

Research on the Cultivation of New Farmers under the Background of "Promoting Agriculture through Digital Commerce"

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Abstract: The vigorous promotion of the "Digital Commerce Revitalizing Agriculture" project has provided a good model for realizing economic value for the construction of digital rural areas. In order to accelerate the modernization of agriculture and rural areas and high-quality rural development, and improve the resource participation of rural population, it will become an important work content in the next stage of digital rural construction. Faced with new opportunities, while grasping the internal, organizational, economic, and innovative driving forces that promote the development of new farmers, we need to face the following challenges: the types of professions brought about by digitization need to be clarified, the direction of employment needs to be clarified, the scale of the platform needs to be expanded, and digital technology needs to achieve full process coverage. We need to optimize the new farmer training model through five paths: identifying with "ideological power", expanding the "cultivation chain", building a "technical framework", building a "talent pool", and building a "circular body", in order to accumulate energy for the realization of rural talent revitalization.

Keywords: New Farmers; Promoting agriculture through digital commerce; Digital empowerment; Rural revitalization.

1. Introduction

The No. 1 central document of 2022, "Opinions of the Central Committee of the Communist Party of China and the State Council on the Key Work of Comprehensively Promoting Rural Revitalization in 2022", proposed the implementation of the "digital commerce for agriculture" project, and defined the new requirements for the development of rural digital industry in the next stage. At present, the prominent characteristics of rural digital systems are increased investment, diverse models, system changes, and complex demands. Therefore, the development and transformation of rural digitalization has become an important focus for agricultural and rural farmers to connect with high-quality development and achieve innovative transformation. As an important component of the three rural issues, the development level of farmers is directly related to the "quality" and "speed" of promoting rural revitalization.

2. The Arrival of the Era of "Promoting Agriculture through Digital Commerce"

The concept of "digital commerce promoting agriculture" refers to expanding the breadth of rural e-commerce participation in digital platform market competition through the use of digital technology in the development of rural industries, and improving the infrastructure construction, mechanism construction, and personnel team construction of rural e-commerce supporting services during the promotion process. It solves the problem of the "digital divide" that previously existed in rural outward development, promotes the upgrading of rural e-commerce industry, and forms a new force for rural digital revitalization. Among them, "number" is a method, which is based on digital technology, fully utilizing technological dividends, and promoting the integration of industries with new demands for the

development of the digital economy; 'Business' is the path, which is evaluated based on the level of economic development. Unlike traditional rural economies, digital industries not only expand their scale and field, but also achieve quality improvement and growth rate, injecting new ideas into the rural economy; 'Revitalization' is the goal, that is, revitalization. The development of rural industries drives the rural economy, affects other fields of rural modernization, and jointly promotes the strategy of rural revitalization; Agriculture "is the main body, that is, agriculture, rural farmers. The key to the prosperity of agriculture is to achieve agricultural modernization. The key to the prosperity of rural areas is to integrate rural construction and development into the overall construction and development of" Digital China ". The key to the prosperity of farmers is to achieve self comprehensive development and become the active force for revitalizing development. Since April 2021, the Ministry of Agriculture and Rural Affairs and 10 other departments issued the "Guiding Opinions on Promoting the Sustainable Development of Characteristic Industries in Poverty Alleviation Areas", the "Digital Commerce for Agriculture" project has promoted the interaction between the digital development of rural markets and the large-scale development of rural e-commerce, thereby creating rural digital brands and digital industries. From the best-selling agricultural product network to the growth of professional rural delivery personnel, and then to the construction of "new farmers", the rise of "digital commerce promoting agriculture" has driven the transformation of rural population resource structure [2]. Taking this as an opportunity, in the process of promoting rural revitalization and modernization of agriculture and rural areas, digital commerce not only cannot be absent, but also must accumulate strength in the digital revitalization of rural areas.

2.1. New Opportunities for Cultivating New Farmers under the Background of "Promoting Agriculture through Digital Commerce"

In a broad sense, new farmers refer specifically to those who have a high degree of specialization in the agricultural production process with the advancement of agricultural modernization construction, and can also expand to refer to farmers with strong productivity and large scale of agricultural product management. The development of new farmers is different from traditional professional farmers because their definition considers many factors beyond the agricultural planting process, including product management, production scale, agricultural organizational system, etc. [3]. The goal of cultivating new farmers is to enhance their basic literacy and achieve modernization in agriculture and rural areas, with a specific focus on solving difficulties in agricultural production, emphasizing the direction of farmers' professionalization, specialization, and refinement, and promoting the optimization and upgrading of human resources structure. At present, the group of new farmers is gradually expanding, including young and middle-aged farmers, cooperative leaders, practical talents, and large agricultural machinery households. According to the positioning of development needs, professional farmers are divided into different types in the cultivation process, including productive, technical, operational, service-oriented, and comprehensive talents. As rural development enters the digital era, the cultivation of new farmers is not only urgent and necessary, but also will face unprecedented opportunities: firstly, the effective connection between poverty alleviation and rural revitalization calls for the cultivation of new farmers. The second is the transformation from the "demographic dividend era" to the "talent dividend era", calling for the cultivation of new farmers. Outstanding talents will play an important role in modernization construction, and professional farmers with digital literacy will become leaders in future development. Thirdly, the construction of digital rural areas calls for the cultivation of new farmers. The transformation of rural industries is closely related to the formation of a new talent pattern. The cultivation of new farmers is an important way to achieve the revitalization of rural talents. In the era of "promoting agriculture through digital commerce", the cultivation of new farmers has a clearer development direction in the process of rural revitalization and development.

2.2. The Characteristics of New Farmers under the Background of "Promoting Agriculture through Digital Commerce"

Under the background of "promoting agriculture through digital commerce", new farmers have a different concept from traditional digital agricultural production and management, expanding their income acquisition channels into digital platforms. In addition, new farmers use their knowledge reserves to bring new benefits to farmers in their fields of expertise, and their income paths are significantly expanded. Specifically, the characteristics of new farmers include: firstly, leading the entire production and operation process. New farmers mainly strengthen their own construction from aspects such as business thinking, market brand cultivation, and digital risk circulation, integrating technological advantages with agricultural production and operation, and

integrating digital market orientation into various aspects of their production process. Secondly, it meets the new requirements of the modern agricultural management organizational system. The modern agricultural management organizational system needs to absorb digital technology, and rural industries need to explore new business models for the development of digital markets, making them the key to enhancing rural competitiveness. New farmers need to constantly explore innovative ways of self-development and build capacity in order to effectively utilize digital convenience to collect information, communicate and collaborate, and build a brand. Thirdly, the role positioning is becoming increasingly diverse, characterized by balanced, coordinated, and versatile development. The excellent new farmers in rural areas and external inflow of talents jointly constitute the new farmer team. Fourthly, it can meet the comprehensive development needs of farmers. In the context of "promoting agriculture through digital commerce", new farmers not only demonstrate the basic abilities of professional farmers in basic agricultural literacy, but also fully utilize the convenience brought by digitalization in rural production and life, enhancing the application and popularization of digital rural areas in social communication, production optimization, learning progress, cultural inheritance, and many other aspects.

3. The Dynamic Structure of Cultivating New Farmers under the Background of "Promoting Agriculture through Digital Commerce"

3.1. Endogenous Motivation for Self Comprehensive Development

What drives the operation of the digital world is the behavior patterns in digital scenarios, and the widespread application of technology provides reliable methods for the development of digital commerce. Farmers, as the main rural population, should actively participate in the construction of digital rural areas and play a subjective and dynamic role. We should integrate the advantages of human initiative, innovation, and initiative into the development of "digital commerce and agriculture" to stimulate the endogenous power of rural population. Affected by the popularization of digitalization, the goal of cultivating new farmers should meet the development needs of new farmers. On the basis of meeting their basic needs, more and more new farmers are starting to reposition their professional roles to achieve self-development. Cognitive correctness, timely action, and scientific decision-making have all become key factors affecting the optimization of human resources for rural population and new farmers. Therefore, the cultivation of new farmers is a comprehensive issue, which not only solves the problem of why to participate in new cultivation, but also fundamentally solves the problem of how to stimulate rural vitality through the cultivation of new farmers.

3.2. Organizational Motivation for Reconstructing the Traditional Rural Pattern

The "Digital Commerce Revitalizing Agriculture" project and rural modernization construction jointly influence the evolution of rural pattern. With the deepening of digital

technology in rural networks, the relationship between farmers and digital agriculture, farmers and technology, and digital industry and government has been reconstructed. The reconstruction of the traditional rural pattern is a sustained test of the original organizational power for rural revitalization. New farmers need to provide a continuous source of endogenous power for this, and also stimulate the potential for the construction of a new digital rural pattern. The traditional differential pattern has been gradually replaced, and the organizational driving force for the development of new farmers has become the driving force for the formation of the new pattern. In addition, the cultivation of new farmers is related to the organizational structure adjustment of future rural digital governance, and therefore has an important impact on the promotion of the "Digital Commerce Revitalizing Agriculture" project, in addition to the needs of "Digital Commerce Revitalizing Agriculture" and rural modernization development.

3.3. The Real Power of Agricultural Industry Development

The upgrading and transformation of the agricultural industry not only requires top-down policy promotion, but also requires the participation of farmers. At present, the development is moving towards digitalization, and the digital economy has entered a new stage of innovation and high-quality development. It is gradually transitioning from the demand side to the supply side, with a focus on production, sales, services, and research and development. This requires farmers to have digital capabilities, coordinate personal development, rural development, and social development in the process of career development, form a linkage effect, and ultimately promote the smooth digital transformation of the agricultural industry.

3.4. Innovative driving force for the development of digital interconnection technology

Technological innovation witnesses the advancement of human civilization history, and as digital technology takes root in rural areas, digital connectivity provides innovative driving force for rural re layout. Technology, as a "hard currency" that promotes development, is the first to be put into practice in rural production and life, which also drives changes in production, life, and governance methods. The positioning of farmers in the process of development is constantly changing. Production is related to income, and social interaction is related to life. It is worth pondering how to master, utilize, and enjoy technology. It can be said that digital interconnection technology has provided innovative impetus for the cultivation of new farmers.

4. Practical Challenges in Cultivating New Farmers under the Background of "Promoting Agriculture through Digital Commerce"

The plan of redistributing rural resources through the strategy of "promoting agriculture through digital commerce" has a transformative impact on the fields of agriculture, rural areas, and farmers. In the actual development process, the entry of technology into rural areas and its integration into rural operations require resolving many contradictions. It is

urgent for regions to increase guidance for rural populations and prepare for the promotion of the "digital commerce promoting agriculture" project.

4.1. The types of digital career development need to be clarified

The promotion of digital rural construction and the "Digital Commerce Revitalizing Agriculture" project requires the refined output of characteristic talents, the need to benchmark development needs, and solve the problem of cultivating new farmers. There is a consensus between the two, but there is still a cognitive mismatch in integrating development, benchmarking the types of rural digital industries, and cultivating a matching new rural talent team. Mainly reflected in: insufficient supply of new farmers for benchmarking digital development, restricting industrial development; The classification of the types of professional farmer cultivation is not clear, which restricts the upgrading of the platform; Insufficient efforts have been made to cultivate professional elites in farmers, which hinders innovative development. According to the composition of the needs for cultivating new farmers, it can be foreseen that, driven by the "Digital Commerce Revitalization of Agriculture" project, more and more versatile new farmers will emerge in the future development of rural society, leading the countryside on the path of digital revitalization.3.2 Improve the evaluation criteria of zero carbon community.

4.2. The employment direction of the digital market urgently needs to be clarified

The 14th Five Year Plan and the Outline of 2023 Long Range Goals put forward a clear requirement for digital development to "create new advantages in the digital economy", with a special emphasis on achieving effective implementation of digital industrialization and industrial digitization. In this context, we should leverage the momentum of digital economic development to assist rural economic development. The digital transformation of industries in the past was mostly difficult to implement, as the demand for digital markets was difficult to connect with the development direction of rural industries. Considering the digital market as a simple superposition of government guidance and technological power, we do not believe that it can lead rural markets to participate in external market competition, hindering the formation of aggregation effects in the economy, and thus failing to feed back rural revitalization. Therefore, market construction must be closely linked to the cultivation goals, opening up barriers for rural talent's ability output, forming a high-quality cycle of cultivation and operation, finding new opportunities for new farmers, and enabling them to play a leading role in digital rural construction.

4.3. The scale of digital platforms urgently needs to be expanded

The scale of rural digital platforms has gradually gathered "hard power", solving the field problem of cultivating new farmers. Since December 2018, the Central Economic Work Conference has explained the concept of "new infrastructure construction". As of now, "new infrastructure construction" has become the foundation for the development of intelligence, and the corresponding talent team has become a new problem restricting rural development. Therefore, promoting the cultivation of new farmers must attach

importance to the introduction of technology and hardware investment in infrastructure, and use digital characteristics to build efficient cultivation platforms, which are irreplaceable. The number of existing platforms is insufficient, and great efforts need to be made to truly leverage digital advantages and cultivate their potential. This requires firmly binding the cultivation of new farmers and the construction of digital platforms, forming a circular mechanism for long-term interaction between the platform and talent resources, in order to help the digital effect win the competition of rural revitalization.

4.4. Digital technology needs to be implemented

The full process coverage of technological development is a prerequisite for digitalization to enter and integrate into rural areas. Technological innovation has played a driving role in cultivating new farmers, solving the technical problem of bottleneck for the cultivation of new farmers in the era of "digital commerce promoting agriculture". From the perspective of mechanism, digital technology runs through the entire process of rural revitalization. In order for new farmers to achieve digital transformation and master digital skills, they must integrate digital concepts and technological learning into the entire process of enhancing their own abilities. Currently, farmers have gradually realized the profound impact of digital transformation on them, and also realize that mastering digital technology will bring convenience to their production and life. However, at present, farmers have insufficient understanding of digital technology and still remain at the level of improving the convenience of production and life, failing to form a correct understanding that digitization is transforming the rural landscape and social relationships; In addition, the lack of digital popularization among farmers and varying levels of acceptance among different age groups have to some extent slowed down the pace of digital rural construction. In the future, the development of new farmers must seize opportunities in the full process of digital technology popularization, gradually become the master of rural digital technology development, and find a foothold for new farmers in the entire process of digital technology innovation.

4.5. The digital cultivation mechanism needs to be optimized and innovated

The exploration of talent reserves, structural planning, and coordination mechanism of advantages and disadvantages are all fundamental contents of the rural talent development strategy, which solves the problem of how to cultivate new farmers. Firstly, the cultivation models used are mostly one-time cultivation models such as "point-to-point" and "single project", which essentially converge to project training rather than positioning long-term cultivation mechanism practices; Secondly, the cultivation did not differentiate between talent types and adopted a "one pot" approach, only pursuing teaching completion without paying attention to the applicability and utilization of the cultivation content; Finally, the digital brand created has not formed a mass construction mechanism, and the promotion effect of successful cases has not formed a virtuous cycle. Therefore, activating endogenous driving forces, accelerating the optimization of cultivation mechanisms, improving supporting systems, and seizing the talent dividends of the times have become key tasks that urgently need to be promoted.

5. The Optimization Path for Cultivating New Farmers under the Background of "Promoting Agriculture through Digital Commerce"

5.1. From passive to active, enhance the "ideological power" of identity recognition

In terms of ideology, enhance the awareness of identity transformation from "worker" to "producer". Under the traditional rural pattern, farmers have formed a complete and relatively passive informal identity framework, which plays a leading role in influencing the effectiveness of traditional rural governance. In modern society, farmers, as the main body of development, are recognized at the institutional level, and their thinking and actions have shifted from passive to active. They are playing an increasingly important role in rural construction, putting the sense of ownership at the forefront, actively choosing, participating, and innovating. To adapt to changes, seize opportunities, and have a correct understanding of the "new" of new farmers. New farmers should seize the "new opportunities" brought by digital dividends, break through themselves, and integrate the spirit of "new farmers" throughout the entire process of rural revitalization, driving the active gathering of "ideological power" among rural population, and moving towards high-quality development.

5.2. Expanding the "cultivation chain" of cooperation from singularity to diversity

The cultivation of new farmers should integrate more diverse cultivation forces, and improve the mechanism of social participation in the cultivation of new farmers under the coordinated efforts of the government, farmers, market, enterprises, and society. Firstly, the change is reflected in the increase in the number of subjects. Driven by the integration of government, schools, enterprises, and rural industry and education, we will integrate the advantages of all parties and equip new farmers with abundant resources. Secondly, the changes are reflected in the expansion of the basic scale. The scale design of cultivation should be more inclined, and the equipment supply, faculty allocation, and teaching plan setting should fully reflect the requirements of rural digital development, emphasizing the improvement of quality. Finally, it is reflected in the extension of teaching content [12]. Breaking through the constraints of traditional vocational farmer education major design schemes, in the top-level teaching design stage, utilizing the diverse resource advantages of digital multilateral cooperation, cross launching new product courses that are digital in line with the times, meet market demand, and update and iterate quickly. The urban-rural demand side and the professional talent cultivation side should adapt to each other, and improve the cultivation chain of multilateral cooperation for urban-rural talent revitalization. At the same time, the cycle of urban-rural information flow can provide new farmers with a positioning, resolve the binary contradiction that previously existed between urban and rural areas, and prepare for the cultivation chain to play its role.

5.3. Building a 'technical framework' that runs through the entire process from rigidity to flexibility

Accelerate the construction of digital infrastructure and provide technological possibilities for cultivation. The foundation of cultivating new farmers is digitalization, and the promotion effect of "new infrastructure" is the standard for testing the popularization and utilization rate of digitalization. The development of the Internet, the Internet of Things, and artificial intelligence in rural areas is no longer just slogans, but is already on the road. Next, in order to enable technology to take root in rural areas, we need to closely monitor the coverage, utilization, maintenance, and update rates of digital infrastructure construction, and promote the construction with the standard of no leakage of any land or household. In addition, it is necessary to fully consider the needs of farmers and match digital technology infrastructure and service systems that are highly applicable, easy to operate, and effective, laying the foundation for more people to become new farmers. In the process of developing the digital economy, technological dividends have played an unprecedented role. In the future, it is necessary to quickly capture effective information from the cultivation of new farmers and promote practice based on development needs. Farmers have the driving force for development and accumulated the ability to develop, so that the role of technology can shift from rigid supply to flexibility, thereby achieving the integrity of digital technology in the overall architecture.

5.4. From professionalism to innovation, building a "talent pool" of resource integration

Connect the cultivation of new farmers with high-quality rural development, and jointly build a high-quality talent support structure. Professionalism and innovation are necessary factors for the revitalization of rural human resources. On the one hand, education should be used to promote the development of human resources. Talent education plays a crucial role in the goal of common prosperity, including compulsory education, vocational education, skill training, etc. The cultivation of new farmers should be combined with education, and the results of education should meet the comprehensive development and employment needs of the rural population. On the other hand, technology should be used to promote innovation in human resources. Technology investment is closely related to the cultivation of new rural talent teams. While providing positive technological support, it has achieved the goal of talent teams nurturing skilled talents, becoming a breakthrough point for rural economic development, technology assistance to agriculture, and talent development. In the "Digital Business Revitalization of Agriculture" project, the digital transformation of new farmers has become a "compulsory course". To deeply explore the line and achieve common prosperity, it is necessary to practice the logical concept of "for people" and "relying on people". People are the foundation of development. Therefore, whether it is digital talent cultivation or new farmer cultivation, greater goals should be established. Only by developing and realizing oneself can we gather forces to achieve common prosperity, Only by continuously injecting fresh water into the "talent pool" of rural areas, can we promote rebirth with fresh water

and win the realization of rural development and common prosperity.

5.5. From collaboration to collaboration, building a systematic and comprehensive 'loop body'

Grasp the top-level design of the system, develop the rural digital talent strategy under the background of "digital commerce promoting agriculture", and improve the "circular body" for cultivating new farmers. The promotion and implementation of rural digital talent strategy is related to rural digital transformation. The rural digital ecosystem is not only about increasing investment in technology, but also promoting a virtuous interactive cycle of rural digital technology, digital talents, and rural digital industry. Overall, promoting investment in digital rural technology and infrastructure construction, strengthening the digital integration of agriculture and rural industries, improving the process flow of digital rural industries, and intelligent iteration of rural digital industries are all components of this "circular body". Organizational cycle kinetic energy is a combination of dynamic learning mode and life production mode. Organizational cycle is based on big data conclusions, gradually adjusting learning plans as needed, updating the knowledge structure of new farmers, and promoting the modernization of new farmers' abilities.

6. Complimentary Close

Because digitization releases multiple functional effects by enhancing the overall value of rural areas and building a digital ecosystem of internal and external mechanisms in rural areas. Therefore, in order to achieve modernization in agriculture and rural areas in the future, it is necessary to pay real-time attention to digital rural construction and focus on the cultivation and cultivation of new farmers. It can not only meet the needs of the self comprehensive development of rural population, but also promote the realization of agricultural and rural modernization construction. Overall, in the context of "promoting agriculture through digital commerce", the development of digital rural areas will encourage more people to pay attention to the complex, systematic, and dynamic new issues of cultivating new farmers. Therefore, it is recommended that while vigorously promoting the construction of digital rural areas, the government should always pay attention to the changes in rural population demand, find a balance point in the healthy development of new farmers, promote the comprehensive development of farmers, and form a new situation of comprehensive development of agriculture and rural areas.

References

- [1] Shen Feiwei, Ye Wenwen. Digital Rural Construction: Strategic Choices for Achieving High Quality Rural Revitalization [J]. Journal of Nanjing Agricultural University (Social Science Edition), 2021,21 (5): 41-53.
- [2] Guo Junhua, Wang Yang. Research on the Optimization and Adjustment of Rural Industrial Policies in the Context of Rural Revitalization [J]. Economic Issues, 2022 (1): 85-92.
- [3] Lv Chengping, Xie Hailong. The Rise of Professional Farmers: Updates in Values and Market Methods [J]. Guizhou Social Sciences, 2019 (10): 79-84.
- [4] Wang Pei, Kang Hongqin. Policy Changes in the Cultivation of New Vocational Farmers from the Perspective of Life Course

- Theory [J]. *Modern Distance Education Research*, 2021,33 (4): 74-81.
- [5] Yan Tingwu, Zhang Lu, Zhang Junbiao. Exploration and Reflection on the Cultivation of New Vocational Farmers: Based on a Survey in Dongxihu District, Wuhan City [J]. *Journal of Huazhong Agricultural University (Social Science Edition)*, 2017 (3): 35-41+150.
- [6] Zhang Xixi, Zheng Shan. New characteristics and spatial effects of inter provincial labor mobility during the post demographic dividend period [J]. *Social Science Front*, 2021 (7): 63-73+282.
- [7] Chen Yiming. Mechanism Innovation for the Integration and Development of Digital Economy and Rural Industries [J]. *Agricultural Economic Issues*, 2021 (12): 81-91.
- [8] Jiang Ruichen, Yan Ping. The Generation and Development Path of Rural Digital Popular Finance [J]. *Jiangnan Forum*, 2022 (2): 50-55.
- [9] Wang Puqiu. The Fundamental Orientation, Core Issues, and Basic Paths of Modernization of Rural Governance in the New Era [J]. *Journal of Huazhong Normal University (Humanities and Social Sciences Edition)*, 2022,61 (1): 18-24.
- [10] Yang Rongjun. On the Modern Transformation of Farmers' Self organization Power Source and Its Structural Optimization for Rural Governance [J]. *Academic Research*, 2014 (5): 33-44.
- [11] Shen Feiwei. The endogenous development model of digital countryside: practical logic, operational mechanism, and optimization strategy [J]. *Electronic Government*, 2021 (10): 57-67.
- [12] Tang Zhibin, Wang Chi ming. The Basic Framework and Realistic Path of Integrating Vocational Education into Rural Industries [J]. *Education Development Research*, 2021,41 (19): 61-69.
- [13] Tao Jianjie, Yin Ziyi. Selection of digital channels for rural residents in the context of digital rural areas [J]. *Journal of South China Agricultural University (Social Science Edition)*, 2022, 21:33-42.
- [14] Zhao Deqi, Ding Yiwen. Mechanism, Path, and Countermeasures of Digitalization to Promote Rural Revitalization [J]. *Journal of Hunan University of Science and Technology (Social Science Edition)*, 2021,24 (6): 112-120.