

Research on the Cultivation of New Professional Farmers in Heilongjiang Based on the Strategy of Rural Revitalization

Lili Yin

Heilongjiang Bayi Agricultural University, Daqing 163319, China

Abstract: The 19th CPC National Congress put forward the strategy of rural revitalization. The realization of rural revitalization requires a large amount of new professional farmers, however, Heilongjiang is facing the increasingly serious status quo of agricultural marginalization, rural hollowing and farmers aging. Based on the current situation analysis of the new professional farmers' cultivation in Heilongjiang, this paper points out several typical problems including farmers endogenous negative, the shortage of trained teachers and institutions, imperfect cultivating system, and insufficient financial support. In view of these problems, corresponding suggestions are proposed after.

Keywords: Cultivation; New professional farmers; Rural revitalization

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***Corresponding author:** Lili Yin, y2450005092@163.com

1 Introduction

In 2019, the Ministry of Agriculture and Rural Affairs launched a campaign to raise the quality and

efficiency of farmers, and require local governments to cultivate high-quality farmers to meet the needs of rural revitalization. Heilongjiang province, as a national important grain production base, the structure of agricultural labor force has entered a new stage of the coexistence of total surplus, structure and regional shortage. There is a serious shortage of talents needed for agricultural modernization. In order to promote all-round and high-quality agricultural development in Heilongjiang, promote industrial transformation, upgrade and deepen supply-side structural reform, it is urgent to cultivate a large number of new professional farmers.

2 The importance of cultivating new professional farmers in Heilongjiang

2.1 Increase the number of people working in agriculture

Rural hollowing is a special evolution form of rural areal system during the process of urban-rural transformation development. As rural labour continues to pour into the cities, leaving children, women and the elderly at home, the rural population is hollowing out. It is apparent from the statistics in Table1.

Table 1. Changes of urban and rural population in Heilongjiang over 2014-2018

Year	Urban population	Rate of change	Rural population	Rate of change	Proportion of urban and rural population
2014	22 240 000	-	16 090 000	-	138:100
2015	22 410 000	+0.76%	15 700 000	-2.42%	143:100
2016	22 490 000	+0.36%	15 500 000	-1.27%	145:100
2017	22 500 000	+0.04%	15 380 000	-0.77%	146:100
2018	22 680 000	+0.80%	15 050 000	-2.15%	151:100

Data Sources: Calculated according to«Heilongjiang’s Statistic Yearbook 2018» data.

According to Table1, the number of urban population in Heilongjiang is increasing year by year, while rural is decreasing. The number of people working in agriculture decreases from 9.76 million in 2015 to 9.305 million in 2018. The main force of rural construction is increasingly weak, and the extent of rural hollowing out continues to deepen, as rural development and agricultural modernization is facing enormous challenges.

2.2 Improve the level of rural human capital

As modern agriculture is different from traditional agriculture which relies on manual labor. Modern agriculture is an intensive industry integrating capital,

technology and human resources. As direct participants in agricultural production, farmers’ human capital is an important source of agricultural economic growth and determines the level and degree of agricultural modernization^[1].

2.3 Promote coordinated development between urban and rural areas

During the process of urban development, the urban economy has a core attraction in terms of capital, market, technology, and human resources with advanced industrial production as the main body, which leads to the widening rich and poor gap between urban and rural, imbalance of regional development and other problems, these problems have become a constraint on the development of China’s economic modernization.

Table 2. Per capita disposable income of urban and rural residents in Heilongjiang over 2014-2018

Year	per capita disposable income of urban residents	per capita disposable income of rural residents	Absolute difference	Specific value
2014	¥22 609	¥10 453	¥12 156	2.163
2015	¥24 203	¥11 095	¥13 108	2.181
2016	¥25 736	¥11 832	¥13 904	2.175
2017	¥27 446	¥12 665	¥14 781	2.167
2018	¥29 191	¥13 804	¥15 387	2.115

Data Sources: Calculated according to«Heilongjiang’s Statistic Yearbook 2018» data.

As the specific value is shown in Table 2, the income gap between urban and rural residents is narrowing since 2015, but the absolute difference is increasing year by year, which increase from ¥12 156 in 2014 to ¥15 387 in 2018. The income of urban residents is much higher than that of rural, which draws more and more rural residents to cities. The city’s high-quality educational resources, advanced medical treatment and sound social security system have made it more attractive for farmers to devote themselves to urban construction.

3 The status quo of cultivating new professional farmers in Heilongjiang

The new professional farmers’ cultivation project in Heilongjiang has been officially launched since 2015. The department of agriculture and rural affairs has comprehensively trained new professional farmers such as production and operation farmers, professional skilled farmers, professional service farmers, modern young farmers and agricultural leaders in accordance with the implementation guidance of classification

training, precise selection, demand docking, and online and offline integration. Heilongjiang have created a number of farmer education demonstration county in the country, identified 15 000 new professional farmers, and business linkage income effect is remarkable^[2].

3.1 The quantity of new professional farmers’ cultivation

By the end of 2019, Heilongjiang has cultivated nearly 90 000 new professional farmers, 13,760 were trained in production and operation, professional skills, professional services and modern young farmers in 2015. In 2016, the province focused on poverty alleviation, trained 11 510 farmers such as leaders of cooperative organizations and village-level farmer technicians. To enhance the ability of management and innovation as the key point, the number of farmers accept education training for 18000 people in 2017. In 2018, 23,000 farmers were trained in three categories: modern young farmers, leaders of new business entities and targeted poverty alleviation training for the agricultural industry. In 2019, the whole province planed to cultivate 20,430 new professional farmers divided into provincial and municipal levels.

3.2 The support of new professional farmers' cultivation

Heilongjiang has basically established a cultivation system with agricultural schools as the main body, leading agricultural enterprises, agricultural research institutes, vocational colleges, farmers' cooperatives and other market players. Since the launch of the cultivation project, it has invested a total of 292 million yuan in the pilot construction of vocational education, which has attracted 684 million yuan of local funds. It has 191 training institutions, selected 30 provincial-level field schools, and established 10 national-level farmers' education and training demonstration bases in two batches. The area of rural vocational schools has increased by nearly 40%, and the floor space of school buildings has increased by more than 58%. The number of productive training bases in vocational colleges increased to 121, and the total value of instruments and equipment increased by 176 million yuan, which provided a strong material support for the cultivation of farmers in Heilongjiang^[3].

3.3 The benefits of farmers participating in cultivation

In the process of participating in cultivation, farmers learned knowledge and improved their quality, and also made many achievements in entrepreneurship, leading the villagers get rid of poverty and becoming rich. In the 10th management district of Jiansanjiang, under the guidance of Wang Dan, a typical entrepreneur, Sui Xiaowei and other 13 farmers set up cooperatives, registered brand packaging, and carried out online and offline multi-channel sales. Li Kui, the head of the fourth operation station of Tieli farm, started his own business by building a greenhouse for raising rice seedlings and accelerating sprouts, and set up a cooperative. He has absorbed 87 cooperative members, planted an area of 13,000 mu, raised 38 million yuan, and led the farmers to a well-off life. In 2018, with the support of farmers' professional cultivation project, the GDP of Nehe increased 5.9% year-on-year, the total fiscal revenue increased 6.1% year-on-year, and the local tax revenue increased 8.3% year-on-year, the total output of grain, soybean and potato jumped to the third in the province^[4].

4 Problems existing in cultivating new professional farmers in Heilongjiang

4.1 The farmers are negative to participate in training

Heilongjiang has high level of agricultural mechanization in China, besides, due to the influence of the dual economic structure of urban and rural areas, the rural young and middle-aged labor force has been working outside for a long time. The left-behind personnel are characterized by "elderly, women and children", and most of the elderly suffer from diseases. Therefore, it is of little significance to train them. Women need to take care of children and the elderly, so they are unlikely to participate in training. Combined with the risks of agricultural production and farmers' unstable income, poor rural living conditions, the new generation of migrant workers born in 1980 or later accounted for 51.5% of the total migrant workers, and 50.5% of rural residents moved to cities to work in the tertiary industry^[5].

Although new professional farmers cultivating is a good project, but the propaganda is not enough, which leads to some farmers' inadequate understanding about policy, and impacts their learning initiative and enthusiasm. The phenomenon of passive learning, to a certain extent, affected the training effect.

4.2 Weak strength of cultivating

On the one hand, the cultivating bases are few. Although there are more than 230 training institutions and practice bases at all levels, Heilongjiang has jurisdiction over 944 townships and 9 157 villages with a population of 15.382 million now. The limited practice bases and training institutions cannot meet the training needs of the majority of farmers.

On the other hand, high-quality teachers are in short supply. The cultivation of new professional farmers in Heilongjiang mainly relies on agricultural schools, agricultural vocational colleges, agricultural colleges and agricultural academy, etc. The quality of training teachers varies significantly, either with more professional knowledge but less practical experience, or with strong practical ability but low theoretical, which makes the teaching content difficult to precisely match

with the actual situation of country.

4.3 Cultivating causes are unattractive

Training form generally includes lectures and skills training, lectures is given priority to with theory, while skills training includes scene view, post training and professional skill appraisal. Generally low level of education and training students with poor concentration and learning ability, classroom discipline, theoretical study effect is not ideal. There is a disconnection between theory and practice in the practical training of skills.

Training content is mainly about agriculture production technology, rarely involved in the operation and management, laws and regulations. In addition, limited by the teachers' ability, funds and other constraints, knowledge update is slow, the cultivating scheme can not fully meet the demand of students, which leads to insufficient adjustment into train students, teaching content, and industrial structure, so it's hard to achieve the best effect of training.

4.4 Lack of training assessment mechanism

At present, all types of training classes are implemented with learning duration ranging from 5 days, 15 days, one month or three months. The end of learning is equivalent to the completion of training, and the certificate of course completion can be obtained without passing strict test. The effect of translating theory into practice is poor. "No difference" learning method is difficult to cultivate high-quality professional farmers needed for rural revitalization.

In addition, training instructors are generally selected by training institutions, lecturer quality is uneven, the lack of investigation to the competence as well as the supervision of the teaching process. The goal of training instructors is to get paid for completing tasks, with little sense of responsibility, inadequate preparation for customized teaching of trainees affects the construction of high-quality teachers.

4.5 Insufficient capital input

Now, the market mechanism of diversified investment in Heilongjiang is not perfect, and the main source of cultivation funds is the financial allocation from the higher level. The fees can be used to pay teachers' class fees, school supplies, transportation and catering, *etc.*, but it is difficult to ensure that the training funds are exclusively used due to the constraints of the functions of government departments.

In addition, according to the training specifications, production of operational training needs 150 hours, according to the calculation about 19 days (8 hours/day), social service and professional skills training should be more than 5 days commonly, e-commerce training needs more than 1 months, but due to the limited training funds, many training unit would choose less expense training courses, or compress the training time to theoretical study, the students generally like classroom practice in the field, or combined with each class of training, which not only weaken the training effect, but also impact the enthusiasm of farmers to participate in training.

5 The suggestions for improving new professional farmers' cultivation in Heilongjiang

5.1 Strengthen the echelon construction of cultivated trainees

Firstly, promote the development of a contingent of high-quality professional farmers. Increase the ability and vocational education of the recognized new professional farmers and policy support. Secondly, enhance the self-development ability of small farmers. Strengthen the publicity work on the cultivation of new professional farmers, actively guide eligible farmers to participate in training, and improve their linkage effect with the new agricultural business entities. Thirdly, pull migrant workers back to the countryside. For migrant workers who have not been working outside for a long time and have not taken root in cities, we should make use of the role of "helping and guiding" farmers to attract "flying swallows to their nests" and build beautiful countryside together. Fourthly, reserve forces for agricultural production. Agricultural vocational colleges and agriculture universities should enhance the cultivation of agricultural talents, strengthen the relationship between students on campus and agricultural production units, integrate ideological education and value guidance into their curriculum, and take rural revitalization as their responsibility.

5.2 Scientific organization of training courses

The form and content of training courses directly affect the effect of students' absorption of knowledge and satisfaction of participating in training. In order to improve the pertinence and applicability of training, we should follow the needs and wishes of different types

of farmers, and design teaching programs and training objectives in combination with the characteristics of the industrial structure of each unit.

The training sites should not be limited to bases. Cross-regional learning and communication can be carried out in provinces and cities with higher industrialization levels, so as to enhance the sense of personal experience and intuitive impact, which can help stimulate the desire of farmers to explore the market and innovate and start businesses.

5.3 Train excellent teachers

Firstly, recruit teachers. Actively mobilize various excellent teachers and experts to participate in the cultivation of professional farmers, establish a database of cultivated teachers for dynamic management, and realize the open sharing of lecturer resources. Secondly, strengthen the management of teacher selection and recruitment, unify evaluation standards, strengthen the assessment of teachers, and implement the dynamic adjustment mechanism that teachers can go up or down. Thirdly, normalize teachers' training. The teachers are of different levels. Only by constantly improving the teaching level and practical ability can high-quality farmers needed for the rural revitalization be cultivated.

5.4 Complete the assessment mechanism

Firstly, strict trainees assessment system. The parallel examination system of class hours and credit is adopted to measure the quantity by class hours and determine the quality by credit. Secondly, supervise the lecturers' teaching process, including pre-training preparation, interaction in training and continuous communication in post-training, to increase the value and meaning of training programs. Thirdly, in order to ensure the independence and objectivity of the assessment subject, multi-channel supervision is needed. For example, establish independent farmer cultivation assessment agency, open public reporting telephone, bring in third-party assessment agency, etc.

5.5 Improve policy support mechanisms

On the one hand, make good use of various measures taken by the central government to support farmers, and formulate policies to support their own industries, encourage credit agencies to develop credit loan guarantees suitable for new professional farmers, and promote innovation and entrepreneurship of them. On the other, give play to the leverage role of government finance, make good use of fiscal and tax policies.

Through social capital of the vigorously support and the joint investment, plural gradually achieve new professional farmers cultivating project marketization. At last, improve follow-up support policies for farmers participating in training, and complete the system for assessing farmers' vocational skills and professional titles in agriculture.

6 Conclusion

In the context of the implementation of the rural revitalization strategy, Heilongjiang has vigorously carried out the cultivation of new professional farmers, to a certain extent, solved the shortage of rural labor force, and reserved talents for Heilongjiang's economic development and transformation, it is also a necessary condition for the realization of agricultural modernization. In the process of training, attention should be paid to mobilizing farmers' enthusiasm for participating in training, training excellent teachers, optimizing the curriculum system, perfecting the evaluation mechanism, and increasing financial and institutional support, so as to provide manpower support for rural development in Heilongjiang, rejuvenate the countryside and realize agricultural modernization earlier.

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