

Research on Problems and Countermeasures of Jiangsu Agricultural and Rural Informatization Development

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Abstract

Agricultural informatization construction is an important support for the road of quality and green development, and plays an important role in promoting the strategy of rural revitalization. This paper expounds the achievements of agricultural informationization construction in Jiangsu Province, puts forward the problems existing in the construction of agricultural informationization, and analyses the causes of the problems. The specific countermeasures to strengthen the construction of agricultural informatization in Jiangsu are put forward, which can guide the construction of agricultural informatization and promote the development of agricultural economy in Jiangsu.

Keywords

Agricultural informatization, Existing problems, Countermeasures.

1. Introduction

Agricultural informatization construction is an important engine to promote the improvement of quality, efficiency and competitiveness of agriculture and to realize the modernization of agriculture and rural areas. Perfect agricultural information service system is conducive to optimizing resource allocation, improving production efficiency, optimizing supply and demand structure, production structure and regional structure; the application of advanced information technology in agricultural production, such as Internet of Things, large data, remote sensing technology, is conducive to improving the utilization rate of agricultural production factors, labor productivity and upgrading. The quality of agricultural products should be improved to broaden the marketing channels of agricultural products. Although the construction of agricultural informationization in China started late, it has made some achievements in agricultural information infrastructure, agricultural information service and agricultural information technology after decades of development. However, there are still some factors restricting further development. This paper analyses the deep-seated causes of these problems and puts forward specific countermeasures to solve them. Measures have become an important measure to speed up the development of agricultural informatization in China and to solve the problems of agriculture, countryside and farmers[1].

2. Major Problems in the Construction of Agricultural Informatization in Jiangsu Province

2.1 Imperfect Infrastructure of Agricultural Informatization

(1) The infrastructure of agricultural information network is incomplete. The laying of agricultural information network infrastructure has not been completed in some rural areas of Jiangsu, especially in northern Jiangsu, and the last mile of the Internet has not yet been solved. In many counties, townships and villages, the construction of agricultural information network infrastructure is not perfect. Even in some areas with basic network, because of poor network transmission capacity and slow network speed, some remote rural areas often have problems of no signal or unstable signal, which are seldom used to transmit agricultural information, and the network advantage is not sufficient. Develop.

(2) The construction of agricultural information infrastructure is not balanced. The construction of rural information service platform and large database of rural information resources in southern Jiangsu has begun to take shape, but it has not been completed in northern Jiangsu. The construction ratio of agricultural information websites is unbalanced between urban and rural areas. Most of the main agricultural information websites in Jiangsu are concentrated in cities. The number of websites located at rural grass-roots level, especially rural websites, is relatively scarce, and the amount of information is small, the timeliness is poor, and the update is slow. Therefore, the latest agricultural scientific and technological achievements, market trends and other latest agricultural letters are presented. Interest is difficult to spread rapidly in the countryside[2].

2.2 The conversion rate of information technology achievements is not high

(1) The development and application of agricultural production, processing of agricultural products, marketing and other fields are insufficient. Intelligent production and precise management of agriculture under the guidance of Internet of Things technology is just in its infancy.

(2) Agricultural e-commerce platform is not perfect. The production, storage and sale of agricultural products have their own characteristics. They mainly exist in a long period, are greatly affected by environmental factors, are not easy to store, and have a large loss. It is urgent to establish a large-scale agricultural e-commerce platform to realize the organic connection between small-scale production of tens of thousands of households and the ever-changing large market. To promote the smooth sale of agricultural products, but at present the construction of e-commerce platform for agricultural products in China is still weak. On the one hand, e-commerce platform does not have enough links with large-scale e-commerce enterprises, large-scale purchasers of agricultural products, large supermarket chains, on the other hand, it does not meet the production bases such as cooperatives, family farms and so on. On the other hand, e-commerce + cooperation is not in place. New modes such as social welfare, e-commerce and family farm are still in the initial stage, and few farmers directly use the existing e-commerce platform to sell agricultural products. In short, the achievements of information technology have not been widely used, and the role of information technology has not been fully played[3].

2.3 Lack of Talents in Agricultural Informatization

(1) Lack of managers who understand not only the major policies and policies of the national agricultural and rural development, but also agricultural information technology.

(2) The lack of specialized personnel in agricultural information technology. At present, the personnel training structure of colleges and universities is not reasonable. Most colleges and universities only set up information management, agricultural technology and other specialties separately. Few universities can cultivate compound talents of both intensive information technology and agricultural technology. After graduation, students usually work in schools, institutions and scientific research departments. They can really base themselves on the countryside. Few people specialize in agricultural information management and information analysis.

(3) The ability of grass-roots information service personnel needs to be improved. At present, rural grass-roots units need grass-roots service personnel who can not only solve the problems of network, multi-functional application of mobile phones, network maintenance and update, but also collect, analyze and collate relevant information of network in time, answer questions for farmers, conduct production guidance and help, and provide market information of agricultural products. However, at present, there is a great lack of such compound talents. Most of the grass-roots information service personnel are part-time agricultural technology extension personnel. They have two jobs. Many of them have low skills and outdated concepts. They don't know much about the latest knowledge of agricultural information. They can only cope with the daily technical guidance of agricultural production, especially in some remote areas, where the environment is bad and the people of agricultural informationization are engaged in. The lack of talent has led to the ineffective use of information resources in our country, which has affected the process of agricultural informationization in Jiangsu Province[4].

2.4 The management of agricultural information resources is not standardized

(1) The construction of agricultural information resources database is imperfect. Although there are more and more databases of agricultural information resources in Jiangsu Province, there are still some problems, such as small scale, scattered resources and low quality of databases. These problems are mainly manifested in the following aspects: the databases between different regions and industries are self-governed, each of them is its own way, lack of division of labor and cooperation, resulting in information decentralization and duplicate input. Because of the waste of resources and the low degree of sharing, the effective allocation of agricultural information resources can not be realized. The information content is identical, lacking distinctive information, lacking pertinent, timely and valuable practical information.

(2) Agricultural information resources lack unified management standards and effective integration. Agricultural information construction involves many departments, such as the management department of a province, including the provincial government, agriculture, information, science and technology, water conservancy, meteorology, enterprises and other departments. Each Department has an independent information network system, and has accumulated a certain amount of agricultural information resources, but they have not collected the information. Resources are effectively integrated and managed in accordance with unified standards, such as no unified and specific standards for information classification, information application environment, etc. Information in the collection, storage, transmission and sharing of various indicators and terminology are not standardized, resulting in the loss of agricultural information resources, waves. Fees, lack of sharing and low utilization rate make it difficult for information resources to play their due role[5].

3. Analysis of the Causes of the Problems in the Construction of Agricultural Informatization in Jiangsu Province

(1) The leading role of the government is not strong and the laws and regulations are not perfect. First, the government lacks overall planning. Agricultural informatization construction involves government, agriculture, information, commerce, meteorology and other departments, but there is no unified agricultural information authority in each region, nor long-term development planning and policy support system. Each department also lacks specific implementation planning, pays attention to empty talk, neglects actual effect, does its own thing, has less contact, and lacks of specific implementation planning. Lack of overall planning often results in repeated construction and waste of resources. Second, the legislative work is lagging behind. Agricultural information market management lacks laws and regulations, the release of information is too arbitrary, online information is mixed, some information is outdated, even false information, it is difficult to identify, once the false information is believed, it will cause serious economic losses to farmers.

(2) The service system of agricultural informatization is imperfect. First, the pertinence of information service is not strong. There is a lack of in-depth and systematic understanding of farmers' information

needs. The vast majority of farmers urgently need information related to agricultural production, such as supply and demand information of agricultural products market, production technology services, future price forecast, migrant workers and so on. However, at present, most agricultural websites have limited scope of information services, insufficient effective information supply and poor information quality, especially lack of a better division. Analysis of agricultural production and market information. Secondly, the ability of information service is limited. Although most local leaders have begun to attach importance to the construction of agricultural informatization, they lack specific planning and measures. The rural grass-roots computer and other hardware facilities are scarce, the agricultural information products software products are scarce, the information managers are fewer and the level is lower. The brand of the agricultural association is hung up in the village committee, but the farmers seldom get valuable information services, and it is more difficult for the farmers in remote areas to get useful information guidance.

(3) Farmers'ability to access information resources is not strong. First, the cost of using the network is high, and there is a lack of low-cost information terminals. Farmers'income level is generally low, but the installation of broadband, the use of network, computer costs are high, beyond the economic affordability of most farmers. Therefore, the proportion of rural household broadband access is relatively low, the computer ownership is not high, farmers rarely access agricultural information through the Internet, most rural areas also mainly through traditional ways such as television to obtain information, the use of smart phones to obtain agricultural information is also increasing. Second, farmers get less information. Although rural information service stations and traditional and modern rural information service modes based on "Internet +" have been increasing, due to the obvious lack of attention to the needs of ordinary farmers, the practical information obtained by farmers is very limited and information content is insufficient, which can provide farmers with agricultural technology, market supply and demand, and convenient life. Sharing Platform of Multiple Information Services. Many information service modes are generally run to complete a project. When the project is completed, the service platform and resources will not exist, which makes the agricultural information service lack of sustainability.

(4) The effective application of information technology in agricultural production is insufficient. The slow application of new technologies such as big data, remote sensing and Internet of Things in agricultural production is due to the fact that information technology is a new thing and people lack trust in it; the cost and skills of new technology should be required; the cost of hardware and software should be required for any new technology in early production. In the initial stage of use, if the government's support is not enough, farmers seldom use this technology; the technical level of grass-roots information service personnel is limited, and many farmers'own knowledge level and ability are not strong, which are not conducive to the use of new technology.

(5) The speed of information system construction is slow. Information systems applied to agricultural management and services such as agricultural information websites, video conference training, agricultural product quality traceability coding, distance education training, office automation, agricultural credit management, animal quarantine and quarantine management, rural financial supervision and other information construction, application, promotion and improvement speed is very fast. Slow, only in developed areas to start pilot, mainly due to the lack of long-term planning of information system construction, frequent updates of information technology, and the maintenance and upgrading of the system, updating and application personnel need a process.

(6) The motive force of the main body of information service is insufficient. Although the main bodies of government, enterprises and farmers'cooperative organizations participating in agricultural information service are becoming more and more pluralistic, their enthusiasm is affected by their low efficiency. Government services for farmers are generally public welfare. Enterprises and farmers'cooperative organizations can also sell some agricultural production materials and agricultural products in information services, which has certain economic benefits, but the benefits are very limited. It affects the social capital investment and is not conducive to stimulate the

endogenous power of agricultural information services, and is not conducive to the further development of agricultural information services.

4. Measures and Suggestions for Accelerating the Construction of Agricultural Informatization in Jiangsu Province

4.1 Bring the Government's Leading Role into Full Play

(1) Improve the legal and regulatory system of agricultural informatization. Perfect laws and regulations are conducive to safeguarding the rights and interests of the main body of agricultural informatization, ensuring the authenticity and effectiveness of agricultural information, fair and equitable distribution of information resources, resolving disputes arising from the unfair distribution of information resources, and realizing information resources sharing, and strengthening the protection of intellectual property rights and dealing with them. A good relationship among information protection, information disclosure and sharing is conducive to restraining the behavior of all parties in the market and preventing false information from accessing the Internet. It is also conducive to building a fair and fair market competition environment, thus promoting the healthy and orderly development of agricultural informatization.

(2) To formulate preferential policies for the construction of agricultural informatization. Government departments set up support projects and special funds to encourage the development and innovation of agricultural information technology, and implement incentive mechanisms to reward individuals or units with outstanding contributions. More enterprises or individuals are encouraged to invest in the construction of agricultural informatization; banks give priority to the establishment and approval of projects when enterprises invest in agricultural informatization construction projects; new agricultural operators and farmers give tax preferences or subsidies when purchasing advanced informatization equipment.

4.2 Establishing a Unified Information Standard System

(1) To formulate unified management standards for information resources at all stages from collection to application.

(2) Unified and specific standards should be formulated for information classification, information application environment, etc. The needs of farmers should be fully considered, applicability should be increased, waste of agricultural information resources should be avoided, and efficient utilization of resources should be realized.

(3) In the field of information technology, standardized management should be implemented. The index terms involved in network construction, data transmission and sharing should also be standardized in a unified way to ensure the smooth flow of all aspects of information resources construction and realize information resources sharing.

(4) In the development of agricultural information software, realizing standardized management is conducive to saving resources and linking up various links.

(5) In all aspects of information construction, such as information platform, database and application system, scientific system standards should be formulated.

4.3 Improving the Infrastructure Construction of Agricultural Informatization

(1) Further improve rural network infrastructure and communication facilities, as soon as possible to solve the last kilometer of network infrastructure, so that the network covers all rural residents, to achieve the goal of making more people use the Internet. At the same time, we should improve the network speed, network transmission capacity and give full play to the advantages of the network.

(2) Promoting the balanced development of agricultural information infrastructure construction. We will strengthen the construction of rural information service platforms, large databases of rural information resources and rural grass-roots agricultural information websites in northern Jiangsu, and increase the amount of information, timeliness and renewal speed.

4.4 Establishing a Complete Agricultural Information Service System

(1) Continuously improve the agricultural information service platform. We will build a national information public welfare platform and provide various information services such as public welfare, convenience to the people, information release of supply and demand of agricultural products, etc. Establishment of remote video technology service platform, timely promotion of new practical technology, dissemination of modern agricultural science and technology, hiring experts to solve the technical needs of grassroots people. App platform of agricultural technology mobile phone service was established. Planting, breeding and processing of agricultural products were integrated into the platform. Training of mobile phone use skills was carried out for farmers, so that farmers could know the actual problems in production and life at any time through mobile phones.

(2) Increase farmers'ability to use and obtain information. We should strengthen the training of farmers in using mobile phones, computers or the Internet, improve their ability to receive various kinds of information, master the skills of applying information technology, establish a set of standardized training system in light of actual conditions, regularly run training courses, publicize and popularize agricultural information knowledge, and cultivate farmers'awareness of modern market information.

4.5 Accelerating the Application of Information Technology in Agricultural Production and Life

(1) Pilot work on big data should be carried out in agricultural production and life. For potatoes, pigs, garlic pilot products, do a good job from the production, processing and consumption of the whole process of big data. Through the analysis of the information data of farming, production and sales of agricultural products in previous years through the Internet, farmers can predict the demand of agricultural products in the market this year, so as to avoid the loss caused by the disconnection between supply and demand to farmers and the state.

(2) Applying Internet of Things technology to agricultural production and life. That is to say, through the network management of material requirements in agricultural production links, such as sowing, watering, fertilizing, spraying pesticides and other production links, the Internet of Things technology is used to control the quantity of water, pesticides, fertilizers and pesticides, reduce labor force, save costs, implement digital agriculture construction, and implement precision operations for agricultural production. Precision control.

4.6 Strengthen the Construction of Agricultural Informatization Talents at All Levels

(1) Focus on training agricultural informationization professionals. All colleges and universities in our country should constantly adjust the structure of personnel training, through the design and adjustment of specialties, train compound talents who not only have excellent information technology, but also understand agricultural knowledge. Through preferential policies, college graduates will be guided to work in rural areas and more specialized personnel in agricultural informatization will be added. Local governments should attach importance to the training and introduction of agricultural informationization professionals. By providing preferential treatment and establishing incentive mechanism for talents, they should retain and attract outstanding talents from relevant fields to actively join the ranks of agricultural informationization construction, and encourage agricultural informationization talents to develop in vast rural areas. Talent, show your skill.

(2) Training should be carried out step by step and in stages to raise farmers'awareness of informatization. Organize various types of training courses on farmers'informationization knowledge, take various forms such as inviting in and sending out, enhance farmers' modern information awareness, improve farmers'ability to acquire information and apply information by using computers, collecting, processing and processing information technology, and enhance farmers' overall quality.

5. Conclusion

This study deeply analyzed the current situation, main problems and causes of agricultural informatization construction in Jiangsu Province, and gave full play to the leading role of the government, improved the construction of agricultural informatization infrastructure, improved the level of agricultural informatization service, and accelerated the application of agricultural information technology in agricultural production and life. In order to strengthen the construction of agricultural informationization talents at all levels, the specific countermeasures to solve the problems in the current agricultural informationization construction are put forward. To provide some reference and reference for promoting the construction of Jiangsu agricultural informatization in the new era, and to contribute to the strategy of rural revitalization.

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