

Problems and Countermeasures of Agricultural Technology Extension System in China

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Abstract: With the development of science and technology, there has also been technological progress in agriculture. Extending these formed and effective advanced agricultural technologies to all regions of the country will greatly promote the development of agriculture in our country. Therefore, a perfect agricultural technology extension system should be established. This article will analyze the current situation and existing problems of China's agricultural technology extension system, and put forward corresponding countermeasures.

1. Introduction

The 19th National Congress of the Communist Party of China pointed out that it is necessary to win the victory of building a well-off society in an all-round way and start a new journey of building a modern socialist country in an all-round way. Through the agricultural technology extension system, mature and advanced agricultural technologies, new varieties, green fertilizers, and new methods to prevent and control diseases and insect pests can be popularized and applied to agricultural production in rural areas, thus increasing the output and income of farmers and providing basic guarantee for the construction of new rural areas and a well-off society.

2. Problems in China's Agricultural Technology Extension System

2.1 The Lack of Funds in County and Township Agricultural Technology Extension Agencies

In the agricultural technology extension system, county level and township level are two important extension subjects as the basic level, but there are differences in economic development, which makes the agricultural technology extension institutions at county level and township level in economic shortage, inadequate allocation, insufficient funds as a pillar, unable to configure advanced agricultural equipment, and thus reduce the efficiency of the work. Secondly, many county-level and township-level agro-technical extension agencies do not have test bases and lack testing equipment, thus affecting the effect of extension. In addition, due to the lack of sufficient funds, they can only pay for staff expenses. There is no money to do the promotion of agricultural technology, which restricting the promotion effect.

2.2 Small-scale peasant economy

In many small-scale peasant economies, the scale of agricultural operations is small, the production conditions are crude, and the necessary accumulation and reserve capacity are lacking. It is difficult to promote agricultural mechanized production and optimization. In addition, coupled with the existing farmers' self-sufficiency and the old production and operation mode, the small scale of investment in agricultural economy makes it difficult to innovate agricultural technology.

2.3 The Lack of Sound Agricultural Technology Extension System

China's agricultural technology extension system uses the government as the main method,

without a clear division of specific service management, and without actual extension work. Secondly, the establishment of some agro-technical extension agencies is chaotic. There is no systematic management system, and many of them have establishment but are not in posts. Such problems are common. In addition, the policy of "three powers decentralization" has been continuously promoted, which has reduced the demonstration and actual promotion time of agricultural technology extension practitioners and restricted the construction of agricultural technology extension system [1].

2.4 Low Quality of Agricultural Technology Extension Practitioners

The government does not have a certain economy as a pillar, which makes agricultural technology extension agencies have no good conditions and cannot attract some high-quality young people. Agriculture is not popular in the choice of major. This leads to a shortage of highly specialized and comprehensive technical personnel and a lack of high-level promotion teams. Furthermore, due to the confusion in the establishment, some people have been entrusted to enter through the back door, which makes the promotion team include some workers without relevant experience and knowledge. Their professional skills and service awareness need to be improved.

2.5 Farmers' Inadequate Understanding in the Significance of Agricultural Technology Extension Services

According to the survey, China's rural population is 576.61 million, accounting for 41.48% of the country's total population. With the rapid development of China's economy, many young and middle-aged people in rural areas have chosen to work hard in cities, which has reduced the number of permanent residents in rural areas. Workers engaged in agriculture are all older farmers. The middle-aged and elderly people have low learning ability and acceptance ability, and they still use traditional empirical methods to cultivate, seriously affecting the economic benefits and productivity of agriculture.

3. Information Construction is Weak in the Construction of Agricultural Technology Extension System

3.1 There is No Clear Development Thinking and Attention

Some leaders understand the necessity of agricultural information, but they do not attach importance to the construction of informatization in the construction of agricultural technology extension system, nor do they list it in the important work process, so it is difficult to change the traditional working methods. At the same time, the construction of informatization in agricultural technology extension system has not established perfect goals and plans, which leads to uneven selection of development platforms, resulting in many problems such as duplication, high investment costs, waste of resources, and inability to maximize the application of funds. There are no priorities and steps in the promotion, and there is no way to achieve unity, which leads to uncoordinated development.

3.2 Incomplete Infrastructure

Due to insufficient funds for agricultural technology extension in some areas, there is no way to build information facilities, and there is no information dissemination equipment and tools, such as basic equipment like computers, which cannot keep up with the processing methods and operation speed, and are still carried out by hand. At the same time, the software development lags behind, the database is incomplete, a large amount of information cannot be scientifically processed and analyzed, and there is no good decision-making power and judgment, thus affecting the use value and timeliness of agricultural technology information.

3.3 Lack of Information-based Talents and Scientific Information Collection Methods

Most regions are short of information-based talents, limited by regions, lack of dedicated servers.

Thus, they are unable to systematically manage websites, which seriously hinders the construction of agricultural technology extension agencies. At the same time, there is no scientific agricultural technology information collection channels and methods, no sound system and sufficient collection points, which makes the information not timely in release. Due to the lack of strong professionalism, agricultural technology information lacks practicability and authority in use. For example, there is no uniform standard for the construction of databases at all levels, resulting in repetitive development and construction, and some urgently needed information in the market is not within the scope of collection.

4. Improving Agricultural Technology Extension System and Strengthening Agricultural Economy

4.1 Increasing Investment in Agricultural Technology Promotion and Raise Funds in Various Ways

First of all, it is necessary to increase the injection of funds in the construction of agricultural technology extension system. It is necessary to increase the extension budget according to the local development and actual extension situation, so as to provide basic guarantee for the equipment funds, personnel service funds, instrument funds and information construction funds in agricultural technology extension [2]. Secondly, there is a special promotion fund to ensure that special funds are earmarked. This fund is used for research and development of new technologies and products, and strongly supports the application and research and development of new technologies and products. Finally, we should conduct multi-channel financing and make full use of resources from all walks of life. Government departments should invite social capital to cooperate and discuss cooperation projects so that they can participate in the promotion of agricultural technology and benefit the local agricultural economy.

4.2 Giving Full Play to the Existing Advantages of Small-scale Peasant Economy and Improve Economic Quality

The existing agriculture operates independently which is responsible for its own profits and losses, which can mobilize the enthusiasm and creativity of farmers. Because it can make most farmers work hard, it can ensure the necessary food supply for the country. In addition, due to the state's economic support for agriculture, China's agricultural economy has developed steadily and is conducive to reinvestment in the agricultural economy.

4.3 Establishing a Sound Agricultural Technology Extension System

In the process of agricultural technology promotion and research, there are many disciplines and departments involved. Therefore, corresponding management standards should be formulated in advance to enable coordination among various disciplines and departments, and to unify the training department, promotion department, scientific research department and investment promotion department of agricultural technology to form certain rules and regulations to avoid the problems of emphasizing scientific research and neglecting production [3]; The government should actively encourage relevant scientific research units to participate in important scientific research projects and promotion to promote the effectiveness of agricultural technology promotion.

4.4 Improving the Technical Level of Agricultural Extension Workers

In order to construct a perfect agricultural technology extension system, extension workers must have professional standards and strong comprehensive qualities. Therefore, attention should be paid to the cultivation and absorption of talents. In view of this situation, local governments can cooperate with colleges and universities, and conduct targeted enrollment and personnel training by eliminating tuition fees and other means, so as to train excellent and professional technicians to participate in agricultural technology extension work. At the same time, the grass-roots

agro-technical extension personnel shall adopt the system of continuing education, regularly participate in the training of professional knowledge, and go deep into areas where agro-technical extension is good to carry out on-the-spot learning, so as to improve the comprehensive quality of agro-technical extension personnel in all aspects [4]. To set up an education and training fund to solve the cost problem for trainers. In addition, agricultural technology extension agencies should establish corresponding management mechanisms specifically aimed at the stimulation, introduction and training of talents, so as to lay a talent foundation for the construction of agricultural technology extension system.

4.5 Diversified Development in Agricultural Technology Extension System

Agricultural technology extension is to better serve agricultural production and promote the development of modern agriculture. The agricultural technology extension system should be developed in a diversified direction, with unified standards and flexible and changeable methods, and the extension channels should be continuously expanded. Build diversified services, such as: green pesticide and fertilizer services, new varieties of services, agricultural and sideline products promotion and consultation services, pest prevention services, agricultural technology services and other professional services [5]; According to the development needs of the market, agricultural enterprises or organizations are actively encouraged to enter the agricultural technology extension service.

5. Suggestions on Strengthening Information Construction in the Construction of Agricultural Technology Extension System

5.1 Information Construction is Developing towards Diversification and Realizing the Modernization of Agricultural Development

The main center of information service should develop towards diversification and play a positive complementary role. The content of the service should be adjusted and focused according to the specific situation on the ground. The form and content of service for different groups and objects of different sizes are also different. It should be targeted and the information service should gradually be paid. Information service will be integrated into the practical application of agriculture to realize the modernization, diversification and networking of agricultural technology extension system.

5.2 Network Information is Popularized to Farmers' Homes

The ultimate goal of the informatization construction of agricultural technology extension system is to serve farmers, because farmers are the promoters of agricultural development and the main users of information, and the informatization service should be implemented to serve farmers. In the early days, large farmers who can develop agriculture can use information networks to get services, so that they can truly understand the importance of network information, cultivate their loyalty, and let users publicize information services for agricultural technology extension. The results will get twice the result with half the effort. In this way, information networking services can be gradually extended to farmers' homes, and the field production situation of each farmer can be explored, so that farmers' life can gradually develop towards digitalization. Through the networking of extension services, innovative development can be achieved in services, and finally the perfection of agricultural technology extension service system can be realized, thus promoting the development of agricultural technology in our country.

5.3 Vigorously Invest in Infrastructure Network Construction of Agricultural Technology Extension Service Informatization

First of all, we should increase investment in the construction of network infrastructure and develop our own system. In order to achieve the popularization of the network, in areas where there is no network construction, hardware facilities should be purchased, network platforms should be

established, and automated office work should be realized. Secondly, in the process of informatization construction, corresponding management systems should be formulated and perfected according to the actual service conditions, and corresponding management standards should be formulated according to the regulations of relevant departments of the state. Agricultural technology extension agencies at all levels should have specialized personnel to initially collect and sort out information, and then report them one by one. Strictly abide by the rules and regulations, on the basis of standardized management, to carry out innovative services, improve the quality of agricultural technology extension services.

6. Conclusion

The rapid development of agriculture needs modern agricultural technology as the cornerstone, and the promotion of agricultural technology is particularly important. All local governments should attach importance to the construction of agricultural technology promotion system, give all-round support, put promotion services into practice, and pay attention to the transformation of scientific and technological achievements into productive forces. Only in this way can the significance and role of agricultural technology promotion be reflected.

References

- [1] Song Donggao. On China's agricultural technology extension system problems and countermeasures [J]. Agricultural Technology Service, 2017.
- [2] Li Juying. Problems and Countermeasures of China's Agricultural Technology Extension System [J]. Cooperative Economy and Technology, 2017.
- [3] Wang Lijian, Du Yonglin, Ge Ziqiang, et al. Current Situation and Development Countermeasures of China's Agricultural Technology Extension System [J]. Anhui Agricultural Science, 2013.
- [4] Gao Qijie. Research on Farmers' Behaviour in Agricultural Technology Extension [J]. Agricultural Science and Technology Management, 2000.
- [5] Liu Cheng. Current Situation, Existing Problems and Development Countermeasures of Agricultural Science and Technology Extension System [J]. Agricultural Development and Equipment, 2018.