

Study on the Development of Farm-Oriented Agriculture in China

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Abstract—With the development of economic globalization, it has been difficult for traditional agricultural management model to meet the needs of today's society; thereby farm-oriented agriculture comes into being. Under this background, this paper discusses the issue of farm-oriented agriculture in China. Firstly, the connotation, definition and necessity of farm-oriented agriculture are expounded, followed by the explanation of its development premise in China. The importance of land transfer to its development is highlighted. And since some parts in China have already carried out farm-based operation, the problems encountered in it are also discussed. In the meantime, it also comes up with suggestions for the problems in the development process such as multi-party coordination and joint promotion of land transfer, disaster insurance to reduce planting risk, providing technical guidance to agricultural operators and constructing rural information service system. Finally, the prospect of farm-oriented agriculture in China is foreseen.

Keywords—*farm-oriented agriculture, land transfer, agricultural operation*

I. INTRODUCTION

China, with a large scale of cultivated land, has taken agriculture as the foundation of the country since ancient times. Up to now, the development model of China's agricultural is still dominated by the decentralized operation of a single household. However, with the development of economic globalization, the exchange of agricultural products, agricultural technology and information is becoming more and more frequent, and the industry is booming and developing at a high speed. The traditional agricultural management mode can no longer adapt to social development. The status and role of agricultural industrialization and its scale has begun to emerge. On the one hand, we can make good use of the current scientific and technological achievements by implementing farm-oriented agriculture to improve productivity; On the other hand, we can improve the quality of crops, with which the agriculture can remain in an invincible position, thereby improving economic benefits. Therefore, it is of great significant to implement farm-oriented agriculture. [1]

II. THE DEFINITION AND CONNOTATION OF FARM-ORIENTED AGRICULTURE IN CHINA

Generally speaking, farm-oriented agriculture is the concentration of small pieces of land, so that people with certain skills can use scientific methods to operate the farm in a

large-scale, industrialized manner. The difference from the traditional planting mode is mainly reflected in that the farm planting mode is characterized by its mechanization, specialization, standardization, information and technology and it has adapted to the current progress of social science and technology. But the first thing to do is to make sure that the land is scaled up, which means to centralize traditional small plots of land and then use the technology to operate it, which is called farm-oriented agriculture. It is a new mode of operation. In accordance with the advanced management mechanism of the company, it improves the competitiveness of China's agriculture and ensures that China's agriculture can have a place in the increasingly fierce industrial competition in today's world.

III. THE NECESSITY OF THE DEVELOPMENT OF FARM-ORIENTED AGRICULTURE IN CHINA

A. *The serious phenomenon of abandoning farming for working in industries in labor market*

With the rapid development of the society, the income from traditional agricultural operation is relatively low, and the proportion of agricultural economic income in the total household income is gradually reduced. Nowadays, many people are no longer willing to farm. As a result, a large number of labor force flood into the cities. Young labor force from rural areas settles in the cities, leaving the rural farmland abandoned. [2] At present, many rural areas have become empty villages. Most of the people left behind in rural areas are elderly, women and children, who are lack of information and necessary skills to operate farms. If this goes on for a long time, there will be no one to farm in the countryside and the rural areas will be filled with weeds. At the same time, cities will also face population pressure. As many rural people migrate to cities, urban labor supply increases, which lead to lower wages for migrant workers, making employers hire more workers and the wages of urban residents become lower and lower. Therefore, a large number of labor force flood into the city, resulting in the general decline of urban labor wage. In addition, there is also food supply problem in cities. The arable land in China is mainly cultivated intensively. Due to the lack of rural labor force, the characteristics of China's arable land have completely vanished. In order to solve the contradiction between arable labor and urban labor force, the farm-oriented agriculture comes into being.

B. Adapting to the development trend of market economy

China's traditional agricultural operation model was formulated 40 years ago under the background of market economy. With the rapid development of society and the progress of science and technology, it has been unable to adapt to the current market economy. At present, there are various machinery equipments, agricultural machineries and fertilizers. We can rely on science and technology to help us to work more efficiently. Only using the current technology can agricultural labor productivity be higher. Meanwhile, with the rapid development of society, people's requirements for food are getting higher and higher. In the old days, what we desired for is to be full, but now we begin to emphasize food quality and pay attention to green health and various nutritional contents. Therefore, it can no longer meet the market demand by relying on the traditional agricultural management mode. In order to make China's agricultural development more efficient and more competitive in the world, it is inevitable to develop farm-oriented agriculture.

IV. THE PREMISE OF DEVELOPING FARM-ORIENTED AGRICULTURE

A. Robust farmland transfer market

China's cultivated land is scattered and fragmented. Therefore, the premise of developing farm-oriented agriculture in China is to realize its scalization. And a sound farmland transfer market is the key to realize it. Only when land is transferred can small pieces of land in China be centralized and transfer into large-scale farming. [3] In recent years, China has issued land ownership certificates to rural arable land owners, which has made land transfers faster and safer. The policy has encouraged farmers to invest heavily in infrastructure to make farming more efficient. At the same time, the perfect land transfer market can guarantee the rights and interests of each villager. The land circulation market acts as an intermediary guarantor and can play its role in case of disputes between farmers and villagers. Therefore, the perfect land transfer market makes land centralization smoother and guarantees the rights and interests of both sides of the transfer.

B. Well-designed social labor security system

The rapid development of farm-oriented agriculture will divert a large number of personnel engaged in agricultural production. The elderly agricultural workers must have a sound social labor security system, which can help them retire from farming. And young workers can be guaranteed to have jobs after abandoning farming. They should not lose their jobs because of land transfer. If we fail to properly resettle these rural residents, we will waste a lot of labor and bring many destabilizing factors to society. The government should give some subsidies to some farmers who have left the rural areas, ensure that they have funds to engage in other industries, establish a social security system, reduce their dependence on agriculture, eventually reduce China's small farmers and promote the formation of large-scale land.

C. Abundant funds and complete technical support

The development of farm-oriented agriculture in China starts very late, and many farms have imperfect infrastructure. It requires lots of funds to solve this problem. In addition, compared with western countries, the development of farm-oriented agriculture in China starts very late, thus we lack technology and experience. Therefore, we should first solve technical problems, actively learn from the advanced technology and scientific experience of western countries, and then fill the technical gap. Therefore, capital and technology are the premise for the development of farm-oriented agriculture. Only when these two premises are well met can the development of farm-oriented agriculture be smoother.

D. High comprehensive quality of human resources

China is a large agricultural country with a long history of agricultural development. Many agricultural practitioners only believe in the farming experience taught by ancestors and are not used to using the advanced technology. In addition, many agricultural practitioners in China are not well-educated, while those who have enjoy high education are eager to flood into cities. As a result, the level of education of agricultural practitioners is very low. And the high requirements on farming-oriented development for farmers have become the bottleneck restricting the development of farming-oriented agriculture in China. But it requires farmers to not only have knowledge in physics, chemistry, biology and water conservancy, but also master marketing to operate farming-oriented agriculture. As the farmer is the central leader of the farm, the planting and operation of the farm are all planned and implemented by the farmer. The comprehensive quality of the farmer directly affects the healthy and efficient development of the farm. Therefore, if China wants to develop farming-oriented agriculture, first of all, it should actively train farmers with high scientific and technological skills, so that they can master modern science and technology and various aspects of knowledge well under the premise of skilled traditional knowledge.

V. PROBLEMS IN THE DEVELOPMENT OF FARMING-ORIENTED AGRICULTURE IN CHINA

A. The contradiction between the guarantee function of cultivated land and scale management

China's regional development is uneven, and the social security system in many regions is not sound. Many young workers leave their home to work in cities, and the family farmland is cultivated by women and old people. They do not expect the cultivated land to bring them higher economic benefits, but only regard it as the final security, which is the result of the influence of traditional Chinese thinking. Many people believe that land is fundamental and they would rather leave it uncultivated than transfer it voluntarily. One of the main reasons for this idea is the unstable employment of migrant workers in cities and towns. Since farmers retain the right to contract land, migrant workers are not afraid of the instability of urban work. As the development of farming-oriented agriculture in China has just started, the contradiction

between the guarantee function of cultivated land and large-scale operation makes land transfer a big problem. [4]

B. Poor mastery of the scale of the farm

At present, many people think that the bigger the scale is, the better it is since we operate farm in an intensive manner, which is another major problem in the current development of farming-oriented agriculture in China.[5] To realize the maximum benefit of agricultural management, it must ensure low cost. For the farmer, their input mainly includes the cost of renting the land, employing workers and infrastructure. With economies of scale, the scalization is used in agricultural management. Economies of scale means that with the increase of production volume, production costs gradually decrease, thus operators will get more profits with the expansion of the scale. However, with the gradual expansion of scale, there will be only scale without economy, which is, when the scale is large enough, the cost will increase with the increase of production, thus affecting the profit of operators. China is now facing the same problem. Many farmers cannot master the scale of the farm, resulting in poor production and management.

C. The serious problems of pests and diseases in farm-based planting mode

Farm is characterized by its large scale and single planting. Such planting mode not only achieves large area and high efficiency, but also forms new characteristics of field diseases and insect pests. Compared with the traditional planting mode, the crops planted in farms are relatively single, which is also another characteristic of farm-based planting, thus leading to either no diseases and insect pests or large-scale diseases and insect pests. If a large area of the field is homogenized, the advantage of biodiversity will be lost. In the case of the same genetic structure of crops, once a certain disease and insect pests appear, it will spread rapidly, and it will be difficult for crops to play a role to resist. Under suitable conditions, pathogenic bacteria will spread rapidly throughout the farming area. If the farm operators fail to conduct good monitoring and control diseases and insect pests in a timely and effective manner, the harm will be devastating and bring great losses to the farm operators.

VI. COUNTERMEASURES TO PROMOTE THE DEVELOPMENT PROCESS OF FARM-ORIENTED AGRICULTURE

A. Promoting land circulation in a coordinated way

Smooth land transfer is the premise of large-scale development of the farm, so we should take land transfer as the top priority in the current work. If there are some obstacles in the communication between agricultural operators and individual farmers, the local government should provide some help, and the local Party committee, government and relevant departments should act as a medium, so that the contractor and each farmer can reach an agreement, thus realizing the land transfer.

B. Disaster insurance reduces planting risk

As we all know, the agricultural operation situation largely depends on the natural situation, which is a very big factor

restricting the agricultural development. If there is a natural disaster, it will cause reduction in production in slight case and the loss of crops for agricultural operators in severe cases. Therefore, in order to ensure that agricultural operators have no worries to operate, we should establish a set of systematic and perfect guarantee mechanism, which can provide economic security even in the event of natural and man-made disasters and effectively reduce the impact of disasters. The government should introduce a policy of support. The supporting fund should be higher than that for the average farmer to encourage relevant people to engage in agriculture, so that they can get more income from agricultural operation.

C. Providing technical guidance to agricultural operators

With the development of economy, the development of secondary and tertiary industries is obviously higher than that of agriculture. As a result, the young and skilled labor force flood into the cities, away from agricultural production. However, farming-based agricultural management has a very high requirement for the comprehensive quality of agricultural operators, so there is a contradiction between them. Therefore, technical guidance should be given to agricultural operators to ensure that they can proficiently master relevant agricultural machinery and learn cutting-edge agricultural scientific knowledge. The government may formulate relevant laws and regulations, stipulating that farm operators must receive vocational education. After carrying out inspection and testing, government can issue certificates of agricultural operation to those who pass the examination, so as to permit farm-based operation and give preferential treatment and subsidies to farm operation. In the meantime, the state may send agricultural managers and agricultural entrepreneurs to each farm on a regular basis to give guidance and teaching, so as to improve the comprehensive quality of farm operators and the level of farm management.

D. Building rural information service system

Another characteristic of farm-based agricultural management is informationization, that is, we are able to timely obtain today's advanced agricultural information technology and apply it to agricultural management. Chinese agricultural producers obtain information through relatively single channels such as radio stations, newspapers and periodicals. Because of the importance of modern information technology to the construction of rural information service system, only by mastering advanced information can we better master mechanization. Therefore, it is particularly important to establish farm information database and farmland file information database. By doing so, we not only can timely access to the most cutting-edge technical information, but also can establish our own information files and develop our own characteristics, making the farms become enterprise characterized by chain development.

VII. EXPLORING THE DEVELOPMENT DIRECTION OF FARM-ORIENTED AGRICULTURE IN CHINA

A. *The development of farming driven by urbanization*

China has made great progress in the development of urbanization. Many regions are planning and developing urbanization, and the development of urbanization plays a great role in promoting farm development. On the one hand, urbanization can get together a lot of sporadic farmers, which is conducive to the concentration of a large number of arable land and thus promote the farm formation. [6] On the other hand, urbanization can divert many agricultural personnel from rural areas to engage in industrial development, reduce their dependence on agriculture, and thus facilitate land transfer.

B. *A recyclable ecological farm combining cultivation and breeding*

With the development of society, more and more attention is paid to environmental protection, and the development of ecological agriculture is the future trend. [7] Farmers can keep a certain scale of livestock and poultry. Then can plant crops and raise livestock and poultry. Agricultural waste straw can be used to raise cattle, and the waste from livestock can nurture fields, which not only can improve the yield of crops, but also protect the environment, thus realizing the maximum utilization of agricultural resources, the unity of the social and ecological benefits. At the same time, it can reduce the cost of planting and risk management, because raising livestock can relieve farmers' economic pressure to a certain extent. However, such mode of operation has higher requirements for farmers, so it should focus on the development of diversified education and provide talents for ecological agriculture.

C. *Developing farms sightseeing*

Scale makes farms homogeneous, and many look like green seas viewing from a distance. Due to the improvement of people's living standard, people will have aesthetic fatigue to many scenic spots, which provides conditions for the development of farms sightseeing. Farmers mainly focus on agricultural production, and actively spare some space for tourists and urban residents to carry out various kinds of sightseeing and tourism business. They can let tourists pick

fruits, eat their own made vegetable and plant crops by themselves. While they enjoy the fun, farmers can also increase their own economic benefits.[8]

VIII. CONCLUSION

Farm-oriented agriculture is the only way for Chinese agriculture development. With the rapid development of economy, all kinds of production tools have been greatly updated. The development of the economy requires us to make use of this advanced science and technology, so as to continuously improve productivity. The carrier of these tools drives to form large-scale agricultural farmland, which is not only the requirement of China's economic development but also the result of international globalization and agricultural competition among nations. With the development of society, the mode of farm-oriented agriculture is changing constantly. Therefore, the continuous exploration of farm-oriented agriculture is the key to improve the rapid development of China's agricultural economy.

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