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# Study on Development Strategy of DIY Farm Based on SWOT Analysis

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**Abstract** SWOT analysis method is adopted to analyze current development situations of DIY farms in China from strengths, weaknesses, opportunities and threats. On the basis of analyses, we put forward strategies for sustainable development of DIY farms, including market investigation and research, full utilization of resources, human-based management, diversified and characteristic services, as well as low price and public-oriented development, *etc.*

**Key words** Development strategies, SWOT analysis, Leisure agriculture, China

As a new style of agriculture, leisure agriculture is formed along with industrial upgrading of agriculture. It is a systematic combination of agriculture and service industry. The leisure agriculture mainly includes tourism agriculture, entertainment agriculture, taste-oriented agriculture, and self-service or DIY agriculture. The first three types appear at early stage. Along with development of social economy and improvement of living conditions, people's demand for leisure consumption is also rising. Simple "experience" of tourism, entertainment, and taste cannot satisfy people's leisure demand for "participation". This requires innovation of leisure agriculture. In other words, leisure agriculture needs development to a higher level. In this situation, DIY (do it yourself) farm emerge as the times require. In DIY farm, tourists can take part in various farming activities, learn crop planting technologies, agricultural product processing technologies, as well as agricultural operation and management experience, and get pleasure from doing by yourself<sup>[1]</sup>.

Before "Happy Farm" game is developed, the DIY farm has appeared, but the quantity and scale are limited. Along with spread of online game "Happy Farm", some persons start to invest a lot to develop real happy farms in suburbs. Unfortunately, DIY farms fail to become as popular as the online game "Happy Farm". After a short time of boom, most DIY farms are hit by the slump, and those survived are mostly suffering from losses. In view of this, we analyze DIY farms by SWOT method, in hope of providing theoretical direction for healthy development of DIY farms.

## 1 Connotation of DIY farms

DIY farms belong to self-service leisure agriculture. They have general character of leisure agriculture, but advantages that current leisure agriculture does not have. In reliance on high level of economic development, based on organic and ecological agriculture, supported by new and high technology,

and oriented towards modern service industry, DIY farm features systematic combination of artificial landscape and natural landscape. It takes sustainable development of leisure agriculture as the goal, and satisfies consumers' spiritual demand of "relaxation and entertainment", "back to nature" and "join and experience", then realizes a new style of farm with returns on operation. The development of DIY farms not only reflects "green, environmental protection, health, and ecology", but also conforms to requirement of current low-carbon economic development. DIY farm is symbol of mature leisure agriculture, also a new field for development of recreational tourist industry.

## 2 SWOT analysis of DIY farms

### 2.1 Strengths

**2.1.1 Superior resource base.** Since 1970s, along with rapid rising of urbanization level, the domestic recreational tourist industry develops rapidly. The statistics show that there are totally 1 495 recreational scenic spots in domestic area, including 680 farm stays, 245 recreational granges, 357 folk culture villages, and 324 picking gardens. Among these, 15 scenic spots are five-star ones, 13 are four-star scenic spots, and 11 are three-star scenic spots. DIY farms can utilize existing recreational infrastructure resources to transform and develop farms, so as to cut down cost of investment.

**2.1.2 Support of new and high technology.** Application and popularization of 3S technology (RS, GPS, and GRS) provide technological support for accurate and rapid location and site selection of DIY farms; development of life science technology provides excellent species for farming and breeding; green agriculture, ecological agriculture, new energy and renewable energy technology make the development of DIY farm consistent with the requirements of low carbon economy, and conducive to environmental protection.

**2.1.3 Rich potential tourists.** Recreational agriculture develops rapidly in domestic area, and consumers of original recreational agriculture have reached 700 million person-times annually<sup>[2]</sup>. All of these are potential customers of DIY farms. Since

DIY farm is suitable for consumption of different age groups, it has rich potential tourists. The trend in ageing of the urban population structure is obviously accelerating. The proportion of aged population over 60 years old is over 12%. Most aged people are physically and mentally healthy, full of vigor, and love agricultural and gardening activities<sup>[3]</sup>. Most young people are easy to accept new things, and keen on releasing working and mental stresses through various recreational activities. Besides, teenagers living in cities rarely experience idyllic life, so they are extremely curious about life in the countryside and agricultural knowledge.

**2.1.4** Based on organic and ecological agriculture. Presently, frequent occurrence of food safety incidents, such as pesticide residues in agricultural products, lean meat powder, poisonous ginger, and contraceptive cucumber, *etc.*, makes people fear of products at market and raises the appeal for healthy and nontoxic foods. DIY farm is an artificial ecological system. Its natural environment requirement is not high, while it has high requirement for its internal ecological system. In DIY farms, people mainly utilize green and organic agricultural production technologies and soilless culture technology to plant vegetables and fruits, and breed poultry, in hope of satisfying people's demand for poison-free foods.

## 2.2 Weaknesses

**2.2.1** High requirement of location and site selection. From the economic point of view, DIY farms emerge and develop along with development of urbanization, and also the result of social economy developed to a certain stage. Therefore, in the location and site selection for DIY farms, the customer location market must be provided with superior social and economic conditions and higher urbanization level, which is also a key point for successful site selection of DIY farms. According to Xue Ruohan's survey in Fujian<sup>[4]</sup>, the highest group that accepts DIY rental farms is the people with monthly income of 2 000 – 5 000 yuan. Therefore, suburbs of main developed cities become ideal selection of DIY farms. Of course, along with further development of social economy, site selection of DIY farms will reduce its requirement for economic development level.

As to the traffic, DIY farm is not only extension of rural tourism, but also a part of urban economic circle, so we should take customers' distance requirement as basic rule for site selection. The survey in Fujian made by Xue Ruohan<sup>[4]</sup> shows that citizens who take self-driving mostly choose 1.0 – 2.0 h travel time, while those travelling by bus mostly choose 0.5 – 1.0 h travel time.

**2.2.2** High cost of investment. The improvement of urbanization level directly results in fierce competition of suburban land and sharp rise of land price. However, DIY farms are not ordinary rental farms. They need more and higher quality infrastructure. For instance, convenient and fast traffic and communication facilities, safe and sanitary board and lodging facilities, and sewage treatment system for environmental protection, *etc.*, therefore, initial investment is generally higher than ordinary leisure farms.

**2.2.3** Single recreational project and fuzzy internal planning.

At present, most DIY farms are still at early stage of experience and participation. If the understanding of DIY farms deviates from its connotation, internal recreational project will be single, and there will be problem of fuzzy planning. As a result, comprehensive function of DIY farms will not be brought into play, consequently leading to low industrial value and poor market adaptability. Although common recreational projects in leisure farms can be utilized and improved in DIY farms, which projects are suitable for introduction depends on natural and social environment of DIY farms, consumers' demands, as well as planning for development internal farm space. Rational and orderly internal planning of farms is to realize layer, informationization, diversification and exquisiteness, and value maximization of limited internal spaces, so as to raise space utilization of farms. Nevertheless, the internal space planning of farms shall not impair customers' consumption feeling in DIY farms.

## 2.3 Opportunities

**2.3.1** Urbanization level improved. Leisure agriculture develops along with quickening and development of urbanization process. Leisure agriculture firstly appeared in those developed countries with high level of urbanization. According to statistics made by World Tourism Organization in 1999<sup>[5]</sup>, the income of agricultural tourism accounts for 5% – 10% of European gross income. In France, over 3 million people go to countryside each year to have a pleasure travel. The income of agricultural tourism is about 11 billion Euros, which corresponds to 1/4 of the national tourism income. Nowadays, the acceleration of China's urbanization process provides guarantee for development of leisure agriculture.

**2.3.2** Opportunity provided by agricultural transformation. With quickening of urbanization process, arable land becomes less and less. Traditional agriculture is already not adaptable to requirement of social development, so it is required to turn to sustainable development of modern agriculture. In modern agriculture, agricultural functions should be diverse. It should integrate culture, education, economy, health care, social interaction, and amusement and recreation. DIY farm is just a manifestation of diversified agricultural functions. Therefore, agricultural transformation creates a wonderful opportunity for development of DIY farms.

**2.3.3** Time guarantee provided by holiday pattern. From January 2008, China began to implement new holiday pattern, and add Ching Ming Festival, Dragon Boat Festival, and Mid-autumn Festival into statutory holidays. Together with New Year's Day, the Spring Festival, International Labor Day, and National Day, there are totally seven holidays for all citizens. It is stipulated that we can have one day off separately during the New Year's Day, Ching Ming Festival, International Labor Day, Dragon Boat Festival and Mid-autumn Festival. In these holidays, it is very suitable for short time, short distance and economical and practical leisure travel. Objectively, it provides time for leisure consumption, and creates favorable opportunity for development of DIY farms.

## 2.4 Threats

**2.4.1** Threat posed by urban and industrial expansion. Since

reform and opening-up, China's urbanization level gradually rises. In 1978, the urbanization level is 17.90%. In 2011, it is approximately 47.00% with an annual increase of 0.88%. Constant rise of urbanization level promotes rapid development of industrialization, brings increase of both national economy and people's income, but also creates dual pressure for agriculture, namely, gradual decrease of arable land and environment pollution. China's arable land is gradually close to the red line (0.12 billion  $\text{hm}^2$ ), with per capita arable land only 40% of the world level. DIY farm is based on organic and ecological agriculture, so environment pollution is the major factor influencing its development. Water pollution, soil pollution and air pollution bring additional sewage treatment expenses, and are not favorable to sustainable and healthy development of DIY farms.

**2.4.2 Hard to guarantee farmers' interests.** As a quite comprehensive style of leisure agriculture, DIY farm certainly needs large areas. In this situation, some farmers' land will be expropriated for farm development. Farmers depend on land for existence<sup>[6]</sup>, and land is farmers' fundamental interest. Presently, DIY farmers are mostly invested and developed by large groups or enterprises. Farmers, as individuals, have limited financial resources. As a consequence, the participation of farmers is often in the form of putting into land. In such development mode, farmers' participation degree is low and their personal interests are hard to guarantee, which is not only a problem faced by DIY farms, but also a threat faced by the entire leisure agriculture.

### 3 Development countermeasures

**3.1 Making market investigation** Before development, we should make thorough market investigation, and carry out statistics for citizens' income level, especially those who are willing to consume in DIY farms. Then in the course of implementation, we should adjust the consumption price properly, in hope of setting a basic target for DIY farms at present stage of social development, and making them have an appropriate scale in different areas.

**3.2 Fully utilizing existing resources** For construction of a completely new DIY farm, the investment is substantial in the entire process from expropriation of land, infrastructure construction inside farms, as well as recruitment of service persons. Thus, when developing DIY farms, it is recommended to draw support from existing leisure farms and their infrastructure, and make a reasonable transformation and planning on the basis of this, so as to cut down costs and shorten the profit period. Strengths and weaknesses of human resources concern service quality of DIY farms. By demands, service persons engaged in DIY farms can be divided into five types: cleaning, reception, experienced, management type, and decision making. The cleaning, reception, and experienced service workers can be recruited from rich human resources in surrounding rural areas and strictly selected for further training. Agricultural technicians and farmers with rich farming experience are experienced workers. Both of them can learn from the other's strengths to offset their own weaknesses, so as to en-

sure scientific farming. Management type persons need rich management experience, and are able to provide powerful assistance and guarantee for policy-making level.

**3.3 Human-based management** We can apply modern network information technology and install camera system within farms, in order to provide human-based service for consumers and let them see growing condition of plants they rent on their PC, and achieve a remote management through computer or telephone. For example, if vegetables are mature but not picked, they can contact farm manager online or by telephone, to let him deliver. Meanwhile, such network information management also can enhance consumers' supervision on farms and strengthen their trust in farms, and consequently consolidate the commercial relation between consumers and operators.

**3.4 Diversified and characteristic services** In line with different age groups, we should provide diversified and characteristic services. Some young couples like to participate in activities to strengthen their relationship, so we can develop special area for couples. In line with gradual increase of retired persons, and old persons and children have plentiful time, while many young parents do not have time to play with children, we can develop grandparent and grandchildren paradise. In the respect of technical service and seedlings, apart from providing conventional vegetables and fruits planting, we can also offer various flow planting, and provide soilless cultivation of various plants with the aid of soilless cultivation technology. In addition, according to local resources of DIY farms, we can develop characteristic service projects in accordance with local situations<sup>[7]</sup>, in order to strengthen adaptability and competitive power. For example, rock-climbing in mountain villages, spa, and cottage games, etc.

**3.5 Low price and public-oriented development** Emergence and development of a new thing mostly follow the law of price from low to high and consumers from specific to public. DIY farm is a new thing, and future social and economic development will promote it to turn to low price and public. Its objective customers and market should not only lie in middle and high class ones, but should be oriented toward a higher and wider market space. In the development cost, citizens' consumption level should be one of major principles for setting development cost. At the same time, it is required to pursue low cost and low price development mode, and to develop into town dwellers affordable public mode in the next 10 years.

### 4 Conclusions

In summary, the newly emerging DIY farms have more strengths than weaknesses and more opportunities than threats, indicating that their appearance and development conform to requirements of social economic development. However, since its practice time is not long, and there is no guidance of academic theory, some problems and challenges (if not solved in time) will become bottlenecks in the development of DIY farms. As the soul of innovation in leisure agriculture and symbol of mature development of leisure agriculture, DIY farm

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employment system and social security system, which is the key of improving the labour production efficiency and effectively using China's abundant labour force resources in rural areas.

**3.3 We should establish virtuous circular agricultural financial credit system** As for the shortage of agricultural development financial supply, the most important reason is that the agricultural financial system reform in rural areas lags behind; the role of policy finance is not fully played; it lacks effective management of finance; there is serious outflow of agricultural capital. Thus, the target of national agricultural financial system reform is to resolve the contradiction problem reasonably between agricultural development of financial institutions themselves and promotion of modern agricultural development.

**3.4 We should hew to the innovation and promotion system of agricultural technology** The progress of agricultural technology is not only the power of agricultural growth but also the important impulsion of transformation of agricultural development mode. Since the reform and opening up, China has established the development strategy of "Agriculture by Science and Education", and written the article of "growth of scientific research investment higher than growth of financial recurrent revenue" into *Agriculture Law* and *Science and Technology Law*, which ensures the steady growth of agricultural scientific research investment. However, now agricultural technology system of China still faces many problems, which needs the supporting reform such as investment in technology, technical innovation, achievement transformation, technology transfer and so on.

**3.5 We should establish strict system of resources environment and ecological protection** In general, the phenomenon of China's agricultural ecological environment suffering damage and waste of resources has not been fundamentally controlled, and it continues to deteriorate in some areas. Thus, we must use the legislation and economic means to carry out system optimization of resources environment and then ensure the sustainable development of modern agriculture.

**3.6 We should establish the agricultural risk security system** On the one hand, we should formulate the security system of the price of agricultural products, establish the mechanism of agricultural futures interest protection and the mecha-

nism of protective purchase price of agricultural products, and arouse the enthusiasm of farmers in exploring modern agriculture; on the other hand, we should actively carry out the system of agricultural insurance, and improve the ability of agriculture to resist natural disasters, international financial crises and other unfavorable factors<sup>[8]</sup>. Once encountering emergency, we should turn crisis into opportunity quickly and minimize the loss of agriculture.

## 4 Conclusion

In brief, in order to achieve the great goal of China's agricultural modernization, we should actively pay attention to probing into the essence of agriculture. According to the local actual situation, we will actively carry out the practice and innovation of agricultural modernization. Moreover, we should enhance the implementation efficiency of supporting security system, and form the relatively self-contained development approach of the agricultural modernization with Chinese characteristics.

## References

- [1] HE BS. Some thinking on quickening modern agricultural construction advancement[J]. *Issues in Agricultural Economy*, 2007(2): 18–23. (in Chinese).
- [2] National Bureau of Statistics of China. Economic and Social Development Statistical Communique in 2010[R]. 2011. (in Chinese).
- [3] China's agricultural imports and exports from January to December in 2009[EB/OL]. (2010–01–26). [http://www.cctw.cn/xxfb/t20100125\\_1422344.htm](http://www.cctw.cn/xxfb/t20100125_1422344.htm). (in Chinese).
- [4] National Bureau of Statistics of China. Second National Agricultural Census Communique main data[R]. 2008. (in Chinese).
- [5] ZHANG XY, LI YZ. Ecosystem services and sustainable development[J]. *Ecologic Science*, 2004, 23(3): 286–288. (in Chinese).
- [6] DAVID RICARDO. On the principles of political economy and taxation[M]. Translated by ZHOU J. Beijing: Huaxia Publishing House, 2005. (in Chinese).
- [7] XI JP. To develop efficient ecological agriculture, to take a new path of agricultural modernization[J]. *Study and research*, 2007(3): 18–20. (in Chinese).
- [8] WANG GM. Risk management and prevention system of natural disasters in agriculture[J]. *Social Science Research*, 2007(4): 27–31. (in Chinese).

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will promote healthy and sustainable development of the entire leisure development. Besides, it will achieve systematic combination of the primary industry, secondary industry and tertiary industry. In addition, it is of practical significance in pushing forward social and economic development of suburbs and effectively solving issues concerning agriculture, countryside and farmers in suburban areas.

## References

- [1] HUANG CM. Experience in the development of leisure agriculture in Taiwan[J]. *Technology and Industry Across the Straits*, 2006(1): 46–48. (in Chinese).
- [2] JI XM. China leisure agriculture status and trends[J]. *Chinese Agri-*

- cultural Science Bulletin*, 2007, 23(12): 456–460. (in Chinese).
- [3] WANG SJ, LIU JP. Suburban problems and suggestions in the development of leisure agriculture[J]. *Rural Economy*, 2007(12): 110–113. (in Chinese).
- [4] XUE RH. Investigation and analysis of rental and recreational farm acceptance[J]. *Journal of Anhui Agricultural Sciences*, 2007, 35(8): 2484–2487. (in Chinese).
- [5] LIU WM, YU ML. Tourism development and foreign agricultural inspiration for Shanghai[J]. *Shanghai Rural Economics*, 2007(9): 39–41. (in Chinese).
- [6] CHENG X, LEI YY, YANG XX, *et al.* Simple discussion on agriculture land – using for tourism industry[J]. *Journal of Anhui Agricultural Sciences*, 2006, 34(13): 3217–3218. (in Chinese).
- [7] CHENG SK, XU ZR, LI S. On the study progress of agrotourism and some theoretical issues[J]. *Tourism Tribune*, 2005, 20(5): 26–30. (in Chinese).