Vol 13, Issue 8, (2023) E-ISSN: 2222-6990

The Effect of Digital Technology Development on Rural Agricultural Enterprises in China: A Survey of Laicun Network

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To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v13-i8/17524 DOI:10.6007/IJARBSS/v13-i8/17524

Published Date: 06 August 2023

Abstract

This essay adopts the method of empirical investigation, based on the field investigation of Laicun network in Henan Province, to conduct the development and impact of the development of digital technology on the development of rural agricultural enterprises in China, and in-depth analysis of the transformation of digital technology to promote the social governance system. With the continuous development of the current society, data resources have become the basic resources of social governance. The empowerment of digital technology for the modernization of rural governance system is mainly reflected in: promoting multi-subject co-governance, promoting the intelligent transformation of governance decisions, consolidating the material foundation of governance, and creating a good human environment. However, the imperfect digital infrastructure, the far-reaching influence of traditional decision preferences, the low quality and complexity of data and the alienation of digital technology use restrict the empowerment of digital technology. Therefore, it is necessary to strengthen the construction of data standard system, improve the digital literacy of decision makers, accelerate the construction of agricultural digital facilities and guide the use of digital technology to ensure that digital technology effectively promotes the modernization of rural governance system.

Keywords: Digital Technology, Agricultural Digital Construction, Rural Governance, Laicun Network, Agricultural Enterprises

Introduction

Digital technologies, represented by big data, the Internet of Things, artificial intelligence and blockchain, are becoming increasingly mature, injecting new impetus into the transformation of social governance and providing new strategic resources(RADOI et al., 2022). At the same

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time, with the development of the Internet, cloud computing, and 5G technologies, the digital economy has promoted social change and development. With the development of the digital economy, digital technology has released a powerful "digital dividend" and injected a strong impetus into the growth of the agricultural economy. China's central and western regions are relatively weak in digital economy infrastructure construction, network infrastructure construction is relatively weak, the application of digital technology is insufficient, and there is a shortage of digital talents. The degree of development of digital economic infrastructure is different in different places, and the enabling effect on agricultural economy is also different. Laicun serves some county-level areas in central China and has high research value. Laicun promotes agricultural development in central China with the help of digital media technology.Laicun network was established in 2015, Laicun network through the active exploration and practical application in digital agriculture, smart agriculture and other aspects. Laicun network is an agricultural order trading and planting management tool. It mainly uses modern Internet technologies such as big data, Internet of Things and cloud computing to provide technical guidance for crop planting from surprise to growth every day, and remote diagnosis and treatment of diseases and pests by artificial intelligence, and conducts digital whole-process detection through various field operation contents of crops. The contents of various field operations of crops are monitored digitally throughout the process, the quality of agricultural products is controlled throughout the process, and the standardization of agricultural products can be traced throughout the process to improve the quality and output of agricultural products. The service field involves digital agriculture, digital countryside, smart agriculture, digital enterprise, full chain traceability, county e-commerce, etc.

Literature Review

At present, with the construction of digital infrastructure, digital technology is being integrated into various scenarios of agriculture, promoting the development of new agricultural business models, and playing an important role in agricultural economic growth. Many scholars at home and abroad believe that the digital economy promotes the growth of agricultural economy, and the emergence of the Internet has injected new vitality into agricultural production. Agricultural information, which cannot be seen or touched, plays an important role in agricultural production. The Internet brings all kinds of information to farmers. Information such as agricultural planting and breeding, prices of agricultural products, market demand of agricultural products, financial subsidies and fiscal policies benefiting farmers and people are disclosed and transmitted on the Internet, which facilitates the production and life of rural residents, enables rural residents to have a deeper understanding of relevant policies and regulations as well as market supply and demand information, and makes agricultural production more accurate and efficient. It reduces the cost of agriculture and promotes the growth of agricultural economy. Compared with traditional paper books, the transmission of e-books allows rural residents to obtain the relevant knowledge they need more quickly and cheaply, providing better services for agricultural production and promoting agricultural economic growth.

Chinese scholars pointed out that agricultural products are perishable, and the complicated and varied circulation process of agricultural products takes a long time, reducing the freshness of agricultural products. The emergence of e-commerce has built a platform for the sale of agricultural products, streamlined the circulation link, and thus promoted the sale of

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agricultural products and promoted the growth of agricultural economy. In the past, agricultural products had intricate distribution channels in the circulation process. From the "field" of agricultural production to the "urban table" of agricultural products sales, they often needed to go through multiple levels, which inevitably led to increased transportation time of agricultural products, increasing prices of agricultural products and loss of agricultural products quality. In the circulation of agricultural products with low efficiency and large losses, agricultural products are forced to harvest early, but consumers spend more money but it is difficult to buy safe and tasty ingredients, because most agricultural products have a relatively short maturity stage. Therefore, timeliness should be emphasized in the sales process of agricultural products. Compared with traditional logistics, the sales process through e-commerce is simpler and more transparent, and the market coverage is larger. A large number of agricultural products consumers gather on the e-commerce platform, and dispersed consumer demand is rapidly aggregated on the e-commerce platform, thus achieving an accurate match between supply and demand. So that consumers can quickly and accurately buy the agricultural products they want, so as to increase the sales of agricultural products and promote the growth of agricultural economy. Different regions may have certain differences in Internet coverage, 5G base stations, Internet of things facilities, and logistics and distribution facilities, which may affect the enabling effect of the digital economy on the agricultural economy.

In eastern China, the construction of digital economy infrastructure, such as rural 5G base stations, Internet of Things facilities and logistics and distribution facilities, is relatively complete, the application of digital technology is relatively high, and digital talents are sufficient. Talent and technology are relatively weak in the central and western regions, so this study focuses on the development of digital agriculture in the central region, which has certain enlightenments.

Digital technology empowers Chinese rural enterprises

Faced with the rapid changes of rural production and life styles and the accelerated flow of population in China, the traditional rural governance of simple hierarchy with the overall planning of agricultural production as the core content has encountered difficulties. The wide application of digital technology has promoted the formation of digital rural society, thus breaking the gap between the country and rural society in the pattern of rural governance, and providing targeted resource support for villages lacking in governance resources. With the increasingly mature and widespread application of five new digital technologies, namely the Internet of Things, cloud computing, big data, artificial intelligence and blockchain, digital technology has become the driving force to promote social governance innovation. Patrick Dunleavy, based on the background of the declining influence of new public management application and the quiet development of digital governance, The paper expounds the theory of digital governance in detail, holds that its core lies in the reintegration of services and the realization of the holistic and co-produced decision-making mode, and proposes that the application of digital technology to social governance will promote the innovation of social governance (López & Guerrero, 2017).

Leicun digital agriculture technology

Agricultural big data: The agricultural big data platform conducts comparative analysis based on the collected environmental data and planting big data, establishes crop growth models,

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guides the production operations required at different stages through big data science, quickly finds solutions, and makes targeted data guidance for different crops, which is more intelligent and convenient.

Agricultural situation early warning command platform: The agricultural situation early warning command platform displays all kinds of agricultural basic data and Internet of Things data environmental early warning information in real time, and can realize the interactive control functions of Internet of things such as voice irrigation and intelligent identification. At the same time, combined with agricultural big data analysis, it provides a basis for government decision-making and guides farmers' production and operation. For soil temperature, humidity detection, light intensity detection, soil nitrogen, phosphorus and potassium detection, data analysis, early warning reminder, expert advice, decision-making command

Agricultural product quality and safety grid control system: In order to ensure the quality and safety of agricultural products, the village (community) as the unit of grid management mechanism, the county government, the village responsible person as the first, second and third level of field manager, monitoring the standardized crop planting, the whole process of the crop planting cycle digital system certification, the task is implemented to the responsible person, the responsible land and the responsible network, forming a level to grasp the level. The mechanism of implementation at every level. Features: Grid quality and safety management, quality control responsibility to people, agricultural planting standardization, real-time supervision of agricultural planting, traceability of planting process, work performance appraisal, timely reporting of problems, regular field patrol, timely identification of diseases, pests and grasses, real-time recording of environmental data, automatic statistics of data, unified personnel management.

Agricultural materials supervision system: Through the use of information technology and one thing one code technology, the agricultural materials supervision system assigns a two-dimensional code label to each bottle of pesticides produced, so as to achieve "one thing one code". For any pesticide purchased by farmers, by scanning the two-dimensional code, you can find the production information such as the manufacturer, production date, batch number, raw material source, quality supervision report, as well as the circulation information such as distributors, retailers, logistics services, etc., truly realizing the whole process traceability mechanism of "product identification, status can be recorded, information can be queried, direction can be traced, responsibility can be traced".

Advantages: By strengthening the supervision of agricultural products from the source, the agricultural materials supervision system prevents the flow of omitted and prohibited agricultural inputs into the market. Once it is found that there are quality problems in agricultural materials, resolutely safeguard the rights and interests of farmers. The construction of agricultural materials supervision system is of great significance to promote the visibility of enterprises, crack down on fake and shoddy agricultural materials commodities, safeguard the interests of farmers, and promote the transformation and upgrading of agricultural materials management services in Henan Province and take the lead in realizing agricultural modernization.

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The core path of the modernization of rural governance empowered by digital technology

The empowerment of digital technology for the modernization of rural governance system is multi-directional: the integration of multiple types of governance forces on the digital platform can promote the co-governance situation of the main body; the decision support provided by the integrated governance interface is conducive to the intelligent transformation of rural governance decision-making; the promotion of rural economic development by agricultural digitalization is conducive to the development of rural governance material basis(Lu, 2014). To create a series of digital technologies around rural development. The development of digital technology is a new model, which conforms to the structural reform of the rural supply side and the development of new industries, and combines with the reform of the rural property rights system to achieve a sustainable model of rural modernization, new urbanization, and all-round social and economic development in China.

To the village network digital order agriculture: Digital order agriculture forecasts the price trend of agricultural products by analyzing big data of agricultural products, creates a four-season cycle order agriculture planting model, guides planting with orders, provides a set of technical and management solutions, drives the development of a new rural economic complex, solves the risk of people blindly following the trend of planting, and truly solves the imbalance between supply and demand. The formation of base procurement directly docking agricultural product processing enterprises and large farmers' markets supply chain, reducing the procurement cost of enterprises, while driving farmers to increase production and income.

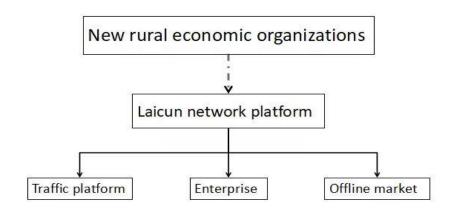


Figure 1: Lai Cun network digital platform

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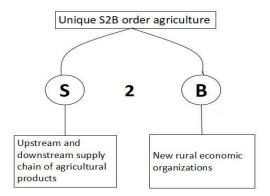


Figure 2: Lai Cun network order agriculture

The development of digital village technology and the establishment of digital village cloud platform: digital village is not only a development model, but also an advanced village dynamic representing the future development direction. At present, the innovation of the new generation of information technology is unprecedentedly active, and continues to drive the continuous and in-depth development of new products, new models and new business forms. The digital rural development strategy with "digital economy + rural development" as its core content has provided a new internal driving force for rural revitalization. Scientific and effective policies provide the target direction and work path for the construction of digital villages and the promotion of rural revitalization. At present and in the future period, it is necessary to further adapt to the tide of digital development, give full play to the advantages of digitalization, accelerate the application of networking, informatization and digitalization in agricultural and rural economic and social development, and build digital villages to help the comprehensive revitalization of rural areas.

- 1. Improvement of digital foundation: implementation of wireless digital coverage and intelligent transformation of facilities in rural areas
- 2. Smart agriculture innovation and development: Build a national agricultural and rural big data platform, build a national digital agriculture rural innovation center, and build a national digital agriculture rural innovation base.
- 3. Cultivation of new business forms and models: "Internet +" agricultural products out of the village process
- 4. Enhancement of digital governance capacity: digitalization of rural governance, "smart legal aid" in rural areas, video image information system for public security in rural areas, intelligent meteorological disaster early warning in rural areas, active release terminal for emergency broadcast in rural areas.
- 5. Revitalization of rural network culture: Digitalization of core rural cultural resources, Yunshang ethnic Village
- 6. Building smart green villages: rural environmental quality detection points, agricultural pollution detection, and drinking water detection in rural areas
- 7. Improvement of public service efficiency: primary and secondary school teachers' information technology application ability has been improved, county-level telemedicine private network has been built, and financial technology has enabled rural revitalization
- 8. Network help expand and deepen: consolidate and expand the achievements of poverty alleviation, and effectively connect network help and digital village construction

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Comprehensive services for villagers: It is configured as a service place for the public life and social governance of rural residents in counties and towns and organized villages, which is an important carrier to ensure that rural residents can enjoy public services and control the source of real society. With the integration of intensive county, township and village construction entities, through digital and information-based digital means, through centralized management, unified dispatch, market-oriented operation, cross-regional integration of process system, to create a new generation of rural service complex integrating party building services, terminal logistics, rural travel, health care and home management, education and training, famous and excellent agricultural products, etc. Expand the rural commercial field and make urban and rural residents become the beneficiaries of the platform.

The application of agricultural digital technology to promote rural governance

Strengthen the construction of digital agricultural facilities, increase investment in the construction of crop growth decision-making models in the field of digital agricultural facilities, strengthen the development and promotion of intelligent irrigation systems integrated with water and fertilizer, indoor environment automatic control systems, and technologies such as seedling, planting, grafting, and harvesting robots, and gradually establish an agricultural intelligent production decision-making and control system(Belova & Sobenina, 2023). Based on this, the collection, aggregation and analysis of agricultural production data are optimized to improve total factor productivity

Laicun Network wisdom business in agriculture

Internet of Things agriculture: The self-developed intelligent farmland planting environment detection Internet of Things system is used to build a unified and convenient information interaction platform by taking digital farmland and remote management of farmland as the starting point, aiming at the characteristics of wide distribution of agricultural fields, multiple monitoring points, wiring and power supply difficulties.

Standardized planting

Standardized sowing, standardized fertilization, standardized irrigation, standardized spraying

Promoting the standardization process of crop production is conducive to reducing the amount of pesticides and fertilizers applied and improving the quality of crops.

1. Planting module management

You can set different categories of crop seed station cycle, planting time, intermediate matters that need attention, watering, fertilization, deworming times.

2. User management module

You can set up different people to manage data, view and modify data, log in to the APP, add farms, etc.

3. Data statistics module

The statistical report mainly includes the number of plants, the number of planting models, and the number of external calls.

- 4. Farm management: Users can add farms. Map to locate farms, enclosures, etc
- 5. Grid management module: The background can set permissions, and the upper level can automatically manage the lower level planting

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6. Planting log module: automatically generates daily planting logs of planting crops, and automatically configures what needs to be done, such as watering, irrigation and other operations.

7. To-do module

Every day, according to the calculation results of the big data model and planting module, as well as the weather, water, soil, fertility and other iot data, the things that the user needs to handle on the day are calculated, and the list is displayed, and the user completes one item and disappears one item

8. Expert guidance module: Experts or farmers can observe the planting methods of growers, daily work items, link the Internet of things or monitoring equipment to view the farm and crop status in real time.

Digital management of field crops

The self-developed intelligent farmland planting environment detection Internet of Things system is used to build a unified and convenient information interaction platform based on digital farmland and remote management of farmland, aiming at the characteristics of wide distribution of agricultural fields, multiple monitoring points, and difficulties in wiring and power supply.

Planting management module: you can set different categories of crop seed station cycle, planting time, intermediate matters that need attention and ecological environment detection.

Intelligent pest identification: The system uses artificial intelligence deep learning technology to establish an automatic upload, intelligent identification, and digitization, information and intelligence for the diagnosis and treatment of common crop diseases in the field of crop planting. Machine learning models need massive machine learning data and machine learning algorithms that fit the actual needs, and do a good job in the precise control of the training process. The tool can display the calculation vector graph, draw the quantitative index graph generated by the image, and display additional data to control the visual training parameters of the model. The system uses the image and video data of crop diseases, insect pests and grass damage, and establishes the artificial intelligence model database of crop diseases. Based on the model building and intelligent image recognition technology, the types of crop diseases and pests can be identified by taking photos, and the prevention plan is proposed.

1. Photo taking and video uploading module

You can take photos or upload them remotely

2. User module

Users can log in to their own page and view the information they have uploaded

3. Pest control module

Background upload some common pest and disease data and control methods and expert guidance

4. Expert communication module

Users can communicate with experts in real time, on-site guidance on pest types and control methods

5. Customer service module

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Customers can communicate with customer service in real time, on-site guidance on pest types and control methods

Al intelligent irrigation: Through the voice assistant function, the intelligent voice controls the start and end of irrigation of the device. At the same time, the control system is equipped with a manual switch button of irrigation equipment to record irrigation time after irrigation, which is convenient to grasp the irrigation amount and automatically generate irrigation records.)

digital business, (Smart Park, digital factory, digital marketing) Build channel terminals: wechat mini program, H5, Android IOS, public number, PC.

Customized services: 1. Program design -- Combining agricultural environment detection sensors with advanced algorithms, Internet technology and integrated water and fertilizer irrigation technology, and integrating big data, cloud computing, 5G information technology, artificial intelligence and other technologies, to realize the program design and project construction of large-scale projects such as the Internet of Things peanut project in Zhengyang County, Henan Province, and the construction of Suiping e-commerce into rural areas.

Full chain traceability: Comprehensive use of advanced Internet of Things, mobile Internet, two-dimensional code, RFID and other Internet of things technology means, research and development of agricultural product safety full chain traceability production management system. Establish a whole-process traceability cooperation mechanism for agricultural product quality and safety, with responsibility subjects and flow direction management as the core, and traceability codes as the carrier to link traceability management with market access, so as to ensure agricultural production safety, agricultural product quality safety, ecological environment safety and people's life safety.

Agricultural product traceability support system

The digital platform of agricultural information service has become the core platform for aggregating the information of various industrial elements and various business entities in rural areas, as well as inter-industrial data and information exchange, industrial collaboration and integration, so as to accelerate the development speed of the new rural industry &. The fourth is to give special support to the construction of agricultural digital infrastructure in backward regions, eliminate the "digital divide" in different regions, and provide digital support for the cross-regional centralized transportation and precision distribution of agricultural products, especially local agricultural products

- 1. Agricultural Information system: purchase records of seeds, pesticides and fertilizers in the agricultural materials system. After the automatic collection data is uploaded to the system, the agricultural product traceability file can be automatically generated, and cannot be easily modified to ensure the authenticity of the file.
- 2. Field manager supervision and management system: related to the field manager system management system, field manager supervision and management task distribution and other data uploaded to the system, can automatically generate agricultural product traceability files, and cannot be easily modified to ensure the authenticity of the files.

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- 3. Planting environment information system: Associated with the environmental information collection system, crop planting temperature, light, soil and other data can automatically generate agricultural product traceability files, and cannot be easily modified to ensure the authenticity of the files.
- 4. Planting management system: Associated with the planting management system, after the growers make records during the operation of the planting process and upload them to the system, they can automatically generate product traceability files, which cannot be easily modified to ensure the authenticity of the files.
- 5. Quality testing information system: According to the testing results of authoritative institutions, the establishment of industry self-made certification file entry system can upload the scanning copy of the corresponding testing certification certificate, which can achieve full traceability management and improve consumers' trust in the brand
- 6. Processing logistics management system: In the process of processing and transportation, the operational and liquidity affairs of agricultural products, the results and the key processes such as batching, compounding, feeding, packaging and finished product shipping in the production process are recorded with full data flow, and the source and process information of agricultural products can be traced afterwards.
- 7. Sales scanning code system: tracking retail supermarket store information (business license, business license), sales records (time, place, purchase information) Users can directly scan the two-dimensional code on the product to trace the product.
- 8. User scanning statistical system: Cloud traceability can track the number of scanning codes of each agricultural product, scanning code geographical distribution and other data, real-time detection of agricultural product market dynamics, to help producers quickly adjust marketing direction and policies.
- 9. Tracing source code management system: the above data of the product automatically generates the two-dimensional code information index, directly printing or printing factory batch printing, posted on the product or other packaging, using a mobile phone to scan the two-dimensional code, you can view the above whole process records of the product.

Laicun network uses digital media technology to collect data and track all aspects of product production, warehousing, distribution, logistics and transportation, market inspection, sales terminals and so on. And can collect and record the production, circulation, consumption and other links of the product information, and constitute a full life cycle management of product production, storage, sales, circulation and service.

The effective measures to realize the source can be traced, the destination can be traced, the responsibility can be investigated, and the whole process of quality and safety management and risk control can be strengthened. The purpose is to improve the quality management ability of enterprises, promote the innovation of management methods, and ensure the safety of consumption.

Planting management traceability system

Record the whole process of crop planting operation and generate traceability results. Users can display product traceability results and crop planting management process by querying the source code of crops or scanning the QR code of traceability.

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Production management traceability system

Based on the production file information of agricultural producers, the real-time record of basic information and production process information, production operation early warning, production file query and upload functions are realized.

Circulation management traceability system

On the basis of market access control, market entry declaration is implemented, wholesale market operators are managed, and the trading situation of their products is recorded, so as to realize the whole process safety management of wholesale market.

Guide the use of digital technology to achieve full coverage of county e-commerce

Guide the use of digital technology, build rural civilization and create a good cultural environment for governance. Digital technology with smart phones as the carrier has been widely popularized in rural society. How to use it as a Ψ tool to improve the comprehensive literacy of villagers, build rural civilization and create a good cultural environment for rural governance will be a new topic faced by rural social governance.

Village network to promote the development of county e-commerce

Village network with e-commerce rural chain outlets, focusing on agricultural products, by means of digital and information technology through centralized management, market-oriented operation, a system of cross-regional, cross-industry joint, to build a compact and orderly commercial complex, reduce rural commercial costs, expand rural commercial fields, make farmers become the biggest profit, so that businesses get new profit growth.

Establishment of county e-commerce service center: a comprehensive e-commerce industrial park integrating business, office, business incubation, e-commerce training, specialty display, logistics warehousing, online and offline interactive transactions.

The establishment of the integrated rural e-commerce upstream supply chain system will actively guide the trademark registration of rural e-commerce and online sales products, and promote the brand construction of agricultural products and rural industrial products, folk crafts, and rural tourism products. Establish a commercialized development system and quality management system for agricultural products, and successfully realize the value-added leap from primary agricultural products to e-commerce commodities, the quality leap from uneven to high-quality products, the safe leap from the field to the public table, and the supply and demand leap from farmers and producers to the vast number of consumers.

Rural E-commerce training system

Based on the e-commerce teachers and trainers among the members of the credible team of the project, we hired excellent entrepreneurial mentors and completed the training of tens of thousands of rural e-commerce businessmen.

Rural e-commerce service site system

Through the construction of village-level service stations, promote the development of e-commerce and information technology in rural areas, guide farmers to transform from offline market sales to online and offline sales, truly realize online transactions, reduce intermediate

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links and increase the added value of agricultural products.

Rural e-commerce logistics distribution system

In accordance with the principle of "mutual benefit, sharing and cooperation", we will promote the integration of trade, supply and marketing, transportation, postal, e-commerce, express delivery and other related resources, and promote the sharing and connection of rural logistics service networks and warehousing and distribution logistics facilities.

Characteristic rural E-commerce marketing system

Strengthening the construction of county rural e-commerce marketing system is of great significance to regional agricultural efficiency, rural development and farmers' prosperity. By improving e-commerce promotion services, creating county e-commerce characteristic brands, building demonstration villages, guiding e-commerce to create their own brands, and unified operation with agricultural products traceability, creating dynamic characteristic e-commerce county brands.

Summary

In essence, the promotion process of agricultural modernization is the process in which industrial elements such as fertilizers, pesticides, and agricultural machinery continue to penetrate, integrate, and replace traditional agricultural element resources such as land and labor force, which determines another expression of agricultural modernization - the profound connotation of agricultural industrialization. Since entering the new century, this trend of penetration, integration and substitution has accelerated significantly, especially the entry of industrial elements characterized by digital technology into the agricultural field, which has given agricultural industrialization its distinctive characteristics of The Times.

Through the field investigation of the village network, it is found that the digital economy leads the development trend of modern agriculture and clarifies the basic direction of agricultural industrialization. Next, more efforts should be made in the following areas.

- 1. Pay more attention to the application of digital technology in production. Compared with the circulation of agricultural products, the application of digitalization in production and management is insufficient (Lyubimov et al., 2021). Compared with the large-scale application of digital technology in livestock and poultry industry, the development of digitalization in planting industry is insufficient. Compared with horticultural production, digitization is not deeply involved in the production of resource-based agricultural products. Therefore, the application of digital technology in the production of resource-based agricultural products, especially in food production as a top priority, including the wide application of intelligent large-scale agricultural machinery, crops from the field to the table production process as an example, in the front-end moisture content, seedling, growth in production, disease and pest monitoring, postpartum particles to the warehouse, the application of digital technology everywhere. The stopping and reducing of crop loss is of great significance to the increase of farmers' production and income.
- 2. Pay more attention to the regional balanced development of digitalization. Objectively speaking, it is consistent with the existing dual structure of urban and rural areas in economic

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and social aspects, and the gap between the east and the west in the application of digital technology is also huge. The digitalization of the whole process of agricultural production in the eastern region can be found everywhere, but in the central and western regions, especially in some poverty-stricken areas, the application of digital technology is only manifested in individual application scenarios such as "live streaming and carrying goods". In this regard, we should increase the construction of "hard" and "soft" parts of digitalization in the central and western regions, overcome the "digital divide" between regions, and achieve balanced development(MEDENNIKOV, 2020)

- 3. Pay more attention to the leading role of enterprises in the development of the digital economy. Farmers are the main body and foundation of production, but enterprises have always played a leading role in the development and application of advanced agricultural technologies, especially digital technologies. In this regard, governments at all levels, on the premise of market allocation of resources, should increase the financial, material and human support for the research and development and application of digital technology related enterprises, so as to promote the growth of enterprises and the interests of the country, the people's interests firmly combined to form a mutually beneficial, sharing and win-win situation between farmers and enterprises.
- 1. Pay more attention to strengthening the digital literacy and skills training of farmers. To improve the digital literacy of farmers, we should start from the actual situation, in accordance with the principles of what is needed, what is lacking and what is made up, and carry out the training of new digital concepts, new technologies and new applications such as mobile phone applications, online services, and live delivery of goods for farmers, cultivate the skills and "intelligence" of new agricultural practitioners, and further improve their participation and sense of gain. Strengthen their ability and level to master the application of modern information technology, improve their human capital, so that farmers can fully enjoy the development dividend of the digital age.

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