The advantages and disadvantages of agricultural economic management information

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Abstract: Agriculture is an important part of economic management. In recent years, due to the popularization of the Internet, the adjustment of agricultural industry structure and the information management of agricultural industry have been accelerated. The wide application of information technology in rural economic management can effectively promote the development of rural economy. Because the development of my country's agricultural information industry started late, and its application is relatively late. On this basis, this article studies the advantages and disadvantages of agricultural economic management information, such as modern production factors and agricultural economic information management by means of agricultural data collection. Taking the agricultural economic management informationization as the experimental group and traditional agricultural economic management as the control group, the application research is carried out. Through the use case test of the agricultural informationization platform data collection system, it is shown that information technology can effectively improve the efficiency of agricultural production. Experimental results show that information technology can effectively make up for the lack of economic information management in agricultural production and life. In addition, the government should increase capital investment in personnel training to promote agricultural economic management information.

Keywords: Economic Management, Information Technology, Agricultural Production, Management Information

1. Introduction
In recent years, agriculture is an important part of economic management, and agricultural economy [1-2] started late. Even with breakthroughs in reform and opening up, there are still some problems that restrict the development of agricultural economy. The sustainable development of agriculture has not brought a corresponding increase in income for farmers. This is mainly due to the inadequate application of information technology in agricultural economic management. At present, due to the
popularization of the Internet, agricultural economic transactions have become more and more transparent and open. For the development of agricultural economic management, it is necessary to actively encourage farmers to accept informationized production ideas and learn related information technology, which is of great significance to the development of agricultural economic management information system [3].

The main purpose of agricultural economic management informatization is to accelerate the rapid development of agricultural production, through the use of information technology to conduct scientific analysis of agricultural production data [4], provide scientific and effective suggestions for agricultural workers, and actively promote modern high-yield agricultural informatization technology. Agricultural high-tech promotes the construction of agricultural economic information, which is conducive to stimulating the enthusiasm of agricultural laborers, increasing agricultural production, and optimizing the allocation of agricultural resources [5] to achieve agricultural production development and economic construction. The core of agricultural economic management informatization is to improve the level of agricultural economic management through the use of informatization methods. Especially in terms of information resources, according to the status quo of agricultural resources and the current situation of agricultural development, the level of informatization of agricultural production management [6] is relatively low, resulting in a decline in the total agricultural output value, so the informatization of agricultural economic management is to optimize the allocation of agricultural production resources. The main method. In recent years, agricultural production in some areas has increased, but farmers’ income has not increased. This has harmed farmers’ enthusiasm for informationization in economic management, and informationization can promote the development of information technology. Therefore, farmers must adapt to the information age. The development trend of agriculture adopts the method of combining scientific development concept and modern technology to obtain economic benefits for agricultural products management [7].

On this basis, this article will study the advantages and disadvantages of agricultural economic management information. In the research, this article comprehensively analyzes and designs the agricultural economic management information system [8-9]. Through the performance test and analysis of the agricultural information platform data collection system, it is found that in order to improve the efficiency of agricultural production, it is necessary to eliminate the restrictive factors of agricultural production technology[10], effectively transform the concept of agricultural economic development, and improve farmers with the construction of agricultural economic management information Economic income stimulates the enthusiasm of agricultural workers and improves the efficiency of agricultural production.

2. Agricultural Economic Management Information Platform

2.1 Agricultural Economic Management
Agricultural economic management refers to a series of tasks for planning, organizing, controlling, and coordinating economic activities such as production, exchange, distribution, and consumption in the overall process of agricultural production, and motivating personnel to achieve expected goals.

In the development of agricultural economy, the progress performance index, cost deviation and performance index of agricultural information system management are used as indicators to measure the agricultural economic management system. Let SPI, CPI, and VAC represent the progress performance index, cost performance index, and completion deviation respectively; EV, PV and AC respectively represent the budgeted cost of the completed work, the planned cost of the completed work, and the actual cost of the completed work; BAC and EAC respectively represent the completed budget and the completed estimate. The indicators are defined as follows:

\[ SPI = \frac{EV}{PV} \]  

(1)
\[ CPI = \frac{EV}{AC} \]  
\[ VAC = BAC - EAC \]

Agricultural economic management is based on the main trend of agricultural economic development, rationally organizing the productivity of agricultural production departments, correctly handling production relations, and adjusting the agricultural structure in a timely manner to effectively utilize the material resources combined with financial resources and agricultural resources. Utilize natural resources, rationally organize production and supply and marketing, correctly handle the relationship between the material interests of the state and society, and the relationship between enterprise employees, mobilize the enthusiasm of farmers, improve the economic benefits of agricultural production, and maximize the social needs of agriculture. At present, the development of agricultural production not only requires the development of agricultural production and agricultural output, but the application of information technology affects the level of agricultural production to a large extent. Therefore, in the process of agricultural economic management development, agricultural information technology is very important in agricultural economic management.

2.2 Informationization of Agricultural Economic Management

Agricultural economic information management refers to the full use of information technology to achieve the acquisition and processing of various types of agricultural information. Reasonably accelerate the process of transformation of traditional agriculture, greatly increase the production and sales of agricultural products, and promote the process of sustainable, stable and rapid development of agriculture.

The general content of agricultural economic information management includes: scientifically formulating agricultural economic development strategies, formulating agricultural development plans on the basis of scientific forecasts, and dividing according to agricultural production areas; viewing other websites about the rational development and utilization of agricultural natural resources, and establishing reasonable The agricultural economic management system reasonably defines the responsibilities, rights and interests of all aspects of agricultural production and operation, rationally arranges the circulation of agricultural products, and uses various economic means to adjust agricultural production and operation.

In addition, the informatization of agricultural economic management is inseparable from marketization. Agricultural economic information management supports all fields and processes of modern agriculture, and the market plays an important role in the introduction of modern agricultural technology. In addition, the introduction of modern information technology into the agricultural scientific research, production, and operation management system, the transformation of traditional agriculture, the acceleration of the introduction and management of agricultural science and technology, and the inevitable trend of agricultural informationization.

3. Experimental Thinking and Design

3.1 Experimental Ideas

The agricultural information platform data acquisition system is an intelligent software system, which has high requirements for the input interface, such as fast data input speed, and unnecessary data information should be removed during input. This paper conducts a use case test on the agricultural information platform data collection system to study the effect of modern science and technology on agricultural production efficiency.

3.2 Experimental Design

Agricultural high-tech promotes the construction of agricultural economic informatization, which is conducive to stimulating the enthusiasm of agricultural laborers, increasing agricultural production
efficiency, and optimizing the allocation of agricultural resources to achieve agricultural production development and economic construction. Moreover, information technology can effectively make up for the lack of economic information management in agricultural production and life, and is conducive to improving the efficiency of agricultural production to accelerate the construction and development of modern agriculture.

This research aims to study the informatization of agricultural economic management, the informatization of agricultural economic management as an experimental group, the traditional agricultural economic management as the control group, and the agricultural data collection system as the test platform. The index concepts involved include villages and fields, Farmers, quarantine areas and crops. A simple scale is used to evaluate the data processing ability of the two groups. 10 points in the score are the upper limit. The higher the score, the better the indicator processing. According to the actual needs of the agricultural data collection system, Table1 is designed and used: village information table, farmer file table, plot file table, district cultivation table. The data sheet design of the agricultural data acquisition system is as follows:

| Table1. Data collection system of agricultural information platform |
|---------------------------------------------------------------|
| Form type | System keywords | type of data |
|-----------------|-----------------|-------------|
| Village Information Form | PK | Varchar(20) |
| Farmer File List | FK | int(8) |
| Parcel file table | FK | Varchar(20) |
| District cultivation table | PK | Int(16) |

4. Discussion

4.1 Application Research of Agricultural Economic Management Information

At present, Internet technology has been widely used in rural economic construction, which plays a vital role in improving the level of rural economic management and ensuring rural economic development, and has become an inevitable trend in the reform and optimization of my country's agricultural economic management system. With the aid of modern science and technology, it has greatly promoted the improvement of agricultural production efficiency and transaction volume, and cannot effectively increase the economic income of farmers. In addition, in order to support the construction of rural economic management information, local governments should increase capital investment and personnel training. Integrate agricultural production information resources to promote the stable and healthy development of agriculture.
Figure 1. Comparison of data collection ability between experimental group and control group

The data collection capabilities are divided into: user management, area management, plot management and user reports. It can be seen from Figure 1 that compared with the control group, the scores of various data collection capabilities in the experimental group are higher than those in the control group; while the scores of various capabilities in the control group are significantly lower than those of the experimental group. The agricultural economic management of the experimental group's information system integrates many factors, which can greatly improve the efficiency of agricultural production and realize the development and construction of modern agriculture.

Figure 2. Comparison of village information management between the experimental group and the control group
According to the comparative analysis of the village information management capabilities of the two groups, it can be seen from Figure 2 that the differences between the two groups are obvious, and the scores of various information management capabilities in the experimental group are higher than those in the control group. This shows that in the process of agricultural economic management, the government needs to make full use of information technology to control and guide the stable and healthy development of agricultural economic information technology, vigorously support the cultivation of information technology and agricultural economic management related talents, and guide farmers in daily agricultural production. Application of information technology in activities.

4.2 Advantages and Disadvantages of Agricultural Economic Management Informatization

1. Advantages of agricultural economic management informatization
   (1) Contribute to improving the sharing of agricultural information resources, thereby increasing agricultural productivity and promoting the healthy and stable development of the agricultural industry.
   (2) It is helpful to strengthen the communication between different agricultural regions, promote agricultural production to industrialization, and the development of production standardization, and enhance the competitiveness of the agricultural economy.
   (3) It is helpful to promote the development of agricultural economy in multiple directions and transform the traditional agricultural economic management mode.
   (4) It is helpful for farmers to quickly and comprehensively understand the dynamic information of the agricultural market, thereby adjusting the agricultural structure, producing agricultural products with large market demand, obtaining higher economic benefits, and promoting rural economic development, and realizing agricultural product marketing information management in agriculture The application in the economy plays an important role in promoting the development of agriculture in our country.

2. Defects of agricultural economic management information
   (1) Lack of professional and technical personnel
      Because the application of information technology to design agriculture is relatively late and the application time is relatively short, there is a shortage of professional information technology talents in agricultural economic management. In addition, the construction of information networks for some rural public utilities is not perfect, causing farmers to be unable to obtain corresponding information in a timely manner and hindering the development of rural economic management.
   (2) Lack of a perfect platform
      Most local government departments do not have a high level of understanding of agricultural modernization. Under the background of the information age, the development of agricultural economy needs to rely on strong support from government departments. Only when the government correctly analyzes the conditions of the agricultural economic market can it guide the rapid agricultural economy Stable development.
   (3) Farmers’ informatization awareness is weak
      Some relatively backward areas are not deep enough in agricultural management concepts, agricultural economic development and information management to effectively guide local farmers in construction. This problem has seriously hindered the process of agricultural economic construction and information management.

To sum up, in order to keep up with the development trend of agriculture in the information age, in terms of information resources, it is necessary to guide the government to build an agricultural information platform and cultivate professional technical personnel based on the current situation of agricultural resources and the current situation of agricultural development. The method of combining scientific development and modern technology has achieved economic benefits for agricultural products management.

5. Conclusions
In the process of studying the advantages and disadvantages of agricultural economic management informatization, this paper uses the agricultural data collection system as the test platform, the agricultural economic management informatization as the experimental group, and the traditional agricultural economic management as the control group. The simple scale is used to evaluate the data processing ability of the two groups. In the comparative analysis, the experimental group can effectively improve agricultural data collection capabilities and village information management capabilities, enabling effective integration of various data and information sharing. Optimizing traditional agricultural economic management methods is the general trend. Overcoming the shortcomings of agricultural economic management information can not only effectively increase farmers' economic income, but also greatly promote the development of the national economy.

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References
[1] Nguyen, T. T., Saito, H., Isoda, H., & Ito, S. (2015). Balancing skilled with unskilled migration in an urbanizing agricultural economy. World Development, 66(8), 457-467.
[2] Xiaohong, C. (2015). Construction of agricultural tourism product model based on experience economy. Journal of Landscape Research, 08(03), 52-53.
[3] Liang, Wang, & Baoying. (2015). Research on application of information technology in agricultural economic management. International Technology Management, 13(7), 70-73.
[4] Rezitis, A. N., & Ahammad, S. M. (2016). Investigating the interdependency of agricultural production volatility spillovers between bangladesh, india, and pakistan. Review of Urban & Regional Development Studies, 28(1), 32-54.
[5] Herrera, J. G., & Botero, J. F. (2017). Resource allocation in nfv: a comprehensive survey. IEEE Transactions on Network & Service Management, 13(3), 518-532.
[6] Anderson, B. D., Mengmeng, M., Yao, X., Tao, W., Bo, S., & Lednicky, J. A., et al. (0). Bioaerosol sampling in modern agriculture: a novel approach for emerging pathogen surveillance?. Journal of Infectious Diseases, 21(4), 537-545.
[7] Ballini, F., & Bozzo, R. (2015). Air pollution from ships in ports: the socio-economic benefit of cold-ironing technology. Research in Transportation Business & Management, 17(1), 92-98.
[8] Dang, A. N., & Kawasaki, A. (2017). Integrating biophysical and socio-economic factors for land-use and land-cover change projection in agricultural economic regions. Ecological Modelling, 344(3), 29-37.
[9] Sambrekar, K. (2019). Fast and efficient multiview access control mechanism for cloud based agriculture storage management system. International journal of cloud applications and computing, 9(1), 33-49.
[10] Chen, Z., Zhang, J., & He, K. (2018). Technical perception, environmental awareness and adoption willingness of agricultural cleaner production technology. Chinese Journal of Eco Agriculture, 26(6), 926-936.