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Research and Practice of the Construction Mode of the Practical Training Base for Agriculture and Forestry

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Abstract In response to bottlenecks and dilemmas faced by institutions for agricultural and forestry practical training base construction, and based on Agriculture practical training base of Langfang Polytechnic Institute, this article illustrates the effective exploration and practice of the mode and ways for the construction of the practical training base, which provides some useful experience for the construction of the training base in agricultural and forestry institutions.

Key words Agricultural and forestry production; Occupation education; Talents training mode; Practical training base; Construction mode; China

As the most important part of professional teaching in vocational agriculture and forestry school, practical teaching is the key link of enhancing personnel quality and realizing vocational education purpose. Agricultural and forestry training base is the foundation and primary condition of everyday teaching. The innovation mode of training base construction is the innovative measure of particular agricultural and forestry vocational education and effective way of enhancing personnel training quality and employment competition.

Through years of exploring the construction of practical training base, some experiences have been made, but so far not a single mature mode had been formed and there were many problems. There is a certain gap in the practical training base construction, and projects with absolute advantages are few. The practical training base within the school needs lots of human and physical power and financial investment, long repayment period and poor social and economic effect. Nowadays, many agricultural and forestry specialized practical training bases are in struggle. The training base outside of the campus is only the school's own wishful thinking. Cooperate companies don't get any benefits and thus lose passion. The combination of production and study is only a meaningless empty reputation. Furthermore, complementary bases groups for different jobs within and outside the campus are in shortage. Solving these problems means a lot to the construction and development of a training base in agriculture and forestry institution.

1 Current practical base construction and problems

The gardening major in polytechnic institutes in Hebei province has a long history. However, because of financial inadequacy and disjunction of school and companies, the gardening field construction is shrinking. Construction of training base field within school has the following disadvantages. Firstly, it can't meet the utilitarian teaching and production demand and it lacks real professional service platform. Secondly, it is restrained by teaching contents and conditions. Thirdly, the actual training is backward and does not meet the market demand. Fourthly, scientific and reasonable management style hasn't come into being. Those problems have restrained the further progress of gardening major^[1]. On the other hand, the training base outside of the school is unstable and the training effect can't be guaranteed. Besides, the number of training base built by company and school was little.

2 Gardening major base construction and management mode

2.1 Guiding ideology of base construction The agricultural science and technology brooder, the cradle of advanced technological industrialization, is a special organization which provide field, technology, information, marketing, and management consulting in order to speed commercialization of agricultural science and technology outcome, to promote agricultural industrialization and to subsidy small companies^[2]. The gardening training base of Langfang Polytechnic Institute takes the agricultural science and technology brooder as reference, the transition of agricultural science and technology outcome as the fundamental starting point of training field construction outside of the school so as to realize the social, economic and ecological outcome and meet the benign circulation of gardening base construction. The self-development of training base within the school is to be realized through the construction of modern agricultural science and technology demonstration park, the exchange of intelligence for Resource and cooperation between school and companies.

2.2 Construction of a training base within campus-modern agricultural science and technology brooder platform

2.1.1 Stimulating construction of training base within the school of construction program. In order to promote socialist new country-side construction, to improve comprehensive agricultural produc-

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tion, to stimulate agricultural modernization, the National Development and Reform Committee, Financial Department, Agricultural Department, Science and Technology Development issued a series of policies to support agriculture. In 2008, the state treasury arranged 562.5 billion for agricultural development. After 2009, the central government has been giving increasing support to agriculture. Therefore, agriculture, agriculture department, agricultural universities and agricultural economy is facing unprecedented advance.

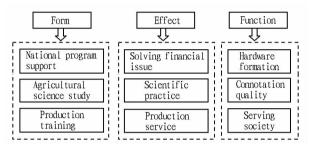


Fig. 1 Construction of training base within campus

The Langfang Polytechnic Institute has constantly paid attention to the government's policy and rose to the occasion to get national support. In 2007 and 2008, modern Agricultural Science and Technology Demonstration Park and biogas utilization programs won 2.5 million yuan of support from the central government. Four demonstrative centers have been built, namely the plants cultivation center, edible fungi industrialization promotion center, locust breeding industrialization center and the introduction of special food species, which provides helpful conditions for the teaching and production practice, stimulates the industrialization and commercialization, and solves the problem of large investment without payment.

2.1.2 Carrying out scientific research to improve the connotation quality of training base within the school. Teachers are encouraged to attend the agricultural scientific research program and each program will have its corresponding practice team. Under the teacher's guidance, students take part in the entire scientific research program, which not only solves the technological problem and improves teacher's scientific research capacity, but also exerts the function of field training base. As a result, students enhanced their professional skills in the scientific research practice. Such method as to unite theory with practice does improve the quality and level of field base construction.

The teacher from gardening major combines practical production every year and chose to file one to two production technology subjects for research so as to solve the problems of production. Since 2005, the training base has carried out lots of research subjects and students have formed various kinds of study groups, like flora study group, vegetable study group, and locust cultivation group, etc. Those study groups were formed under teachers' supervise and student's comprehensive quality has been improved. The field training within the school definitely accelerated the transition of agricultural science and technology.

2.1.3 Construction of production service platform to improve professional key capacity and to serve the society. By combining profession with industrialization, the licensed production service demonstration platform is built to provide a practice place for students before them entering society. Since the gardening training base of Langfang Polytechnic School being built in 2006 to the social development, we have been exploring the revolution of teaching modes and we have involved in the construction of rural science and technology service platform. Independent economic bodies for external service have been established, one flora hospital, Langfang Jinnong mushroom Co., Ltd and agricultural medicine detection center, etc. to carry out agricultural technology promotion service. Through practice, economic bodies run great. Those platforms are the playground for students and teachers to improve fundamental skills. What's more, platforms enhanced teaching skills, enriched the field training activity, and showed the technology development, which provides references for local agricultural structure adjustment and making farmers rich, and improve the function of field training base to serve the society.

2.2 Construction of field base outside of campus-science and technology promotion service support In order to solve the training base outside the campus construction problem, the project of uniting with the training company is initiated. Though cooperation with companies, government and training organizations, schools achieved the purpose of hardware complement, resource sharing and reciprocal benefits and got out of the awkward situation of only one side being enthusiastic. The mode of training base outside of school is shown in Fig. 2.

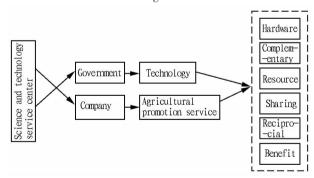


Fig. 2 Training base mode outside of school

2.2.1 Intelligence for resource, school and companies cooperation. School and company are two bodies seeking after different benefits, the former for teaching benefits and the latter for monetary benefits. To realize conformity to personnel training between school and company, one has to come up with a plan that benefits both sides. Based on this idea, we should start with the idea of serving the company's production and personnel training, and then connect teachers with companies to build a training base outside school.

Firstly, school is actively providing technology service to companies. Since 2005, school has been encouraging teachers to choose at least one student to intern in companies. On the one hand, the training base has been turned into a place to change sci-

ence and technology into tangible product, which will bring the company both social and economic benefits. On the other hand, the cooperation between scientific research and company satisfies the demand of technologies in different position and improves teachers' teaching skills. Secondly, cooperation provides company with vital financial insurance and realizes resources sharing outside the company. In response to the limited finance and incomplete facilities in private companies, school will invest certain amount of money in getting more equipments in the lab and in return, companies would provide training base for schools, in which way school and company will have win-win situation. Such win-win mode meets the aim of study for work and work for the study and the talented students groups are considered to be the personnel bank for companies.

In recent years, Langfang Polytechnic Institute has established partner relationship with more than ten agricultural companies and achieved satisfactory results.

2.2.2 Supporting government's agriculture-oriented work and serving "three agricultural programs". Since 2009, Langfang Polytechnic Institute has founded agricultural development training center. According to work in urban agricultural center, the school organized various activities to support the three pastoral programs. namely helping agriculture, farmer and countryside. The school designated technicians to the countryside to over consultation service. On the one hand, technicians go to qualified rural cooperative centers to give lecture and solve technological questions. On the other hand, the school subsidize the green vegetable production demonstration center in Guangyang, Anci, Dacheng Yongqing, etc., which made significant contribution to local economy. Those cooperatives and production demonstration bases in return offer places to train students. Almost all the practical skills for gardening major can be arranged, such as vegetable plantation, pests diagnosis and prevention, soil fertilizer, medicine use skills and shed construction technological standards, etc.

3 Main experiences and achievements

3.1 Benign circulation of teaching-production-market mode Based on the training base within and outside of campus, the production training base on the market is established. Teaching training facility is used in production to improve utilization of facilities. The productive training base is closely connected with marketing to ensure the upgrade of facilities synchronizing with other companies. The training base concentrates on production with one side connecting teaching practice and another side connecting with the market. Production process is the teaching process. The production, management process and adaptability to market are the key professional skills. Whether it's the choice of training content or equipment maintenance, the training base has improved a lot, which realizes benign circulation of training base construction.

3.2 Training effects and quality The science and technology brooder and a win-win mode are the concrete realization of open construction. The practice is closely related to the market, which makes students not only to understand company's culture and production process, but also to learn more about the current situation and development trend of their major. The infusion into industry and construction of accessible training base gives students realistic work experience, ameliorates training effect, makes training more accurate, realistic and effective, and insures the training effect and quality.

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(From page 69)

consumers, highlight the importance of quality safety of aquatic products, and improve the consumers' awareness of quality safety, in order to form strong social supervision, and promote the level of quality supervision of aquatic products in Nanjing City.

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