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Research on the Strategic Path of Veterinary Medicine Serving Rural Revitalization in Agriculture-Related Universities

Jiedan Liao*

School of Life Science and Engineering, Foshan University, Foshan 528225, Guangdong Province, China

***Corresponding author:** Jiedan Liao, liaojiedan@163.com

Abstract: Local agriculture-related universities must have certain regional advantages, advantages of agricultural characteristics, human resources, and science and technology in the process of implementing the rural revitalization strategy. Using literature research and investigation methods, combined with the experience of colleges and universities, the veterinary discipline of rural science and technology correspondent and technology yard, this study discusses our veterinary discipline in education teaching practice and talent training mode innovation, improving the quality of talent training and study on the strategic path of united front service for rural revitalization.

Keywords: Veterinary medicine; Rural revitalization; Path research

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1. Introduction

Serving rural revitalization is an important function of agriculture-related colleges and universities, and it is also one of the essential features that distinguish the patriotic united front of agriculture-related colleges and universities from other patriotic united fronts [1,2]. The combination of colleges and universities and rural areas is a scientific and technological innovation. How to carry out local agriculture-related colleges and universities, use information technology to improve the quality of talent training, enhance the talent training mode of agriculture-related disciplines, and serve rural revitalization through scientific and technological innovation is an important issue in the united front of colleges and universities.

2. Research background

In 2017, the General Secretary formally put forward the rural vitalization strategy in his report to the 19th CPC National Congress. In July 2018, the CPC Central Committee and The State Council issued the Strategic Plan for Rural Vitalization (2018–2022), marking the full implementation of rural

vitalization [3]. On September 5, 2019, the General Secretary wrote back to the secretaries, presidents of agriculture-related universities, and experts, raising ardent expectations for the development of higher agriculture and forestry education in the new era [4]. Yan Wu, director of the Higher Education Department of the Ministry of Education, said that the construction of the new agricultural science technology step by step, singing the "trilogy." In 2019, more than 140 Party secretaries, principals, and well-known experts from more than 50 agriculture-related universities issued the seminar of Anji Consensus——Declaration on the Construction of China's New Agricultural Science, and the construction of new agricultural science sounded the "start whistle" [5]. In September of the same year, the Beidacang Action launched the "eight new actions" to deepen the reform of higher agriculture and forestry education from the middle level [6,7] and set off new changes in higher agriculture and forestry education [8].

In December of the same year, the Beijing Guide pointed out "strengthening ideological and political education, promoting classified reform, launching new agricultural research and reform practice projects so that new agricultural science will take root in universities across the country" [9]. In 2021, the National New Agricultural Science Construction Promotion Association will combine ideological and political work with farming and reading education. In 2022, the Guide proposed that the construction of new agricultural science is to finally train modern farmers' talents who serve the new agriculture and the construction of new agricultural science. Since the action Plan issued by the Ministry of Education in 2018, institutions of higher learning have given full play to their advantages in scientific and technological innovation to provide technical support, achievement supply, and talent support for the development of rural industries and industrial revitalization. The construction of new agricultural science from the top-level design to gradual landing, has achieved phased achievements.

2.1. Technology innovation changes the face of the countryside

The gene editor independently developed by China Agricultural University provides core key technical support for the revitalization of China's seed industry. Jilin University's saline-alkali resistant rice "Jida 6," "Jida 7," and "Jida 158," generated 1.2 billion yuan for farmers. Huazhong Agricultural University has promoted a total of 150 million mu of high-quality rapeseed in the main rapeseed-producing areas of Hubei province in the Yangtze River Basin, and the feed alone has increased farmers' income by 450 million yuan. Northeast Agricultural University has promoted a total area of 30 million mu, creating economic benefits of more than 2 billion yuan. The new carrot from Xiamen University was successfully planted, reducing the planting cost to 73% lower than the price of imported seeds. The scientific research team of Guangxi University guided 453 large-scale cattle and sheep enterprises in the region to pass the ecological breeding certification and guided and helped 54 poverty-stricken counties in the region to carry out the improvement of cattle breeds [10]. The scientific research team of Tianjin University has realized the efficient synthesis of biological pesticides in the microbial chassis and solved the problems of limited sources of pesticide raw materials and excessive consumption of resources.

2.2. Writing the paper on the earth

Poverty alleviation and rural revitalization have become a big classroom for moral education. Northwest A & F University has sent more than 2,000 teachers and students to carry out a rural survey to form a survey report on rural types in northwest China. The "Youth Practice of Rural Revitalization" written by students has been published. Tongji University innovated the circular agriculture model and built a base for organic waste digestion and production of biological natural gas, which was promoted to the whole country as a

sample of the formulation of the national "14th Five-Year" renewable energy policy formulation. Through the implementation of the "Digital Tashan" project, the University of TC has realized the standardization and visualization of aquaculture. Zhongnan University of Economics and Law has established a Party organization of "school-village joint construction," giving full play to the role of a joint Party organization, creating a model of "one village, one product," and exploring a new development model of "planting and breeding + acquisition + direct selling."

2.3. Science and technology courtyard has achieved initial results

The General Secretary's important instructions on graduate education provide a fundamental guideline for the reform and development of graduate education in the new era. In 2009, China Agricultural University established a small science and technology institute to realize the organic integration of moral education and targeted poverty alleviation in the front line of agricultural production. By 2020, China Agricultural University, together with other agriculture-related colleges, local governments, and large enterprises, has established 127 science and technology courtyards in 23 provinces and municipalities across the country, forming a national network platform for science and technology courtyards, covering different planting systems, scales, and organizational methods in different ecological zones in China [11].

3. Research on the strategic path of serving rural revitalization in agriculture-related universities

3.1. Basic ideas

Although the national rural revitalization strategy and the new agricultural science construction layout have been gradually implemented in recent years, there are also certain problems in some universities. For example, the incentive mechanism of colleges and universities for science and technology commissioners and members of the United Front to participate in serving rural revitalization is insufficient, and the assessment system and management system for science and technology commissioners need to be improved. In terms of rural revitalization strategy services, members of the United Front mainly provide scientific research and ideological projects for rural revitalization, and lack activities to actively participate in the implementation of rural revitalization. In addition, colleges and universities do not have enough publicity and knowledge popularization of "agriculture, rural areas, and farmers" policies, and teachers lack oriented education on the theory and experience of rural revitalization. There is inadequate innovative content and form for the activities, community activities, and expert lectures, and the limited funds make it difficult for the practical activities to enhance students' feelings about "agriculture, rural areas, and farmers" [12]. Full-time professional master's degree education is more academic, less participation in rural revitalization activities, and uneven quality of universities and enterprises, lack of innovation consciousness, innovation ability, and independent ability [12].

Therefore, the academy should first build a high-end think tank for rural revitalization strategy research and strengthen the theory and cultural innovation of rural revitalization. Platforms such as the Rural Revitalization Strategy Forum were set up to exchange research results and practical experience. The veterinary discipline in local universities provides research support for policy formulation through in-depth policy research and theoretical innovation. Teachers and students should carry out the rural investigation and study, focus on rural development hot issues, strengthen urban and rural integration development, modern rural industry system, production system, management system construction, agricultural ecological construction, farming civilization

and rural culture, rural grassroots structure and social governance, rural basic public services, social welfare, and village people's livelihood theory and policy research, provide theoretical support for rural revitalization strategy implementation and decision-making consultation [2,13].

Secondly, we can try to innovate the scientific and technological service model to foster new industrial drivers for rural revitalization. Through the new practice of agricultural science and technology promotion of "science and technology institute," the scientific and technological achievements and talent advantages of universities are transformed into a new industrial driving force to promote agricultural and rural development. Through the connection between the rural science and technology correspondent project and poor villages, teachers, party members, and high-level people outside the Party set up "doctor service groups" to participate in the implementation of rural revitalization, strengthen practical education, deepen services for poverty alleviation, and focus on targeted poverty alleviation. By turning rural and corporate workshops into university practical teaching classrooms, turning highly skilled farmers and corporate technicians into university practical teaching teachers, and exploring various poverty alleviation models such as "industrial technology + demonstration and promotion + talents + farmers," bringing experts to farmers, technology to farmland, and products to the market, enhancing the "blood" function of poverty-stricken areas [14].

In addition, the ideological and political reform of the master training mode in agriculture is necessary. In the process of serving rural revitalization, we should give full play to the important role of innovative practice, production practice, and poverty alleviation practice in the training of high-quality talents; promote the organic combination of scientific and technological innovation, talent training, and social service through the activities of ideological and technological classroom, curriculum, and second classroom. Centering on the ideological and political construction of professional courses, we will promote the reform of the training mode of master talents in agriculture, guide students to take root in rural areas, and write their papers on the motherland.

3.2. Research on the strategic path of a united front serving rural revitalization

3.2.1. Building an excellent talent resource pool of the united front in colleges and universities

Supporting the talent pool and formulating corresponding management systems, giving full play to the talent advantages of the united front members of colleges and universities, and orderly mobilizing the united front members of colleges and universities are imperative to actively and efficiently participate in the construction of rural revitalization. We should build the united front team in the new era, strengthen political guidance ideologically, and consolidate the common ideological and political foundation of the united front; as well as strengthen the ideological construction of the united front team in colleges and universities, and construct and perfect the knowledge and theory system of the united front theory [15].

3.2.2. Reform and practice of talent training mode with "Science and Technology Institute" as the carrier

The quality of talent training in science and technology institutes will be an important index for the quality evaluation of agricultural degree authorization points. The master of agriculture in veterinary medicine draws lessons from the reform of graduate training mode in national agriculture-related universities and explores the talent training mode of master of science and technology in agriculture with non-party personage and scientific research institutions. The discipline establishes a long-term cooperation mechanism with scientific research units, breeding bases, and enterprises, and sends the graduate students of professional science and technology to the base through the construction of "science and technology courtyard" and practice base. The discipline sends agricultural degree graduate students to the front line of agricultural production, on the basis of theoretical knowledge learning, studies and solves the practical problems in the practice of agricultural and

rural production, and integrates the training mode of talent training, scientific and technological innovation, and social service. New agricultural science construction creates a "three path," actively explores practice integration development, diversified development, coordinated development of new road, speeds up the cultivation of innovative, compound applied, practical skilled agriculture and forestry talents, high standard construction of agriculture and forestry "gold" and "highland," cultivate high-level applied talents with a love of agriculture [16].

3.2.3. Establishing a practice base and an education platform by relying on the science and technology commissioners of Guangdong Province

The college Party committee and teachers' Party branch formulate the selection standards for science and technology commissioners and improve the relevant incentive mechanism, enhancing the quality level and participation enthusiasm of science and technology commissioners [12]. In the post-promotion, professional title evaluation, performance allocation, and other aspects reflect the work achievement evaluation and reward of rural science and technology commissioners. Relying on outstanding provincial rural science and technology correspondent in Maoming electric town village established "industry + cooperative + base + FuPinHu + market" five integration of poverty crucial mode of science and technology, further promoted graduate and undergraduate agricultural quality talents into the rural revitalization of the line, continued to carry out research exchanges and social service activities, integrated the power of knowledge, the energy of science and technology, and the vitality of youth into rural revitalization. We will work with local governments to explore demonstration projects to cultivate talents for rural revitalization and strengthen training for new-type professional farmers, talents in agricultural production and operation, and public services, so as to provide all-round and diversified talent and intellectual support for rural revitalization.

In addition, relying on "science and technology commissioners," "doctor service groups" will be established, and practice bases and education platforms such as education and training, labor education, innovation and entrepreneurship, and volunteer service will be established in supporting areas. Teachers and students use scientific research results in rural areas, so that universities and villages can closely integrate and grow together.

3.2.4. Ideological and political promotion of the feelings of agriculture, rural areas, and farmers into the rural revitalization strategy

Curriculum education, management education, organization education, party building education, and other multi-dimensional rural revitalization and rural education are the core issues. Under the background of "new Agricultural Science," the reform of the talent training mode of graduate students of veterinary medicine focuses on the reform of faculty team construction, curriculum construction, and school-enterprise cooperation.

(1) Construction of the teaching staff

We will strengthen the construction of "double-qualified" teachers with enterprise backgrounds, and pay attention to the training of innovation and entrepreneurship among young teachers; adhere to the practice of applied teacher training ideas, teacher selection to the enterprise temporary posts practical skill training, and encourage teachers to serve as enterprise technical consultants and other measures, to cultivate "double qualified" teachers with enterprise backgrounds. The improvement of teachers' information teaching skills and ideological and political education ability is mainly to improve the consciousness of ideological and political education tasks and the professionalism of ideological and political education. We aim to improve the ideological consciousness, political standing, and information teaching means of professional teachers in

each link of talent training, and to build the development path of "organic integration of knowledge system education and ideological and political education."

Teacher teams need to strengthen their own teacher ethics construction, improve professional quality, and enhance their teaching level and the ability to use modern teaching tools. Teachers are encouraged to serve at the grass-roots level and take temporary posts in enterprises, explore practical problems in production, and lay production experience for PBL (problem-based learning) teaching. It is also necessary to strengthen the construction of an ideological and political teaching team of backbone teachers of professional courses, dig into the ideological and political elements of the curriculum, and maximize the group strength and wisdom to promote the reform and innovation of ideological and political teaching of the curriculum.

(2) Curriculum construction

Top-level design and department teachers coordinate to promote the pace of ideological and political construction of professional courses. The University Party Committee-College Party Committee-Teachers' Grassroots Party Branch-Party members jointly promote the ideological and political construction of the curriculum. The Party Committee of the college creates an environment of ideological and political education in the second classroom, and sets up an excellent model demonstration college of "Sanquan education"; giving full play to the vanguard and exemplary role of teachers and party members in the ideological and political construction of the course, and fully mobilizing the wisdom of reform and enthusiasm for exploration from the height of "educating people for the Party and the country." The construction of the ideological and political curriculum system of "new Agricultural Science" is achieved by integrating "knowledge exploration, ability cultivation, personality cultivation, value shaping," and other aspects into the talent training program. The syllabus highlights ideological and political education, constructs the teaching content of the course, and reshapes the teaching objectives of the course [17]. Centering on the "education goal, talent training system, curriculum content, teaching resources, practice link, teacher team," it is imperative to have innovative curriculum education and teaching concept innovation, curriculum mode innovation, and educational means innovation. The innovation of teaching ideas and educational methods is reflected in various links such as case design, practical teaching, and resource construction. The open and shared online course resources are used to expand the spatial and temporal direction of course ideological and political teaching design. The first class and the second class continuously expand the space of ideological and political courses, improve the ideological and political adaptability of the course, expand the coverage of ideological and political courses, innovate the carrier of ideological and political courses, and expand the ideological and political education ways of practical activities such as extracurricular science and technology competitions.

(3) Off-campus industry-university-enterprise cooperation

The construction of an off-campus practice base, as the breakthrough point of practice teaching reform, attaches importance to the integration of production and education through "integration of production and education," and creates a long-term mechanism of cooperative education of off-campus practice teaching base through concept innovation, system innovation, and mode innovation. The college has signed an agreement with off-campus industry-university, university, and enterprise cooperation to formulate teaching objectives and training programs for off-campus practical education, design and develop off-campus practice projects that can help consolidate students' professional knowledge and cultivate students' innovative spirit, and jointly build a practical teaching system for innovation and entrepreneurship [18]. We need to jointly build the curriculum system and teaching content of off-campus practical education [19]. The main contents of the

practice teaching base include three aspects: practical research on university-enterprise cooperation; teaching graduate teaching; and providing research and production practice. The college signed the enterprise head teacher with the enterprise, supplemented the leading enterprises as the cooperative practice education base, and built the practical education base for student party members. Enterprise practice mentors should give guidance and cultivation from the aspects of ideological guidance, professional ethics, and working skills. School-enterprise cooperation drives the ideological and political understanding and consciousness of non-party members.

In addition, teachers are "sent to the countryside," through the exchange and observation of the touching stories of China's rural revitalization, the ranks of rural revitalization can be promoted. Through the reform and development of curriculum education, management education, and organization education, agricultural colleges and universities should carry out education and teaching practice and talent training mode innovation around the development of rural industry, talent revitalization, and ecological civilization construction. The new generation of information technology should be used to improve the efficiency of talent training, enhance the talent training mode of agriculture-related disciplines and the ideological and political education mode of courses, and guide students to invest and adapt to the development needs of new agriculture, countryside, farmers, and ecology [20].

Through the preliminary exploration and practice this year, the veterinary science and technology correspondent of the "five-in-one" poverty alleviation model in Lou Village, Danchang Town, Dianbai District, Maoming City, has good radiation effect, as reported by the media; the veterinary discipline and the small science and technology hospital promote the close integration of agricultural master education and production practice, social needs, agriculture and rural development, and close contact with the "agriculture rural areas" targeted poverty alleviation and rural revitalization. The veterinary discipline has formed the ideological and political education mode of "six-in-one" courses, and built an alliance of young doctoral groups and universities to serve rural revitalization, so that the advantages of science and technology and ideological and political courses will become the "driving force" to promote rural revitalization.

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