. Generally speaking, the heat in the three regions is similar. The relationship between the overall popularity of the three regions and their administrative areas is shown in Table 3 and Figure 3.

**Table 3. Attractions and popularity data for the three regions**

<table>
<thead>
<tr>
<th>Region 1</th>
<th>Region 2</th>
<th>Region 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of scenic spots</td>
<td>484</td>
<td>435</td>
</tr>
<tr>
<td>Average popularity</td>
<td>5.64</td>
<td>5.28</td>
</tr>
</tbody>
</table>

**Figure 3. Relationship between number of attractions and popularity**

The geographical topic model is used for thematic analysis, and tourist attractions are recommended according to tourism characteristics. According to this model, users' preferences for various scenic spots can be
obtained, and their preferences for other scenic spots can be predicted. Similarly, a numerical value can be used to express users’ preferences for scenic spots. For each user \( P \), its satisfaction with each scenic spot is calculated as formula:

\[
P = P(Y = 1) = F(\beta, X_i)
\]

The specific process can be shown by Figure 4. First obtain the minimum spanning tree, then control the loop according to the condition, and block the edge with the largest weight. If you need to get two clusters, you only need to cut one of the longest edges.

5.5. Sharing and Sharing the Whole Country

Global tourism forms a new type of destination, a comprehensive and open tourism destination with complete allocation of relevant factors and comprehensive satisfaction of tourists’ experience needs. Global tourism requires not only the construction and management parties but also the participation of tourists and residents.

5.6. Increase Publicity Efforts

Publicize regional tourism through TV, network, mobile phones and other media. Let more people know and understand, and improve the popularity of tourism in the region in a wider range.

Acknowledgements


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