

Study on the characteristics of changes of agricultural science and technology extension system in China

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Abstract: The extension of agricultural science and technology is an important bridge and link between the government and farmers, scientific research and farmers, and has great significance for agricultural development. Our country rural basic level technical extension system is the important strength of rural economic development, at the same time is also the important foundation of traditional agriculture to modern agriculture transformation. However, China's agricultural industry in the process of development, due to the restrictions of resources and markets, in the process of promoting the development of modern agriculture, there are still many difficult to achieve the requirements and problems. Therefore, it is necessary to strengthen the understanding of the current situation of agricultural production and science and technology promotion in China through relevant research, and analyze some problems in the current grassroots agricultural science and technology promotion work in China. This paper also aims at how to realize the institutional change of agricultural science and technology promotion in China, formulate corresponding measures and countermeasures, and provide an important basis for the establishment of a new agricultural science and technology innovation and technology promotion system.

Key words: China's agriculture; Science and technology promotion; System change; characteristic

Agricultural technology extension service system and operation mechanism is an important guarantee for the development of modern agriculture, which is directly related to the quality and efficiency of the development of agricultural industry. From the current agricultural development situation, China's agricultural science and technology extension service system is not perfect, the agricultural scale is small, the extension of science and technology and the needs of farmers are not unified, and the investment in the extension of agricultural science and technology is insufficient, the existence of these problems directly lead to the current agricultural production efficiency is low, the transformation effect of scientific and technological achievements caused a serious impact, while restricting the long-term development of agricultural science and technology in our country. Under this background, China's agricultural science and technology extension work faces new challenges, namely how to improve the agricultural science and technology extension service system and operation mechanism.

I. The significance of agricultural science and technology extension in China

China is a country with a large population, so for the development of China's agricultural industry, the popularization of agricultural science and technology is very important, it has an important significance and influence for the future development of our country. Agricultural science and technology can not only promote the breeding of new varieties of crops, but also increase the income of farmers. In addition, the comprehensive application of agricultural science and technology can also bring new vitality to the agricultural industry, which can solve the problem of insufficient quality of agricultural products, effectively monitor the entire process of agricultural planting and production, ensure the consistency of production technology, and ensure the safety of agricultural products and the health of the people.

II. Problems existing in the promotion of agricultural science and technology in China

1. Small scale of agriculture

China's agriculture is a kind of dispersed household smallholder economy, mainly with peasant households as the units, with the characteristics of production dispersion and small management scale. According to relevant investigation and research, 69% of farmers are not willing to sublet their land, while only 12% of rural migrant workers choose to sublet their land, and most farmers still maintain the original land use right. In terms of farming methods and planting types, each farmer enjoys full autonomy. Because most rural areas are under the household contract responsibility system, agricultural operations are small, which is not conducive to the establishment of economies of scale and mechanized farming areas, but also makes it more difficult to spread and transform scientific and technological achievements on a large scale, and poses a great obstacle to agricultural development.

In the process of land planting in rural areas, farmers are the beneficiaries and users of agricultural scientific and technological achievements. If we want to make scientific and technological achievements become actual productive forces, we need to gain farmers' recognition. Under the conditions of the new market economy, farmers take obtaining benefits as the basic orientation, and their requirements for science and technology show a high efficiency and diversified development trend. At the same time, due to the continuous changes of the market, the agricultural planting process also puts forward higher requirements for efficient comprehensive technology and management technology, but the current agricultural science and technology promotion mode focuses more on the promotion of a single technology. There is no effective guidance for the combination of new varieties and related planting management technologies. Moreover, the relevant extension personnel pay insufficient attention to the overall effect and regional effect of the technology, resulting in the promotion and service effect of agricultural science and technology in cost saving and efficiency increase, post-production processing and agricultural product safety and other technologies, and also lead to the fact that the promotion of science and technology cannot be unified with the actual needs of farmers. Coupled with the lack of effective marketing channels and market information, the transformation of scientific and

technological achievements to actual productivity has been hindered to some extent.

2. Insufficient investment

China's current shortage of agricultural extension funds, has become an important restriction of its promotion and transformation, many areas of grass-roots agricultural science and technology promotion organizations and staff due to the shortage of funds and farmers lack of education and other problems, there is a "broken network, broken lines, people scattered" situation, the current means of promotion in some areas of the single, backward way, resulting in poor science and technology promotion effect. Can not fully meet the technical needs of farmers.

First, insufficient capital investment. Although China is a big agricultural country, but our agricultural infrastructure is not outstanding, and has not shown a high level of mechanization. At present, the popularization of science and technology in rural areas of our country is short of funds, which makes the popularization of science and technology in rural areas more difficult and affects the transformation of scientific and technological achievements in rural areas. In addition, the growth rate of farmers' income is slow, and farmers' willingness to invest in agricultural science and technology is not high. Second, the education level of farmers is not high. In some rural areas of our country, the young and middle-aged people are mainly migrant workers, and the remaining labor force basically has problems such as lack of education level and older age. Due to their poor cultural level, they lack of knowledge of science and technology, and are used to traditional farming methods, unwilling to introduce advanced science and technology, and show more conservatism in agricultural planting. In addition, emerging technologies have certain risks, and the price of agricultural products is not high, so few farmers will try new technologies.

III. Principles of institutional change of agricultural science and technology extension in China

In today's rapid economic development, more and more experts and scholars began to pay attention to the agricultural technology extension system and operation system, and conducted many studies on it, and achieved a lot of innovative results. In the future development process, we should adhere to the following basic principles: first, we should treat the development of diversified agricultural technology extension institutions and organizations with a positive and correct attitude, and give them new support. Second, we should vigorously promote innovative and feasible methods of agricultural science and technology popularization. Third, it is necessary to strengthen the development and reform of non-profit agricultural science and technology popularization organizations so that they have an independent status from government departments. The fourth is to accelerate the construction of rural information systems and establish modern technology platforms to lay a good foundation for the development of rural technical services. Fifth, in view of the existing problems in China's scientific research work, continue to improve the scientific research work mechanism, and establish a more reasonable and scientific scientific research work mechanism. Sixth, it is necessary to effectively guide the combination of production, study and research, so as to effectively improve the weak links of China's rural training system.

IV. China's agricultural science and technology extension system change structure and model

1. Structure

First of all, we should establish a public welfare agricultural science and technology popularization system. In order to break through the current inefficient situation of the government's public welfare agricultural science and technology popularization, we must establish a modern concept of development, and carry out reform and innovation. At the same time, we must pay attention to the rational application of market-oriented operation mechanism in this process, and combine the market-oriented competition system with the work process to implement the bidding system. Starting from the establishment of the incentive system, through the formulation of incentive contracts, the implementation of a series of service work to achieve the contract. Secondly, if we want to strengthen the popularization of agricultural science and technology, we need to integrate all kinds of resources and establish a quasi-public agricultural technology popularization system. At present, China's agricultural colleges and related research institutions are the main force of agricultural technology popularization. In the process of service, it is necessary to establish a science and technology service mode combining research institutions, agricultural colleges and rural science and technology service institutions.

2. Mode

This paper expounds the basic mode of China's agricultural science and technology extension system from three aspects. First, it is a government public welfare technical service mode closely combined with production and management. Second, it is a model of the close combination of part-time scientific research and scientific and technological service in research institutions. Third, it is a market-oriented and diversified profit-making science and technology service model combined with business operation and management.

V. China's agricultural science and technology extension system change strategy

1. Innovative service mechanism

In the process of agricultural science and technology promotion, first of all, the relevant departments should abandon the traditional development concepts, analyze the agricultural science and technology promotion service mechanism as a whole, and integrate modern elements into it to ensure that this mechanism is more innovative, and promote the combination of agricultural science and technology and production practice, guide relevant technical personnel to participate in agricultural production, and realize the effective integration of science and technology and economy. Secondly, all relevant units should be fully aware of the important role of the service object and service content in promoting the progress of agricultural science and technology, pay attention to the renewal and reform of the two, and

adjust the current agricultural science and technology service mode accordingly. The service system reform must be carried out according to the actual situation of our country, so as to make the extension of agricultural science and technology to obtain the better effect. Finally, China's current level of agricultural science and technology development is insufficient, and it is necessary to transform the early agricultural science and technology extension technology into rural comprehensive science and technology service. At the same time, we should strengthen the guiding role of government functional departments, and gradually establish a set of reasonable and scientific operating system. The administrative means of the government should be used to coordinate the relationship between various aspects, carry out the integration and integration of agricultural science and technology popularization resources, pay attention to the development of agricultural cooperatives, and lay a good foundation for their development.

2. Strengthen the connection between production and scientific research

In the process of carrying out the popularization of agricultural science and technology, all colleges and universities should first start from the real life and production situation, strengthen the connection with scientific research, and actively carry out outdoor investigations, after the completion of this work, in accordance with the principle of reasonable and scientific experiments, in order to prevent the invalidity of research. Secondly, all colleges and universities should pay more attention to the agricultural science and technology extension organization, strengthen the contact with the agricultural science and technology extension organization, establish the model of combining production, study and research, and avoid the hollowing of agricultural science and technology in practice. Finally, to increase the intensity of science and technology research and development, from the actual agricultural production, strengthen scientific and technological innovation, but also to find out the problems in this activity, work out a set of reasonable and effective methods for the future development of agricultural science and technology extension organization to provide strong support.

3. Strengthen the construction of extension organizations

First, the government and relevant units should understand their own responsibilities, treat the development of grassroots agricultural science and technology extension institutions with a positive and positive attitude, and give them more financial support. At the same time, they should recognize the current work and development situation, introduce more advanced facilities and technologies, focus on improving the quality of service, and properly adjust the salary of scientific research workers. In this way, the high mobility problem of researchers can be effectively solved. Second, the agricultural science and technology institutions should be continuously improved and the work efficiency of agricultural science and technology institutions should be continuously improved. If some staff members do not meet the standard operation mode or provide poor service quality in practice, they should be punished according to relevant regulations. Third, strengthen the supervision of promotion organizations and institutions, prevent various systems from being too formalized, integrate various systems into the actual work process, in order to improve the service efficiency of management institutions.

Concluding Remarks

In general, in order to make China's agricultural science and technology extension service system and operating mechanism to get better development, we need to start from the following aspects: First, innovative service mechanism, to introduce more effective policies and measures to make the agricultural science and technology extension service system more sound, but also to guide the new agricultural technology extension work, so that its development on the right track. Secondly, it is necessary to change the outdated ideas and ways of thinking, and improve the reform and optimization level of the agricultural technology extension operation system. Relevant enterprises need to carry out regular professional training to improve the professional ability and professionalism of employees. In this way, it provides a good foundation for promoting the reform of the agricultural technology extension service system and operation mechanism.

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