Research on the Development Path of Modern Agriculture Based on "Internet + Agriculture"

Xiaojun Li¹, Zhihua Zhen^{2,*}

¹Tangshan Agricultural Information Center, Tangshan, Hebei 063000, China ²Crop Seed Station of Tangshan, Tangshan, Hebei, 063000, China *Corresponding Author

Keywords: Internet +, Modern agriculture, Development path

Abstract: Nowadays, with the growing development of internet technology, people's lives have undergone tremendous changes. At present, agricultural development has become an important force to promote China's social and economic development. China has also paid more and more attention to the development of agricultural industry. In the development of modern agricultural industry, China encourages the combination of agricultural development and internet development model, thereby expanding the agricultural development path and continuously promoting the development of modern agriculture under the new model of agricultural development. Combining internet technology with modern agriculture is the key to promoting the transformation and upgrading of all aspects of agricultural production, processing, management, sales and service, enabling modern agriculture to realize the development of intelligence, technology and information under the support of internet technology. The use of "internet +" can solve many difficulties encountered in the development of traditional agriculture. The realization of the "internet + modern agriculture" development model can effectively innovate efficient sales channels and simplify agricultural production. Based on this, this paper conducts an in-depth analysis of the business thinking and innovation path of "internet + agriculture" and promotes the development of "internet + agriculture".

1. Introduction

"Internet + agriculture" refers to the use of internet technology to transform, optimize, upgrade and upgrade traditional agricultural industrial chains from planning, production, sales, service and finance, restructure industrial structure, improve production efficiency, and develop traditional backward agricultural production methods. Become a new and efficient production method. The "internet + agriculture" is not a direct combination of the two, but based on the internet platform and communication technology, the deep integration of traditional agriculture and the internet, including the rational allocation of production factors, the optimal scheduling of human and material resources, etc. The internet will provide support for agricultural intelligence, promote the upgrading of agricultural products, innovate the industrial chain to improve production efficiency, promote revolutionary changes in agricultural production and management methods, and drive innovation in agricultural new business development[1].

The concept of internet technology and the internet is profoundly changing traditional agriculture, making agricultural production more standardized, management constantly regulated, and circulation faster and faster. In recent years, China's "internet + agriculture" has developed rapidly. Taking rural e-commerce as an example, in 2014 China's agricultural product network transaction volume exceeded 100 billion, accounting for 3% of agricultural product sales. At present, the number of agricultural e-commerce platforms in China exceeds 3,000, showing a rapid growth trend. E-commerce is only one aspect of "internet +", and "internet +" has made initial progress in agricultural internet of things and agricultural information services[2]. "Internet + agriculture" not only uses the internet to transform agriculture, but also needs to transform the internet application model to adapt to the characteristics of agriculture. In the integration of agriculture and the Internet,

DOI: 10.25236/iwass.2019.089

it seeks the business logic and innovative thinking of agriculture in the internet.

At present, "internet + agriculture" still has problems such as backward concepts, unreasonable industrial structure, and inadequate business models. In rural households in China, the level of computer popularization is low, the number of computers is small, and the application capacity is backward. The level of labor culture left in rural areas is relatively low. Due to the limited information in China's agricultural market, the agricultural structure is unreasonable and the overall economic benefits of agriculture are not high. This paper starts from three aspects, on the one hand, analyzes the importance of the development of modern agricultural industry under the "internet + agriculture" model, on the other hand, analyzes the problems existing in the development of modern agricultural industry under the "internet + agriculture" model, and finally analyzes the path of modern agricultural industry development under the model of agriculture[3].

2. The Importance of "Internet + Agriculture" Model for the Development of Modern Agricultural Industry

Internet technology is one of the most important ways for rapid economic development. At present, it is more and more widely used in the development of modern agriculture, which has greatly promoted the rapid development of China's agriculture and promoted the pace of construction of new towns in China.

Firstly, the development of modern agricultural industry under the "internet + agriculture" model has promoted the rational allocation of agricultural resources in China. As we all know, one of the biggest features of the internet is that it can publish all the information on the internet, so that the same information can be shared by more demanders in the same period of times. the relevant people publish the agricultural information on the internet, the internet will automatically integrate and process it to form effective information. In this way, many agricultural information users can find relevant information according to their own needs, which has a positive effect on promoting the healthy and rapid development of agriculture.

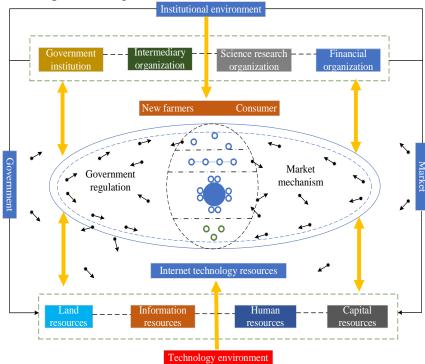


Fig.1 Innovation and Development Mechanism of Modern Agriculture Based on "Internet +"

Secondly, it can promote the upgrading of agricultural product sales models. In recent years, in the development of agriculture, the emergence of the internet has provided a new technical direction for the sales of agricultural products, which has reduced the cost input of agricultural products to a certain extent and improved the economic income of farmers. At the same time, through the

construction of the internet, farmers can also promote their agricultural products through various channels and broaden the sales channels of farmers' agricultural products. In addition, the distribution of fresh agricultural products has also been affected by the "internet + agriculture" development model[4]. As we all know, the requirements for the distribution of fresh agricultural products are relatively high and have certain limitations. However, the integration of the internet has changed this situation. As the information on fresh produce is published on the internet, its sales will be more extensive, which not only saves sales time, but also guarantees the quality of fresh produce and obtains more economic benefits for farmers.

Finally, it can effectively improve the overall quality of agricultural practitioners themselves. For the internet itself, it is a relatively powerful information system that contains information in many fields. Agricultural practitioners can find the relevant information on the internet and then apply the information to their own agricultural products, so that their agricultural products can be better produced and developed. At the same time, some agricultural operators with certain experience can also publish their own experiences on the network, provide corresponding reference materials for other agricultural operators, and improve the overall quality of farmers themselves, thus continuously promoting the development of rural agricultural economy[5].

3. The Development Path of Modern Agriculture under "Internet + Agriculture"

3.1 Accelerate the Construction of Agricultural Information Platform

The construction of agricultural information platform can improve the efficiency of agricultural production, contribute to the modernization, high efficiency, scientific and technological development of China's agriculture, and promote the development of China's agricultural economy. Therefore, the relevant parts should pay attention to the construction of agricultural information platform. The local government should be deeply aware of the importance of modern science and technology for agricultural development, and invest corresponding personnel, technology and funds in the construction of agricultural informatization to speed up the construction of agricultural informatization platform. In recent years, the level of information technology in China is constantly improving, which has driven the development of all walks of life and promoted the rapid development of our national economy. The application of Internet technology in agricultural industry can effectively improve the utilization rate of agricultural information, improve the efficiency of agricultural industry related work, and promote the development of agricultural economy in China. In this regard, the local government should make full use of modern information technology, strengthen the construction of agricultural information, and combine with the development of local agricultural industry and development needs, allocate corresponding technical personnel and funds to promote the smooth development of the construction of agricultural information platform. Secondly, we should guarantee the normal operation of the agricultural information platform after completion [6]. Therefore, we should constantly improve the information in the agricultural information platform, and regularly update its content, so as to provide farmers with the latest agricultural information. At the same time, we should also strengthen the management of the relevant staff, pay attention to the operation of the agricultural information platform in real time, so as to ensure the normality and stability of the operation of the agricultural information platform. Therefore, according to the actual operating conditions and needs of the agricultural information platform, the corresponding management system can be formulated to regulate the behavior of staff. In addition, relevant staff should submit work summary report and hold agricultural information exchange meeting regularly to improve the work level of relevant staff. Finally, we should strengthen the maintenance of network security, ensure the security of network operation, so as to ensure the security of agricultural information platform operation.

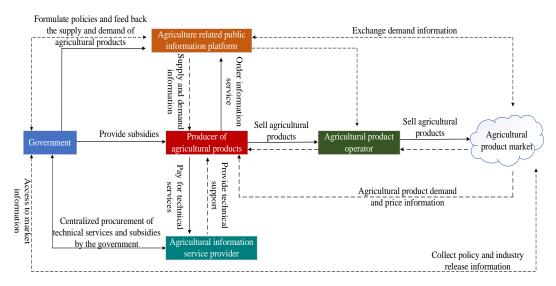


Fig.2 Modern Agricultural Product Organization Model Based on Agricultural Information Platform

3.2 Strengthen Personnel Training

Under the background of "internet +", the development of modern agriculture depends on the support of talented people. However, the traditional technical talents can no longer meet the development needs of modern agriculture, and we need to strengthen the training of new skilled personnel to promote the smooth development of modern agriculture. Firstly, according to the needs of the work, we should attract professional talents with strong working ability and good application ability of modern information technology[7]. Secondly, we should pay attention to the cultivation of internet technology talents and increase the promotion and publicity of internet technology. In this regard, we can carry out technical training, carry out professional training for relevant technical personnel, and improve the professional level of technical personnel through the learning of professional knowledge. At the same time, we should also actively establish an internet technology team to give lectures and publicity on internet technology knowledge to local people, and provide one-to-one guidance to promote the improvement of internet technology for local people[8].

3.3 Promote the Development of Rural e-Commerce

The direct embodiment of "internet + agriculture" is rural e-commerce, part of the "generation agriculture" is the "internet plus modern agriculture" which can take the lead in achieving breakthroughs, and will also become a new form of circulation of agricultural products and agricultural means of production. E-commerce is a trade platform for both buyers and sellers, but agricultural e-commerce is not a simple trade service behavior. "internet +" has completely changed the original sales channel and sales mode of agriculture, brought disruptive changes to the marketing of agricultural products, integrated the resources of industrial chain, and integrated various links of supply chain, such as sales, purchase, pricing, settlement, financing and so on. According to the classification of varieties, quality, brand, origin and other factors, build a large online market for regional agricultural products, and promote the e-commerce of agricultural products to deepen the development from easily stored nuts and tea to fresh agricultural products. Fourth, brand and traceability logo sales model. Brand is an important part of the value-added of agricultural products. Therefore, the core and focal point of "internet plus agriculture" should be based on the quality brand and optimize the operation mode. In the process of product marketing, the brand of fresh agricultural products is the highlight, but also the difficulty. It is the advantage of e-commerce to change the traditional wholesale sales channel mode of agricultural products and make agricultural products transparent from field to table[9]. To ensure the safety and quality of agricultural products, we can track the whole process of production, processing, circulation, sales and other aspects of agricultural products through radio frequency identification, mobile internet, internet of things and other information technology channels.

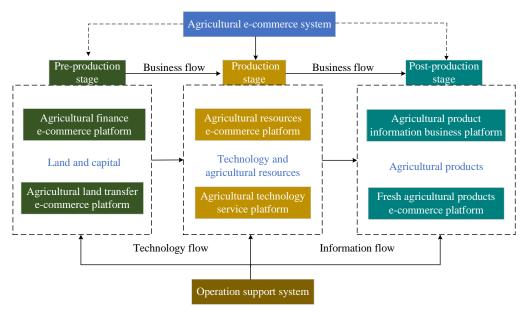


Fig.3 Schematic Diagram of Agricultural e-Commerce System

4. Conclusion

In general, strengthening the use of internet technology in the development of agricultural economy is the inevitable trend of the development of the times. The internet has played a good leading role in promoting the development of modern agriculture. Under the background of "internet +", in order to improve the quality of agricultural development and increase the income of farmers, it is necessary to accelerate the popularization and application of internet technology in modern agriculture, and establish and improve rural products. Flow network system, strengthen infrastructure construction such as logistics outlets, build intelligent agricultural comprehensive demonstration park, comprehensively improve agricultural information technology service level, promote the development of rural e-commerce, enhance the brand strategy of agricultural products, and promote the innovation and entrepreneurship development of farmers. The development path of modern agriculture under the background of "internet +" should speed up the pace of agricultural modernization, informatization and greening, to enhance the efficiency of agricultural production in China. In order to promote the rapid development of China's agricultural industry, we should actively establish an agricultural information platform, constantly improve the relevant content, and increase the publicity and promotion of modern agricultural technology.

References

- [1] Wang B P. The Design of Modern Agriculture Control System Based on Internet of Things[J]. Applied Mechanics & Materials, 2014, 513-517:1519-1522.
- [2] Jing S W, Xia Y, Chen H H. Coupling Path of China's Modern Service Industry and Agriculture Based on Improved Entropy Method[J]. Asian Agricultural Research, 2015, 07(12):1-8.
- [3] Yin K, Men Y. A Study on the Reform and Further Development of Chongzhou Mode Based on the Perspective of Modern Enterprise Management[J]. Asian Agricultural Research, 2016, 4:42-43.
- [4] Fei L, Guo X L. The Design and Implementation of Crop Growing Environment Monitoring System Based on the Internet of Things [J]. Advanced Materials Research, 2014, 912-914:1440-1443.
- [5] Li Y. Japan's Modern Agriculture and Its Effects on Agricultural Development of Anhui Province [J]. Asian Agricultural Research, 2017(5):52-55.
- [6] Yang X L, Wang Y Q, Ji H W. Path to Support Development of Production and Operation of

- Big Grain Production Households-Based on Investigation of Heilongjiang Province[J]. Journal of Northeast Agricultural University, 2015, 22(4):83-92.
- [7] Zhen Z. The Research on Key Technologies of IOT in Agriculture Based on Semantic SOA[J]. Applied Mechanics & Materials, 2014, 519-520:1542-1545.
- [8] Wang Z H. Driving Effect of Construction of the "Blue Yellow" Economic Zone on Modern Agriculture Development of Shandong Province[J]. Economic Research Guide, 2015, 41(2):162-8.
- [9] Chen S J, Chen G Y, Wang C Z. The Curriculum System Development of Sightseeing Agriculture Major Based on Work Flow[J]. Asian Agricultural Research, 2014, 06(12):96-97.