

# Research on the Construction and Practice of Urban Agricultural Complex Planning Model Based on Symbiosis Theory——Take the One-stop Rural Complex Planning of Chunshu Village in Xi'an as an Example

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**Abstract:** Urban agricultural complex is a brand-new conceptual system. This thesis focuses on the development of urban agricultural parks, based on the theory of symbiosis, taking the model of coordinated urban and rural development in development economics as the path, and following the relevant aspects of urban planning Theory and requirements, construct the planning and construction model of urban agricultural complex, and finally apply the planning model to the planning and design of practical cases for practical demonstration. Integrate the rural and agricultural parts of the urban fringe into the system of the entire urban area, and solve various problems in the economic and social development of the suburbs through a variety of ways, and provide a certain reference for the overall development of the urban fringe in my country.

**Keywords:** Urban Agricultural Complex, Symbiosis Theory, Urban and Rural Coordination, Planning Model, Agricultural Park

## 1. Overview of Urban Agricultural Complex

### 1.1 The Concept of Urban Agricultural Complex Based on Symbiosis Theory

The concept of urban agricultural complex was proposed based on the application of symbiosis theory in urban-rural coordination. According to the elements and characteristics of the biological symbiosis relationship, it was deduced what kind of symbiosis unit should be adopted between the rural and urban in the urban-rural coordination. [1]Concrete means to achieve symbiosis. Based on the research and discussion of the urban-rural coordination in the theory of symbiosis, combined with the construction and development of urban agriculture in urban fringe areas, drawing on the concept of complex, and following the research model from theory to practice, and then from practice to theory, we strive to build urban-rural coordination through urban radiation The new model of urban agricultural complex developed-urban agricultural complex [2].

### 1.2 Characteristics and Functional Composition of Urban Agricultural Complex

The urban agricultural complex combines the two characteristics of the urban complex and the agricultural complex, the most important of which are the following four aspects. (1) Experience. Giving play to the advantages of agricultural experience, setting up agricultural experience projects, and creating an idyllic atmosphere in the city is the biggest feature of the urban agricultural complex. (2) Convenience. The site is located in the city or on the outskirts of the city, with convenient transportation and urban residents can go back and forth at any time. (3) Commercial. Taking retail and catering as the main forms of consumption has enhanced the commercial value of the complex and has also played a role in promoting investment. (4) Ornamental. Some planting land owned by the urban agricultural complex is also a good landscape resource. It can also be built into a high-quality landscape with good ornamental properties.

The author believes that agricultural experience is the core of the functional composition of urban

agricultural complexes. A complete commercial chain should be formed around this core and extended and expanded on this basis. The main functions should include agricultural production, catering, retail, experience, and ecological recreation. .

### ***1.3 The Development Status of Urban Agricultural Complex***

After nearly 20 years of development, China's urban agriculture has achieved remarkable results, but there are also some outstanding problems. The understanding of urban agriculture needs to be improved [3]. In the future, with the rapid development of industrialization and urbanization, my country's urban agriculture will also show new development trends. Its content is as follows:

First, the supply capacity of agricultural products has gradually increased. One of the important tasks for the development of urban agriculture in all parts of our country is to improve the ability of vegetable basket products, which plays an important role in enhancing the attack ability of agricultural products.

Second, the continuous accumulation of high-quality production factors. In order to promote the development of urban agriculture, various regions have actively guided the gathering of various resource elements by increasing various policies and financial investment.

Third, promote the coordinated development of urban and rural areas. In recent years, the foundation of urban agriculture development has been continuously consolidated, and the level of agricultural industrialization and service socialization has been significantly improved, which has effectively promoted the integration and coordinated development of urban and rural areas.

Fourth, continuous innovation of institutional mechanisms. In terms of enhancing the vitality of urban agriculture development, various localities mainly adopt measures such as land transfer, labor training, financial support, and investment policies [4].

Fifth, theoretical exploration continues to deepen. With the active development and practical exploration of urban agriculture, relevant theoretical research has been continuously deepened, providing solid theoretical support for the development of domestic urban agriculture.

## **2. General Overview of "One-stop Pastoral Complex Planning Project of Chunshu Village, Xi'an"**

### ***2.1 Project Background***

Since 2015, the state has provided industrial policy support to agricultural cooperatives for the promulgation of supporting policies. Support farmers, support rural areas, support agriculture, the rural revitalization strategy proposed in the report of the 19th National Congress of the Communist Party of China [5]. Chunshu Village, Lintong District, Xi'an City, has a vast agricultural planting land with a long history of organic farming. And because young people go out to work, there are many people in the village staying behind. At present, China strongly supports rural revitalization, insists on the priority of agricultural and rural development, insists on the development of urban and rural integration, insists on the harmonious coexistence of man and nature, insists on adapting measures to local conditions, and making progress gradually [6].

### ***2.2 Current Status of Project Planning***

Chunshu Village in Xi'an is located in Xiquan Street Office, Lintong District, Xi'an City. Chunshu Village governs 8 villager groups with an area of 3159 acres, 717 households and 3056 villagers. The village vigorously develops agriculture and characteristic industries; it focuses on vegetable planting, in the form of cooperatives and farmers, based on the village's land resources and agricultural planting history, and actively builds a core tourist area featuring leisure vacations, agricultural sightseeing, and popular science education . At present, the Chunshu Village Rural Cooperatives rely on the country's precise poverty alleviation policies to vigorously develop the tourism industry, actively solve the infrastructure construction problems of water, electricity, and video communications, and develop a new type of rural leisure tourism based on cooperatives. At present, Chunshu Village is actively preparing to build a popular science knowledge park, adding multimedia classrooms, livestock breeding sightseeing parks, supporting cultural and recreational facilities, lighting projects, parking lots, homestays, etc., to achieve the integrated development of city and county agricultural economy.

### **2.3 Project Positioning**

The one-stop pastoral complex of Chunshu Village is positioned as "ecological pastoral in the city", integrating traditional agricultural production elements with modern urban life, completing the direct transformation from agricultural production to commerce, and breaking the pastoral complex and farmhouse at the same time Regional restrictions on other forms of pastoral experience. With agriculture as the core, vigorously develop tourism. The project vigorously develops participatory agriculture and builds a new type of rural leisure tourism based on cooperatives.

### **2.4 Design Concept**

The construction of this project is an innovative exploration in the planning of agriculture in the city. It is one of the important trends in the development of modern agriculture. It can effectively realize industrial clustering and functional complementation, and has important practical significance for the sound development of agriculture. . The project can help revitalize the rural economy, and help villagers in Chunshu Village to take the road of sustainable development and promote the transformation of traditional agriculture to modern agriculture. While meeting the needs of residents in life, production, ecology, etc., it can expand the content of agricultural production.

## **3. Plan Analysis**

Through the preliminary site survey work of Chunshu Village in Lintong District, careful investigation and analysis have been done to fully understand the current situation of the base, and develop a plan for the construction of a rural complex for this base.

### **3.1 Overall Layout**

The project is divided into three phases. The first phase of the project, the Wisteria Park and the United Nations of Melon and Fruits, is mainly to create large-scale wisteria tunnels and the sea of Chi Sakura and other viewing and healing landscapes. The large fresh lawn provides a venue for large-scale events; the United Nations of Melon and Fruits mainly develops local characteristic agriculture. The freshness and pollution-free of crops, fruits and vegetables are shared with every customer with confidence, and combined with parent-child activities, it drives nearby villagers to improve economic benefits. The main functional zones of the second and third phases are: Agricultural R&D, Science and Education Demonstration Zone, in-depth cooperation with schools , to achieve the integration of production , education and research; Cultural and creative districts focus on commerce and food, creating a lingering environment for tourists; expanding camping clubs is an extreme hobby A paradise for equestrians; the equestrian club provides a standardized and normative place for equestrian enthusiasts, allowing people to feel the speed and passion . In the later period, the centralized renovation and construction of homestays not only solved the housing problem of tourists around Lintong, but also brought the local villagers a way to become rich. The one-stop pastoral club has created a comprehensive experience place far away from the city and returned to the garden. It brings visitors the fun and enjoyment of "viewing the village of vines and trees and seeing Lishan leisurely".

### **3.2 Function Layout Analysis**

The functional zones of the one-stop pastoral complex in Chunshu Village are agricultural R&D, science and education demonstration zone, homestay concentrated zone, cultural and creative block, wisteria special category garden, melon and fruit United Nations, romantic flower sea area, equestrian club, and extended camping club . The project is characterized by its reliance on rural agriculture. The layout of the planting area and the consumption experience area is scattered. Its catering, retail and leisure experience are laid out mainly by roads, and multiple agricultural experience areas are connected in series to form a complete set. Rural agricultural tourism route.

### **3.3 Streamline Analysis**

The one-stop pastoral complex of Chunshu Village is based on the countryside. Its tourist flow line is the main road of the village diverging to the surroundings. The secondary flow line connects each planting area, and the consumption area and main road are the passages for tourists. Its tree network

streamline allows customers to change the tour route at any time according to their browsing status.

#### **4. Pre-solve Problems and Solutions**

At present, the overall tourism service industry in Chunshu Village is not perfect and the service quality is low. In terms of its rural landscape construction, the overall is not coordinated enough, and the management is not rigorous enough, and it lacks a unified standard. So far, its agricultural tourism system has not been formed, and the related supporting facilities are not perfect. These problems require the management staff of Chunshu Village to customize a unified management standard, make a unified plan for the village's sightseeing spots, regularly train the village service personnel, improve the service quality, and hire professionals to build the village. All aspects must be coordinated to further develop infrastructure construction, develop transportation, vigorously promote, and continue to innovate in leisure agriculture.

##### ***4.1 The Spatial Layout of Each Functional Section***

The functional sections should be connected to each other to facilitate tourists to visit and experience. The arrangement of various planting areas should have a sense of hierarchy, and various retails should have their corresponding planting areas. connected together. And each functional section should have an independent rest area. The village buildings should be arranged according to main roads and sightseeing spots. Integrate various retail stores with characteristic rural experiences. The villagers in the village can carry out tourism services nearby, and the buildings should not be laid out in a regular pattern, but should be combined with transportation, tourism and sightseeing while preserving the original rural features.

##### ***4.2 Employment of the Original Labor Force***

Chunshu Village originally had a large number of surplus laborers, most of whom were plantation laborers. Such personnel can become personnel in the relevant service industry after being trained, and those with rich planting experience can become planting workers in the relevant plantations. In addition, rural folk cultural performances can also be performed in the village. This type of work can provide a large number of jobs and solve the employment problem of the original labor force.

##### ***4.3 Agricultural Landscape Issues***

First, the agricultural landscape needs to consider the comprehensive ecological characteristics of the region and the specific target requirements of regional development, and build a regional agricultural landscape system with spatial harmony, ecological stability and ideal economic benefits [7]. After the establishment of a complete system, the agricultural landscape in this area has basically become complete, and its various problems have also been resolved. Second, the landscape planning of the village should be based on the original rural landscape and modern aesthetic innovations, creating a diverse, stable and sustainable ecological agriculture. Only such ecological agriculture can lead the villagers out of poverty and give the village development a steady stream of power drives the continuous and stable development of the village. Third, the agricultural landscape planning of the village should have moderate spatial complexity, and follow the principle of 744 optimal economic output and ecological stability, that is, seek a balance between system stability and productivity, and carry out appropriate manual adjustments to make it the development status has always been maintained at an excellent level. Fourth, according to local conditions, the eco-agricultural model is constructed according to the climate, temperature and humidity, watershed topography, economic development, population density and social development [8], so that the various functions of the village's agricultural landscape can better play its role, and it is more beneficial to the village longterm development.

#### **5. Conclusion**

The form of urban agricultural complex is an effective innovation of current traditional agriculture, and it is also one of the effective realization forms of my country's current vigorous rural revitalization. The emergence of urban agricultural complexes can effectively promote the industrial upgrading of agriculture, expand the agricultural industry chain, provide jobs for the agricultural population, and

promote the development of the agricultural economy. The one-stop pastoral complex in Chunshu Village, Lintong District, Xi'an City is an in-depth exploration and study of the construction of an urban agricultural complex. It integrates and optimizes the original rural landscape and modern new agricultural forms, and refines more advantageous projects for development the research has given full play to the attractiveness of the agricultural sightseeing experience and promoted the growth of rural and urban consumption. At the same time, it has also made reasonable improvements to rural culture and carried out beneficial innovation reforms in rural development. Generally speaking, it is a progressive process of realizing the integration of rural urban cultural features, taking its strengths and avoiding its shortcomings.

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