# Research on the promotion of Agricultural Competitiveness in Heilongjiang Province

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#### Li Baotai, Li Yan, Ai Shijin, Tan Lubin, He Lu, Yu Haiyan

College of Economics and Management, Heilongjiang Bayi Agricultural University, Daqing, China, 163319

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Abstract: Agriculture is the foundation of our country. In the context of supply side structural reform, it is becoming more and more important to enhance competitiveness and agricultural development. As a major agricultural province in the country, Heilongjiang Province has continued to promote the construction of modern agriculture in recent years, but there are also many shortcomings and problems in its development, which lags the high quality development of agriculture in Heilongjiang. Based on the investigation and analysis of the current situation and characteristics of agricultural development in Heilongjiang Province, this paper finds out the shortage of its agricultural development and the main factors restricting it, so as to put forward countermeasures to enhance its agricultural competitiveness, so as to promote its agricultural high-quality development.

#### 1. Current status of agricultural development in Heilongjiang Province

# 1.1 The rapid development of agricultural mechanization

Heilongjiang has special terrain, many plains, flat terrain and the land generally clustered together, all of these have laid the foundation for machine operation and provided convenience for the popularization of mechanization, thus greatly increasing output and effectively utilizing the resources. Because of these advantages, Heilongjiang Province's agricultural mechanization has developed early, its level has always been high, and it is in the forefront of the country. In 2018, the province's rural agricultural mechanization construction invested 21.4 billion yuan, which is 1.3 times of the total investment from 1949 to 2007. There are 817 newly established agricultural machinery cooperatives, including 788 Modern Agricultural Machinery Cooperatives in dry land with 10 million yuan and 18 Modern Agricultural Machinery Cooperatives in paddy field with 5 million yuan. Large agricultural machinery is applied to paddy fields and upland fields, and agricultural mechanization operations cover the entire process of agricultural production.

# 1.2 Speeding up the process of farmland formula management

In recent years, Heilongjiang has improved the rural land contracting relationship and accelerated the circulation of land contracting management rights, changed the production organization method, and made full use of the effects of production factors to change the business model. Make full use of agricultural production factors, deepen the degree of management and mechanization, promote the construction of new rural areas and coordinated development of urban and rural areas, thereby improving the modern production capacity of agriculture, and on this basis, subtly influence the ideas of peasants, and peasants operate voluntarily and with compensation in accordance with the law. As a result, rural land circulation and moderate scale operation area continue to increase. At the same time, peasants' professional cooperatives are the mainstay of Heilongjiang's development of modern agriculture. Putting large amounts of funds into peasant professional cooperatives and giving priority to them will help improve the economy's service development capabilities.

# 1.3 Remarkable achievements in industry, University and Research Institute's innovation

Heilongjiang Province has strong educational support, with several agricultural-related colleges and universities, and a solid foundation for scientific research institutions. There are 2 agricultural universities, 10 agricultural vocational colleges, 8 agricultural secondary specialized schools, and 37 agricultural research institutes. The province has formed an integration of agricultural scientific research, development, and extension with the Provincial Academy of Agricultural Sciences, Northeast Agricultural University, Heilongjiang Bayi Agricultural University and Provincial Academy of Agricultural Sciences as the core, and the agricultural technology extension centers of provinces, cities and counties as the main integrative system.

#### 2. Restrictive factors of promoting agricultural competitiveness in Heilongjiang Province

#### 2.1 The quality of agricultural practitioners is not high

From the overall perspective, the quality of agricultural laborers in Heilongjiang Province is generally low, especially those with a college degree or above are relatively low, there are insufficient talents in higher education, and there is still a considerable number of illiterate people, and some agricultural laborers have the ability to learn modern agricultural knowledge. Resistant psychology, insensitive to relevant agricultural science and technology information, difficult to accept the input of new agricultural science and technology achievements, so that it is difficult to realize the transformation of theory to reality, and hinder the upgrading of agricultural industry. All the above situations are not conducive to the promotion and absorption of agricultural science and technology. At present, the most important factor that promotes the progress of the agricultural level is science and technology. The promotion of science and technology relies heavily on a series of agricultural practitioners such as scientific researchers and technical operators. The low level of education of agricultural laborers in Heilongjiang Province is an important reason affecting Heilongjiang's agricultural competitiveness.

#### 2.2 Backward agricultural infrastructure

Agricultural infrastructure mainly includes water conservancy and hydropower facilities, agricultural production facilities and urban and rural transportation equipment. These facilities have a direct impact on peasants' production and life, not only can directly improve peasants'

lives, but also reduce agricultural production costs. Due to insufficient investment, the agricultural disaster resistance capacity has declined significantly. This is because most of the agricultural infrastructure in Heilongjiang Province was established in the 1960s and 1970s. Most of these infrastructures have expired and cannot be used anymore, and the existing reservoirs are also ageing. There has been a decline in efficiency. In addition to necessary hydropower, production, and transportation facilities, agricultural infrastructure should also include agricultural technology promotion, agricultural talent team building, agricultural scientific research, etc., to provide potential motivation for improving agricultural competitiveness. A survey of surrounding villages in Heilongjiang found that peasants' thinking and concepts are relatively old and cannot keep up with the pace of development, and they know little about planting new varieties and using new technologies. As the main producers of agricultural products, peasants have a direct impact on the output and quality of agricultural products. The overall level of agricultural infrastructure in Heilongjiang needs to be improved.

# 2.3 Uncoordinated agricultural structure

The proportion of forestry and fishery in the overall agriculture of Heilongjiang Province is too low. Affected by congenital resource conditions, Heilongjiang is an inland area with lack of marine resources, and the seafood industry is underdeveloped, so the proportion of fishery is too low. However, there are many rivers and lakes in Heilongjiang Province, and freshwater resources are abundant, and the freshwater aquaculture industry has not been well developed. Similarly, Heilongjiang Province is rich in forest resources, but compared to its narrowly defined agriculture and animal husbandry development, forestry still accounts for a very low proportion.

# 2.4 Inadequate integration with the Internet

Although the development of agricultural Internet technology in Heilongjiang Province has an upward trend, it is still below the level of other agricultural Internet technologies in most industries. First of all, "Internet + Agriculture" is relatively unfamiliar to many peasants, and some agricultural practitioners have limited education and limited knowledge. Learning and proficient in the use of cutting-edge technology equipment is undoubtedly very difficult for them. If it is difficult, Internet technology cannot be used efficiently. Secondly, the market deployment of Internet software and hardware equipment requires high maintenance and maintenance costs, which many peasants cannot afford. Even some remote areas in rural areas still have problems such as slow Internet speed, inaccessibility of broadband, and inconvenient transportation and logistics. The application of technology in agricultural production cannot be popularized. Finally, the overall environment for peasants to use Internet technology for production, operation, and sales has not yet been established, and the understanding of its connotation needs to be improved. At the same time, governments at all levels need to pay more attention to Internet agriculture.

# 3. Policy suggestions for the improvement of Heilongjiang's agricultural competitiveness

# 3.1 Strengthen education investment and improve famer's cultural level

Currently in Heilongjiang Province, there are more peasants with a high level of education going to the coastal areas to work, while the agricultural practitioners who stay behind in the rural areas have a low level of education, and some have not even attended school. The training of agricultural practitioners from basic education must not only guarantee the right of rural people to receive education, but also supervise the implementation of compulsory education and

eliminate illiteracy. In addition, the government should also improve the conditions for running schools in rural areas and guarantee the quality of education in poor areas so that peasants' knowledge in basic science and agricultural management can be supplemented.

At the same time, based on the professionalism and comprehensiveness of the discipline of agriculture, the government should fund agricultural colleges and academies of agricultural sciences to strengthen basic scientific research in agriculture, and carry out practical short term training for agricultural practitioners. It is also necessary to vigorously introduce higher education talents, attract and retain high-tech talents by improving welfare benefits for higher education talents, and establish a sustainable talent training and delivery system.

# 3.2 Increase investment in infrastructure to increase total agricultural output value

Good agricultural infrastructure is the foundation for improving the comprehensive competitiveness of agriculture and the cornerstone of agricultural development. To develop high-efficiency agriculture in Heilongjiang and take the road of sustainable development. First, strengthen the construction of high standards of farmland in Heilongjiang and improve the overall quality of farmland. Second, strengthen the training of peasants in the use of new technologies, and increase the degree of professionalization of peasants' planting. Third, increase Invest in the construction of new types of hydropower and water conservancy and other hardware equipment.

For consumers, the quality and safety of food are of the utmost importance, which requires the establishment of a complete and strict supervision system for supervision and management. At the same time, speed up the process of agricultural industrialization in Heilongjiang Province, increase the total value of agricultural output, make use of Heilongjiang's fertile land resources, vigorously develop agriculture in accordance with local conditions, strengthen the additional output value of agricultural products, and increase the overall food production capacity and total agricultural output value.

# 3.3 Optimize the industrial structure and strengthen the structural reform of the agricultural supply side

The key to industrial prosperity lies in mode transformation and structural optimization. Adjusting and optimizing the structure is the overall foundation. For the agricultural structure of Heilongjiang Province, it is necessary to consolidate its advantages, expand its shortcomings, and develop the industry in all directions. Continue to give full play to its unique black land resources and natural pastures and other advantageous resources to further consolidate the status of the national grain ballast and high-quality dairy factories.

At the same time, facing the rich forestry resources of Heilongjiang Province, it is necessary to carry out appropriate and reasonable development, respect peasants' wishes, highlight local characteristics, select forestry economic fine products in accordance with market demand, and further increase the forestry production value in accordance with the sustainable development route. Due to the inland geographical location of Heilongjiang Province, its marine resources are scarce, and the diversification of fishery development types is limited. However, Heilongjiang Province has many rivers and lakes with abundant freshwater resources. This advantage can be used to develop freshwater aquaculture. , To make up for the lack of fishery imbalance in the industrial structure.

#### 3.4 Strengthen the "Internet + Agriculture" development model

The Internet must be linked to agriculture and both of them should be combined to achieve better results. For better development, it is necessary to transform the development method with the help of the Internet and related communication technologies, so that the network can be highly used in modern agriculture. It mainly involves the following parts. First, it is necessary to appropriately change the production factors. Good allocation and perfect combination of human and material resources. Only in this way can agriculture develop better relying on the progress of the network. At the same time, the most important thing is to transform the production and operation to the greatest extent to complete the production of products faster, to improve the product.

The important roles of Internet in agriculture includes the following aspects. Firstly, in production process, the extensive use of the Internet allows resources such as labor, production, and land to be used to a greater extent. The use of Internet high-tech technology can use positioning and navigation technology in the field of agricultural production in a certain production area to sow, irrigate, and fertilize agricultural products. Secondly, in sales process, The Internet can make products flow into the market more efficiently, which greatly changes the way of sales. For example, internet can be applied to allow consumers to fully experience the environment of agricultural and livestock products in which they are grown and fed, allowing consumers to better understand these products, so that consumers can trust the products more. Finally, with the help of the information network, peasants can quickly master the technology and information they want to obtain, at the same time, they can rely on the law to protect their reasonable interests, which is of great significance to peasants.

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