

# Research on the Construction Path of Rural Talent Team of Horticulture and Plant Protection in Xinjiang under the Background of Rural Revitalization

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**Abstract:** Under the background of Xinjiang’s rural revitalization strategy, horticulture and plant protection industries are facing the problems of talent shortage and unreasonable structure. In order to solve this dilemma, the following strategies are put forward: first, optimize the education and training mode, improve the system and practicability of talent training by incorporating professional courses, carrying out characteristic education, combining distance education and establishing practical training bases; Second, build a talent introduction platform, strengthen the linkage between government and enterprises to attract talents, provide favorable treatment and carry out cooperation and exchanges to attract more professional talents; Third, improve the career development path, clear promotion channels, set up promotion posts and hold competitions to stimulate the enthusiasm of talents; Fourth, innovate the incentive mechanism, optimize the salary system, provide welfare security and honor recognition, and enhance the sense of belonging of talents; Fifth, strengthen school-locality, industry-university-research collaboration in education, promote in-depth cooperation, improve the construction of training bases, implement the “industry-university-research and application-oriented” integration model, cultivate high-quality talents, and contribute to rural revitalization. The efforts of various measures have been coordinated to lay a solid foundation of talent for Xinjiang’s rural revitalization and agricultural modernization.

**Keywords:** Rural revitalization; Horticulture; Plant protection; Talent team construction

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## 1. Research background

In the new journey of comprehensively building a modern socialist country, the rural revitalization strategy is regarded as a key measure to realize the modernization of agriculture and rural areas. The report to the Party’s 20th National Congress pointed out that talent is the core resource to achieve rural revitalization, and it is necessary to build a “three rural” workforce that understands agriculture, loves the countryside and farmers.

Xinjiang, as one of the provinces rich in agricultural resources, the implementation of its rural revitalization strategy is of great significance to the country's agricultural modernization and food security<sup>[1-3]</sup>. Therefore, focusing on the construction of rural talents for horticulture and plant protection in Xinjiang has a far-reaching impact on enhancing industrial competitiveness, promoting farmers' income and improving the rural ecological environment.

In terms of research background, remarkable progress has been made in the process of implementing the rural revitalization strategy in Xinjiang. The structural reform of the agricultural supply side has achieved initial results, farmers' income has been greatly increased, rural infrastructure has been gradually improved, poverty alleviation has achieved positive results, and the ecological environment has been continuously improved. However, with the deepening of rural revitalization, problems in the construction of talent teams in the fields of horticulture and plant protection have gradually become prominent, such as insufficient total professional talents, unbalanced talent structure, weak rural attractiveness and shortage of industrial talents<sup>[4]</sup>. These problems restrict the development of Xinjiang's horticulture and plant protection industry to a certain extent and hinder the full implementation of the rural revitalization strategy.

## **2. Research significance**

### **2.1. Theoretical contribution**

By analyzing the current situation and challenges of the construction of horticultural and plant protection rural talent teams in Xinjiang, this study aims to construct the cultivation, introduction, use and incentive strategies of horticultural and plant protection rural talent teams that adapt to Xinjiang characteristics, and provide empirical support for the theory of rural talent team construction.

### **2.2. Practical guidance**

In view of the practical problems in the construction of rural talent team in Xinjiang, a series of specific strategies, such as optimizing the education training mode, building the talent introduction platform, improving the career development path and innovation incentive mechanism, are proposed, which will provide practical policy suggestions for the construction of rural talent team in the horticulture and plant protection industry in Xinjiang and other regions of the country.

### **2.3. Social value**

Effective talent team construction will directly promote the upgrading of Xinjiang's horticultural and plant protection industries, help improve the quality of agricultural products, ensure national food security, increase farmers' income, improve the rural environment, and provide strong talent support for realizing rural industrial prosperity, ecological livable, rural culture civilization, effective governance, and prosperous life.

### **2.4. Sustainable development**

Through the construction of a talent team, the professional ability and comprehensive quality of local talents can be improved, which is conducive to the green and sustainable development of agriculture, the modernization of Xinjiang's agriculture, the realization of comprehensive rural revitalization, and the important role of Xinjiang in the overall national development strategy.

To sum up, this study focuses on the construction of rural talents for horticulture and plant protection in

Xinjiang under the background of rural revitalization, which has important theoretical value and practical significance, and has a far-reaching impact on exploring the road of agricultural modernization conforming to Xinjiang characteristics, promoting regional economic and social development, and realizing the national strategic goal of agricultural and rural modernization.

### **3. Analysis of the current situation of horticulture and plant protection in Xinjiang**

#### **3.1. Current situation of the horticulture industry in Xinjiang**

Xinjiang's organic fruit and vegetable industry occupies a significant position in the rural economy, but faces the challenge of transformation and upgrading, and needs to build a talented team. The scale and output of the horticultural industry are increasing, but the talents and innovation capabilities of high-end links such as new variety research and development, processing and brand building are insufficient. The lack of technology application and promotion, especially in remote areas, has led to limited production efficiency and market competitiveness<sup>[5,6]</sup>. The level of organization and marketization needs to be improved, and smallholder farmers' business models limit product standardization and bargaining power. There is a gap in the talent structure, and there is a shortage of young and middle-aged technical talents and interdisciplinary talents.

In order to achieve high-quality development, Xinjiang's horticultural industry must solve the problems of talent shortage and structure, strengthen the training of talents in science and technology, management and marketing, promote the transformation of scientific and technological achievements, and improve the level of industry organization and marketization. This will be the key for Xinjiang's horticultural industry to give full play to its advantages in rural revitalization, develop sustainably and healthily, and boost farmers' income and rural prosperity.

#### **3.2. Current situation of plant protection work in Xinjiang**

Plant protection in Xinjiang is crucial to agricultural production safety, but it faces many challenges. The application and promotion of modern plant protection technology are insufficient, especially in remote villages, and traditional control methods are still widespread, which affects the prevention and control effect and may cause environmental pollution. The shortage of professional plant protection personnel and the low quality of grass-roots technical teams limit the scientific management of diseases and insect pests<sup>[7]</sup>. The level of organization and informatization of the plant protection system needs to be improved to enhance the ability of resource allocation and emergency response. There is a gap in the talent structure and a shortage of young talents, which aggravates the brain drain<sup>[8]</sup>.

In order to deal with these problems, it is necessary to strengthen the popularization of plant protection technology and improve farmers' acceptance of new technology. Cultivate and attract more professional plant protection personnel, strengthen the education and training of grass-roots technical personnel, and promote technological updating<sup>[9]</sup>. Establish a sound information management system to improve the efficiency of plant protection work. At the same time, measures should be taken to inherit the experience of the older generation of experts, encourage young talents to join the plant protection industry and alleviate the brain drain problem. Through these measures, Xinjiang's plant protection work is expected to improve and promote the sustainable development of the horticultural industry<sup>[10]</sup>.

## **4. The theoretical basis of rural talent team construction**

The construction of a rural talent team is the core element of rural revitalization, and its theoretical basis mainly covers human resource development, human capital, talent ecology and system theory. These theories provide solid guidance for an in-depth understanding of the key role of talents in rural development, as well as effectively carrying out the work of cultivating, attracting, using and motivating talents.

### **4.1. Human resource development theory**

This theory emphasizes improving the quality of the rural population through education and training, so as to promote rural industrial innovation and economic transformation. For example, in the fields of horticulture and plant protection in Xinjiang, targeted training programs can be designed according to local industrial characteristics and the actual needs of villages to help practitioners improve their professional skills and better adapt to the needs of industrial development.

### **4.2. Human capital theory**

This theory regards talents as an important investment object and believes that the productivity of talents can be improved through education and other ways to promote economic development. In practice, this means increasing investment in rural education, improving the knowledge and skill level of rural talents, so that they can contribute more to the development of horticulture, plant protection and other industries, and promoting industrial upgrading and economic growth<sup>[12]</sup>.

### **4.3. Talent ecological theory**

Mainly focuses on the impact of environmental factors such as policies, institutions and culture on talents, aiming to optimize the environment for the growth of talents. For Xinjiang, to attract and retain horticultural and plant protection talents, it is necessary to formulate a series of preferential policies and create a good institutional and cultural atmosphere, so that talents can develop and display their talents<sup>[13]</sup> in rural areas.

### **4.4. System theory**

Emphasizing integrity and relevance, the construction of a talent team is regarded as a systematic project, which needs to comprehensively consider the coordinated development of all links. In the construction of horticultural and plant protection talents in Xinjiang, from the cultivation, introduction, use and incentive of talents, each link is interrelated and influences each other. Only through concerted promotion, can a systematic and scientific framework of talent team construction be built to provide a strong guarantee for industrial development<sup>[14]</sup>.

## **5. Talent team-building strategy based on rural revitalization**

Under the background of Xinjiang's rural revitalization strategy, the development of horticulture and plant protection industries has an increasingly urgent need for talent. However, currently facing the outstanding problems of talent shortage and unreasonable structure, it is of great importance to implement a series of targeted talent team-building strategies.

### **5.1. Optimize the mode of education and training**

- (1) Integration into professional courses: The horticulture and plant protection majors will be fully integrated into the agricultural education curriculum system to ensure that relevant professional knowledge can be systematically imparted, laying the foundation for training professional talents.
- (2) Carry out characteristic education: The implementation of order-type and oriented education, according to the needs of the market and enterprises, accurately train talents who meet the requirements of the industry and improve the pertinency and practicability of talent training.
- (3) Combined with distance education: the use of modern distance education means to break the limitation of time and space, to provide farmers and technical personnel with convenient and efficient learning ways, and to constantly improve their professional skills.
- (4) Establish a training base: Establish an integrated base of production, learning and research, strengthen practical teaching links, so that students and practitioners can accumulate experience in practice, cultivate compound talents with practical experience, and meet the requirements of industrial development for the comprehensive quality of talents.

### **5.2. Build a talent introduction platform**

- (1) Linkage between government and enterprises to attract talent: Through the close linkage between government and enterprises, a joint force is formed to attract talent. The government has issued relevant policies, enterprises have provided jobs and financial support, and jointly set up special funds to provide a strong material guarantee for attracting foreign professionals.
- (2) Provide favorable treatment: provide favorable salary treatment, a good working environment and development space for imported talents, and enhance the attraction of talents.
- (3) Carry out cooperation and exchange: actively implement cooperation and exchange plans, cooperate with advanced regions, universities and scientific research institutions at home and abroad, introduce cutting-edge scientific research results and management experience, broaden the horizon of local talents, and improve the overall level of the industry.

### **5.3. Improve career development paths**

- (1) Clear promotion channels: Set up clear and reasonable promotion channels, so that talents can see their development prospects in the industry, and stimulate their enthusiasm and creativity.
- (2) Set up promotion posts: Set up full-time technical promotion posts to encourage talents to apply advanced technologies and concepts to actual production, and provide them with more development opportunities.
- (3) Hold competition activities: Through the organization of technical competitions and innovation and entrepreneurship competitions and other activities, to provide a platform for talents to show their talents, stimulate their internal motivation, and create a positive industry atmosphere.

### **5.4. Innovation incentive mechanism**

- (1) Optimize the salary system: Establish a scientific and reasonable performance salary system, link the work performance of talents with salary, and fully reflect the value of talents.
- (2) Provide welfare security: In addition to salary, we should also provide housing welfare, etc., to solve the worries of talents' life, so that they can devote themselves to work.

- (3) Honor commendation: Pay attention to spiritual encouragement, through honor commendation and other ways, enhance the sense of honor and belonging of talents, and improve their sense of identity and loyalty to rural undertakings.

## **5.5. Strengthen the collaboration of schools, local industry, universities and research to educate people**

- (1) Promote in-depth cooperation: Strengthen cooperation among schools, local governments and enterprises, form a good situation of tripartite collaborative education, integrate resources of all parties, and jointly serve talent training and industrial development.
- (2) Establishment of training base: Further improve the construction of internship and training base, and provide more practice opportunities for students and practitioners, so that they can constantly improve their ability in practice.
- (3) Implementation of integrated mode: Fully implement the integration mode of “production, university, research and application”, so that teaching, scientific research, production and application are closely combined, and more high-quality talents are trained to meet the needs of market and industrial development <sup>[15]</sup>.

## **6. Summary**

This study is closely related to the rural revitalization strategy of Xinjiang horticulture, plant protection rural talent team construction to carry out an in-depth discussion. At the beginning of the study, the background is clear. In the process of national modernization of agriculture and rural areas, Xinjiang holds a key position, but its talent shortcomings in horticulture and plant protection are gradually emerging, which restricts the implementation of industrial development and rural revitalization. The significance is extraordinary, in theory for the construction of rural talent team theory to add empirical basis; In practice, the proposed strategies of optimizing education and building a platform for attracting talents give practical suggestions for the cultivation of talents in relevant industries in Xinjiang and even the whole country; At the social level, it helps achieve multiple goals such as industrial upgrading and farmers' income increase; We also focus on sustainable development and promote green agricultural development. The analysis of the current situation hits the key point, although the organic fruits and vegetables in the horticultural industry are bright, the high-end link is short of talents, difficult to promote technology, and insufficient organization and marketization; Plant protection work is of great significance to agricultural security, but it is plagued by problems such as technology promotion, talent shortage, and imperfect system. The theoretical foundation is steady and steady, and the theory of human resource development guides all aspects of human resource work. Finally, focus on the construction of strategies, from education, talent introduction, career development, incentive mechanisms to school, land, production, university and research coordination education, to build an all-round talent development system suitable for Xinjiang, inject a surge of momentum for rural revitalization, is expected to solve the talent dilemma, open a new chapter in Xinjiang's agricultural modernization.

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