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A Study of Grain Scale Management Mode in Hubei Province

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Abstract In order to better ensure the food security in China, this paper explores the grain scale management mode in Hubei Province. It analyzes the grain production situation in Hubei Province as well as the existing scale management mode, and according to the main mode of grain scale management in Hubei Province and the main problems, it puts forward related recommendations to improve the productivity of grain and promote the development of Hubei's grain scale management.

Key words Scale management, Food security, Mode

1 Introduction

In 2016, the Central Document No. 1 makes it clear that it is necessary to play the role of various forms of agricultural moderate scale management. At present, there is not good matching between the traditional mode of food production and agricultural modernization. Agricultural fragmentation will restrict the efficiency of farmers' food production, and make grain farmers' ideas lag behind. Rural labor transfer gradually hinders the grain scale management, and the implementation of grain scale management is not only the objective requirement for the development of the rural labor force, but also the inevitable trend of modern agriculture.

2 Grain scale management mode in Hubei Province

2.1 The present situation of food production in Hubei Province

Due to differences in geographical location and ecological conditions in various cities, the regions can be broadly divided into three parts to be discussed.

2.1.1 Western Hubei and Central Hubei Mountain. Due to geographical location and climate, the food productivity of the mountain area is weak relative to the other parts of Hubei Province. The mountainous area is large, but the arable land only accounts for 33% of the province's arable land, grain production accounts for 31% of the province's total grain output. The main agricultural products are rice, corn and potato, and there are also a lot of local products and ecological tourism resources.

2.1.2 Eastern Hubei Plain and Jiangnan Plain. Plain is large, the arable land area is the largest among the three parts and grain production ability is strong, and food production is high. The arable land in plain is 46% of total arable land in Hubei Province and food production accounts for 44% of total food production in Hubei Province. In the plain area, grain varieties get priority with rice and wheat. Most of the cities on the plain are along the Yan-

gtze River, and the proportion of paddy field is large, so it is more suitable for planting crops such as rice.

2.1.3 Central Hubei, Northern Hubei Hills and Downland. The arable land area of Central Hubei and Northern Hubei Hills and Downland is small, but there are good climate conditions and good geographic location, and the ability of grain production is strong. Although the arable land only accounts for 21% of the arable land in the entire province, the food production accounts for 25% of the province's total grain output. The main grain varieties are rice and wheat.

2.2 Grain scale management mode in Hubei Province According to the current status of Hubei's food production, as well as the relevant policy and development experience in various regions, Hubei's grain scale management modes include the following three parts:

2.2.1 Professional major grain growers and family farms gradually promote grain scale management. Professional major grain growers and family farms in the area plant crops and the grain yield has significant advantages compared with the ordinary grain growers. Their land is relatively concentrated, easier to manage and achieve food scale operation. With major grain growers and family farms as example, spreading the successful experience of the professional major grain growers and the family farms to other grain producers can promote the production efficiency of other grain producers and guide comparatively dispersed grain producers to change with the family farms, speed up the land circulation, and drive large-scale food production and operation.

2.2.2 Farmers' professional cooperatives provide unified service and accelerate the food scale management. Farmers' professional cooperatives through cooperative members provide unified entrusted agency services, centralized services about purchasing of agricultural production and other aspects of agricultural production and management. The cooperatives provide members with comprehensive service, and solve the problems for farmers in the food production process, so as to improve cooperatives' service and problem-solving efficiency, and accelerate the grain scale management.

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2.2.3 Support is offered for leading enterprises to accelerate food scale management. Support for agricultural leading enterprises is mainly reflected on the grain seed industry and grain processing leading enterprises. The leading enterprises are responsible for driving the development of ecological agriculture, accelerating Hubei's food industrialization and intensive management. In seed industry, there is a need to support the main provincial leading enterprises of seed industry, and improve food production efficiency of new operators. In terms of food processing, it is necessary to develop deep processing of food products, improve the agricultural processing industry chain, improve the food product logistics distribution system, build the benefit-sharing mechanism between leading enterprises and farmers, and vigorously promote "company + base + farmers" business model.

3 Grain scale management problems in Hubei Province

3.1 Financing difficulties Currently, the grain scale operation or agricultural development will require substantial financial integration, and the grain scale management entity is hard to get the loan. The major grain growers, family farms and farmer cooperatives business entities lack the loans, and they only have arable land and farm machinery. And the arable land as collective belonging can not serve as valid loan collateral, or meet the conditions of bank lending. Large farm machinery property owned by agricultural cooperatives is relatively complex, and the banks do not want this type of collateral for mortgage lending. The number of relevant security agencies is small, and they can not provide the grain scale management entity with effective guarantee for financing.

3.2 Fragmentation of arable land and unsound transfer mechanism Fragmentation of arable land will not only affect the scale of grain production, but also restrict the implementation of food production scale management. Farmland fragmentation will make major grain growers, and farmers' professional cooperatives fail to use agricultural machinery in arable land for continuous operation, which will extend the grain growers' work time and increase their workload. Additionally, the current arable land transfer mechanism is not sound, farmland leasing subcontract is not standard, the cultivated land circulation in general is in a state of chaos; cultivated land transaction cost is high, cultivated land conversion price is too low, and the cultivated land circulation entities lack the enthusiasm for farmland circulation. So many grain growers can not successfully complete arable land circulation.

3.3 Geographical differences and uneven grain scale management Hubei's terrain is relatively complex, including mountains, plains, downland and hills. Mountain land area is very big, but the arable land is barren, and both overall quality and quantity of arable land are at a low level. It is difficult to implement large-scale production and management, and there is low utilization efficiency of agricultural machinery in the mountain, affecting grain productivity, so the level of grain scale management is not high. Some cities and counties along the river in the flat

plains, have good climate suitable for farming, and food production is highest in Hubei Province. The utilization rate of agricultural machinery in the plains is greater than in the mountains, hills and downland, its grain scale management level is higher than that of other areas. In the province, the hill and downland area is not large, but the land utilization rate is high. Because of appropriate climate and abundant labor, food productivity is high even if there is little arable land. Even so, the grain scale management is still restricted by land area, and it is difficult to greatly promote the grain scale management.

4 Recommendations for developing grain scale management

To achieve grain scale management, it needs the long-term financial support of financial institutions, and the related departments need to improve the land circulation mechanism, establish and perfect the guarantee system at provincial level and risk compensation mechanism, to expand agricultural scale management, improve the productivity of grain, gradually achieve grain scale management, speed up the agricultural modernization, and ensure China's food security.

4.1 Establishing and perfecting the provincial agricultural credit guarantee system and ensuring the smooth realization of grain scale management To establish and perfect the provincial agricultural credit guarantee system, we first need to build the agricultural credit guarantee framework, to accelerate the establishment of provincial, municipal, county agricultural loan guarantee agencies. It is necessary to rationally use grain subsidies to give agricultural credit guarantee company appropriate financial support. Then, it is necessary to set up a corresponding agricultural credit guarantee business risk aid and rescue mechanism, to reduce and control the agricultural credit guarantee business risk. Finally, there is a need to strengthen the establishment of the agricultural infrastructure and professional personnel, to lay the foundation for the provincial agricultural credit guarantee system.

4.2 Improving farmland circulation mechanism and speeding up the process of grain scale management Currently, the province's farmland circulation regulations and policies are yet to be perfected, so it needs for regulation and policy support and guidance. On the one hand, the government should clearly define land circulation regulation and policy, and strictly implement the transfer policy; on the other hand, it should increase the publicity of farmland circulation regulation and policy, organize agricultural professionals and farmers for detailed explanation, let farmers really learn and understand the specifications of the farmland circulation system, and encourage various grain scale management entities to sign a formal farmland circulation contract. In addition, we also need to develop social services in rural areas, to solve the worries behind for the farmers amid farmland circulation.

4.3 Developing grain scale management in accordance with local conditions

4.3.1 Western Hubei and Central Hubei Mountain. Due to the

scattered state of arable land in Western Hubei and Central Hubei Mountain, it is not suitable for arable land contracting of major grain growers and family farms. The importance and necessity of grain scale management shall be publicized to the local farmers, to encourage farmers to join the local farmers' professional cooperatives, provide full service for farmers, and allow farmers who grow grain to get more professional and technical guidance. In addition, the mountains still need to strengthen the construction of agricultural infrastructure, ensure the delivery of agricultural machinery, and let farmers enjoy the convenience brought about by agricultural machinery equipment. Meanwhile, it should support local agricultural leading enterprises to promote the development of local agricultural economy and ecological agriculture, and speed up the realization of scale management of grain. The mountain areas are rich in speciality products, and there is a need to create special local product brand effect on the premise of guaranteeing the grain output, and also focus on ecological tourism, to promote the development of local agricultural economy.

4.3.2 Eastern Hubei Plain and Jiangnan Plain. The plain region is flat, there are a lot of cities and counties along the river, and water and land resources are relatively abundant. It is necessary to give priority to the model of family farms and major grain growers to improve the grain scale management in the plain region. The model of establishing farmers' professional cooperatives and supporting local leading agricultural enterprises is complementary. These models should be combined and applied reasonably. The food production and processing enterprises have obvious advantages, and it is necessary to improve food product distribution

chain, and enhance added value of food products, so as to achieve grain scale management in the plains, and gradually improve grain scale management in the surrounding areas.

4.3.3 Central Hubei, Northern Hubei Hills and Downland. Central Hubei, Northern Hubei Hills and Downland's climate is suitable, and the environmental conditions are suitable for farming, so it can take corresponding grain scale management modes according to the specific terrain status in the region. Near the foothill of the mountain, we can take scale management model, namely joining the farmers' professional cooperatives; in hill and hill-ock, we can combine several models of operation to speed up the realization of the local grain scale management.

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