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Cultivating New Professional Farmers: Experience of the United States and Implications for China

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Abstract This paper firstly analyzed legislation of the United States for guaranteeing qualified successors of agriculture, such as Morrill Land Grant College Act. Then, it elaborated policies of the United States for supporting beginning farmers and ranchers. On the basis of analysis, it came up with recommendations for cultivating new professional farmers, including adhering to leading role of government, speeding up legislation of cultivating new professional farmers, combining cultivation and attraction, and strengthening fundamental position of education and training in cultivation of new professional farmers.

Key words New professional farmers, Cultivation, The United States, Experience

1 Introduction

With acceleration of industrialization and urbanization, numerous rural young and middle aged labors flow to cities, leading to increasing shortage of talents for agricultural production. Thus, it is urgent to cultivate and stabilize modern agricultural production and operation personnel, and alleviate the situation of shortage of agricultural labor. At this background, cultivating new professional farmers becomes an effective approach for changing their status back to original nature, the direction of optimum development of future agricultural production, and also essential requirement for ensuring national grain security and effective supply of major agricultural products. In 2012, No. 1 documents of the central government firstly introduced cultivating new professional farmers. In 2013, working report of government pointed out taking effective measures to stabilize agricultural production and operation team, and actively cultivating new farmers. These indicate that cultivating new professional farmers becomes a focus and hot spot with wide concern^[1].

In China, comprehensive, systematic and in-depth research on cultivation of new professional farmers started from 2011. Major scholars include Zhu Qizhen, Wang Shoucong, Zhao Banghong, and Wu Hongyao. Researches are mainly concentrated on connotation, problems, and measures for cultivation of new professional farmers. However, there are no in-depth researches about support policies and measures of a country for cultivation of new professional farmers. Especially, the analysis on new policies of foreign countries supporting cultivation of new professional farmers is still relatively weak. In-depth research and learning of experience of foreign countries in cultivating new professional farmers will enrich domestic theories and will be significant in guiding cultivation of

new professional farmers in China.

2 Connotation and current situation of cultivation of new professional farmers

The new professional farmer is a phased and developing concept compared with traditional farmers and part-time farmers^[2]. American anthropologist Whorf stated that traditional farmers mainly pursue for making a living, their status is different from urban residents, while professional farmers fully enter the market and take agriculture as industry and maximize returns using every possible means^[3]. From domestic rural basic management system and current situation of agricultural production, operation and development, new professional farmers are modern agricultural workers taking agriculture as profession, having higher quality and certain professional skills, and income mainly coming from agricultural production and operation. They mainly include production and management type (large farming and breeding households, family farmers, cooperative leaders), professional skill type (agricultural workers and employees), social service type (rural information assistants, rural brokers, trans-regional agricultural machinery operators, plant protectors, and epidemic prevention workers)^[4]. At present, cultivation of new professional farmers in China still remains at the stage of theoretical exploration and pilot practice. In August, 2012, the Ministry of Agriculture launched pilot project for cultivation of new professional farmers in 100 counties of 31 provinces (cities and regions) of the whole country. The pilot project plans to cultivate 100000 new professional farmers in three years. More importantly, the Ministry of Agriculture will explore new professional farmer cultivation system through establishing education and training, certification management and policy support. Since the launch of pilot project, all pilot counties have made active exploration and practice in organization and leadership, fund input, certification management, and support policies. Learning helpful experience of foreign countries will be greatly beneficial for cultivation of new professional farmers in China.

3 Legislation: successful experience of the United States in farmer vocational education

The United States always values legislation of farmer vocational education and has formulated a series of laws, regulations and preferential policies about farmer vocational education. The agricultural education legislation of the United States can be traced back to *Morrill Land Grant College Act* in 1862. It granted each state 30000 acres (12140 hectares) for each of its congressional seats. Funds from the sale of the land were used by some states to establish new schools; other states turned the money over to existing state or private colleges to create schools of agriculture and mechanic arts^[5]. In 1890, Congress of the United States passed the second *Morrill Act*, authorizing additional direct appropriations for the land grant colleges of agriculture, to ensure sufficient operation funds. These two acts are the most important laws in agriculture and farmer education fields of the United States. They established appropriation system of government for agricultural colleges, realized legalization and institutionalization of agriculture and farmer education, and ensured long-term stable development of agricultural education. To conduct pertinent researches on agricultural production in different regions, the United States established the first Agricultural Experiment Station in Connecticut State in 1875. Later, other states followed and established 12 experiment stations. However, except Connecticut State, experiment stations of other states were established in agricultural colleges. These stations failed to carry out agricultural experiments due to lack of funds, and then they sought support from federal government. The congress issued Hatch Act in 1887. It provided 15,000 USD per annum to establish agricultural experiment stations in connection with the land-grant colleges and universities, to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigations and experiments respecting the principles and application of agricultural science^[6]. The establishment of agricultural experiment stations makes closer the relationship between agricultural colleges teaching and agricultural scientific research and lays solid foundation for promoting agriculture through science and education.

However, these are not enough and it is difficult to extend new outstanding technologies in vast farmers and it is necessary to establish adult education training and agricultural extension service system. Then, in the beginning of the 20th century, various farmer short-term training classes and correspondence education developed vigorously. In 1914, the congress of the United States passed the *Smith-Lever Act*. With subsidy of the federal government, Department of Agriculture, in cooperation with land grant colleges, established many agricultural extension stations for organization, implementation and management of agricultural technology extension^[7]. The promulgation of this act determined leading role of land grant colleges in agricultural technology extension. Through the above acts, the United States gradually established cooperative extension system integrating teaching, scientific re-

search and extension, making great contribution to rapid development of agriculture.

In 1997, the congress passed *Smith-Hughes Act*, stating that public schools must establish agricultural vocational education. In 1929, the congress passed *George-Reed Act*, stipulating that federal government appropriated funds for agricultural education and home education in land grant colleges. In 1934, the United States promulgated *George-Ellzey Act*, stating that the federal government appropriated 14 million USD to land grant colleges in all states. In 1935, the congress passed *Bankhead-Jones Act*, specifying that one million USD will be increased annually for agricultural research^[8]. In 1963, the congress passed *Vocational Education Act*, to encourage rural schools to hold vocational education centers for training technical personnel for rural workers and raising capability of non-agricultural production personnel^[9].

All of these acts are interconnected and greatly strengthen intervention of government against farmer vocational education. With legal safeguarding and abundant fund support, the farmer vocational education of the United States has cultivated a number of professional farmers, promoted progress of agricultural science and technology, made great contribution to agricultural economic development, made the United States become the largest agricultural product exporter from backward agricultural country, and laid solid material foundation for economic liftoff of the United States.

4 Policies and measures of *Agricultural Act 2013* for supporting cultivation of beginning farmers and ranchers

In the early of the 1930s, the United States encountered great depression and many farmers went bankrupt. To rescue agriculture in crisis, American government issued and implemented *Agricultural Adjustment Act* in 1933. This is the first agricultural legislation and also the beginning of intervention of government against agriculture^[10]. Later, to adapt to economic development and social environment, the congress revised the *Agricultural Act* every 5 years. In 1933–2008, American government issued and implemented 15 agricultural acts in total. *The Food, Conservation, and Energy Act of 2008* should be expired on September 30, 2012, but due to dispute of two parties about food coupons, Senate and House of Representatives decided to extend the *Agricultural Act of 2008* to September 30, 2013. On June 10, 2013, the Senate passed Agriculture Reform, *Food and Jobs Act of 2013* for 2014–2018. On July 11, 2013, the House of Representatives passed *Federal Agriculture Reform and Risk Management Act of 2013*. In the end of October, 2013, Senate and House of Representatives made compromise and finally submitted the final act to the president. According to definition introduced by the Department of Agriculture, a beginning farmer or rancher means an individual or entity who has not operated a farm or ranch, or who has operated a farm or ranch for not more than 5 years and will materially and substantially participate in the operation of the farm or ranch^[11]. Close attention to cultivation of beginning farmers and ranchers of American government is

to cultivate new generation of agricultural production and operation for dealing with aging of farmers and guaranteeing leading of agriculture in the world^[12]. *The Agricultural Act of 2013* introduced a series of measures for strengthening cultivation of beginning farmers and ranchers.

4.1 Strengthening farmer education and training and improving occupation ability of beginning farmers and ranchers

According to statistics, in the United States, 35 – 54 years old farmers account for 53%, farmers younger than 35 account for 14%, and the average age of farmers is higher than 60 and there are few young and middle aged farmers. Thus, it fails to satisfy demands of agricultural development. *Agricultural Act of 2013* came up with many measures for improving production skills, operation and management ability and market risk control ability of beginning farmers and ranchers. (i) Government provides funds for subsidizing following fields: improving rural labor transfer, ensuring rural labor stability, and carrying out agricultural labor training till 2018, and also providing agricultural technology extension and training guidance services for farmers and ranchers in low social status. (ii) Increasing subsidy for agriculture-related disciplines of land grant colleges, to raise education level of beginning farmers. At the same time, it encourages ranchers to provide part-time jobs and apprentice opportunities for students. (iii) Continuing implementing the Beginning Farmer and Rancher Development Program (BFRDP) approved in the *Agricultural Act of 2008*. BFRDP is planned to provide education, training, extension and guidance services for beginning farmers and ranchers, to ensure success of new generation farmers. In 2009 – 2012, American government input 75 million USD to implement BFRDP. *The Agricultural Act of 2013* specified that it will provide 85 million USD to carry out training of beginning farmers and ranchers in 2014 – 2018, and expands training objects to veterans willing to do agricultural production^[13].

4.2 Improving rural production and living conditions, and enhancing attraction of rural areas and agriculture to beginning farmers

The agricultural modernization of the United States is high, but some rural areas are backward. Improving rural infrastructure has become an essential part attracting and keeping young generation staying in rural areas. According to statistics, the total fund of federal government since 2002 has reached 170 billion USD for improving rural infrastructure. *The Agricultural Act of 2013* combines government subsidy with loan, implements a series of projects to improve rural water, build rural network, and solve the problem of rural waste and sewage treatment. Through the broadband network plan, the Department of Agriculture provides funds for construction, upgrade and transformation of equipments and facilities for broadband network service in remote rural areas. *The Agricultural Act of 2013* authorizes the Department of Agriculture to provide donation and loan for extending broadband services in rural areas. It provides competitive donation and loan to support improvement of equipments and infrastructure, to improve remote communication ability of rural education and medical care fields.

Through government subsidy and loan, it is expected to support development, storage, treatment, purifying of water resources, sewage and waste treatment and disposal. Rural communities with population less than 5500 are areas with priority for development. Annually, it provides 25 million USD to non-profit organizations to support construction of public water supply in rural areas^[13].

4.3 Improving agricultural subsidy and making beginning farmers and ranchers obtain more benefits

The most important reform of the *Agricultural Act of 2013* is adjusting agricultural subsidy policy. For a long time, American government helps farmers resisting natural and market risks through various subsidies. However, the proportion and level of subsidies obtained by beginning farmers and ranchers are still relatively low. *The Agricultural Act of 2013* further adjusted and improved agricultural subsidy policies and expanded subsidy level of the safety net for beginning farmers and ranchers. *The Agricultural Act of 2013* kept Rural Energy for America Program (REAP) and Biomass Crop Assistance Program (BCAP) put forward in *Agricultural Act of 2008*. According to 193 million USD biomass crop assistance program, farmers can obtain as high as 50% cost subsidy for planting perennial plants. Rural Energy for America Program simplifies process of farmers and rural enterprises applying for medium and small sized rural energy program. This program plans to invest 241 million USD to help farmers, ranchers and rural enterprises to reduce expenditure in energy for installing renewable and energy-saving facilities.

4.4 Increasing special loan for agriculture to satisfy demands of beginning farmers and ranchers for funds

The special loan for agriculture is temporary and transitional assistance funds provided by Farm Service Agency for farmers who lack starting funds and contingent funds but fail to obtain loan from commercial credit institutions. The special loan is not new part of *Agricultural Act of 2013*, but it increases loan scale and amount. *The Agricultural Act* passed by the House of Representatives stated that the special loan for agriculture includes direct loan and guaranteed loan for farm ownership and agricultural production and operation. As long as being engaged in agricultural production and operation for more than 3 years and satisfying guarantee condition, farmers can obtain direct loan as high as 30000 USD and guaranteed loan as high as 70000 USD^[10]. *The Agricultural Act* passed by the Senate stated that it continues to implement measures about special loan in the *Agricultural Act of 2008*, sets up loan fund reserve for turnover loan and farm ownership loan of beginning farmers and ranchers, and implements Beginning Farmer and Rancher Individual Development Accounts (IDA) Pilot Program, to help these farmers of limited means finance their agricultural dreams through business and financial training and matched savings accounts^[13].

5 Implications of the experience of the United States for cultivation of new professional farmers in China

5.1 Adhering to leading role of government and accelerating legislation of cultivating new professional farmers

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nature of farmer issue, weak nature of agriculture, and fundamental nature of rural human resource development essentially determine leading role of government in the cultivation of new professional farmers. To guarantee national grain security and effective supply of agricultural products, we should adhere to subject role of government department in cultivation of new professional farmers, especially for responsibility for teaching and education of farmers engaged in the primary industry^[14]. The United States is experienced in providing legal safeguarding for agricultural successors. In China, there is also certain foundation in education legislation. For example, Tianjin Municipality and Gansu Province have issued *Farmer Education and Training Regulations* in 2010 and 2011 respectively. It is recommended to issue national or regional laws and regulations on professional farmer training, to provide legal guarantee for those who do farming and breeding work, which is of milestone significance for promoting comprehensive development of agriculture, farmers and rural areas^[15].

5.2 Education and training being the foundation of cultivation of new professional farmers

A distinctive feature of new professional farmers is high quality, so cultivating new professional farmers must firstly provide education and training. (i) It is recommended to carry out skill training, closely connect demands of key industries, and provide specialized skill training and undertaking training for rural practical personnel leaders, large farming and breeding households, enterprise backbones, and various agricultural production and operation and skill service talents, to improve their professional quality and operation and management ability. (ii) It is recommended to energetically develop farmer vocational education, include those backbone farmers younger than 45 and having certain cultural foundation and production and operation scale into the scope of tuition fee free and national financial aid policies of vocational education, carry out practical part-time vocational education, and speed up cultivating modern agricultural producers and operators with quality of new professional ability. (iii) For agricultural successors, it is recommended to attract and encourage graduates of agricultural secondary vocational schools to return to rural areas for starting an undertaking and provide free training services for rural senior middle school graduates, young and middle aged migrant workers and veterans returning to rural areas, and cultivate agricultural successors loving, knowing and doing farming work^[16].

5.3 Attaching importance to connection of cultivation and attraction and improving auxiliary support policies

In the context of constant and numerous transfer of rural labors for a long time, it is recommended to attach importance to cultivating left-behind farmers, especially young and middle-aged farmers with certain cultural foundation and production and operation scale, to modern agricultural producers and operators with new professional farmer ability and quality. Besides, it should take a long-term view and attract and encourage college and university graduates, excellent migrant workers, and veterans to go to rural areas for starting an undertaking through increasing comparative benefits of

agriculture, improving farmer employment environment, and stimulating agricultural producers and operators to stay at rural areas, so as to bring more high quality farmers to become professional farmers. In addition, it is recommended to attract young, high quality and professional farmers to stay at rural areas, continue to improve rural infrastructure in the new socialist countryside construction, and improve rural production and living conditions especially in agricultural production bases, agricultural industrial parks, and modern agricultural model areas. Furthermore, in the policies of strengthening, benefiting and enriching farmers, it is required to give consideration to cultivation of new professional farmers, and increase subsidies for large farming and breeding households, specialized farmer cooperatives, and leaders of social service organizations. Financial support projects should give consideration to new entities such as family farms established by new professional farmers, to make farmers fully enjoy social security services of public finance.

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