

Construction of Optimization Path of Agricultural Products Supply and Demand Based on the Perspective of Supply-side Structural Reform

Jun Wang

General Education Center, Xijing University
Xi'an, Shaanxi 710123, China

Abstract—The imbalance between urban and rural development, inadequate rural agricultural development, and unbalanced agricultural product supply structure are the top priorities for solving the problem of “agriculture, rural areas and farmers” in the new era. Promoting structural reform of agricultural supply side, solving problems such as resource mismatch, disconnection between supply and demand, market distortion, reducing inefficient supply and low-end supply of agricultural products, improving the quality effect of agricultural product supply and brand competitiveness, promoting agricultural restructuring, and increasing farmers’ income, which are the main direction of China’s agricultural policy reform and improvement in the new era. This paper analyses the current situation of the contradiction between supply and demand of agricultural products in the new era, and deeply analyses the dilemma faced by the structural reform of the supply side of agricultural products in the new era. On this basis, it puts forward the construction of the optimal path of supply and demand of agricultural products under the perspective of the structural reform of the supply side.

Keywords—New era; Supply-side structural reform; Agricultural products; Supply and demand; Optimization

I. AN ANALYSIS OF THE UNBALANCED SUPPLY AND DEMAND OF AGRICULTURAL PRODUCTS IN THE NEW ERA

A. *The production and consumption of agricultural products do not match, and the market fluctuates frequently*

With the continuous expansion of the middle class and urban groups in China, the consumption demand of agricultural products is changing every year. Under the background that consumption patterns and habits have not yet been finalized, production is organized entirely according to consumption, and agricultural products are often “difficult to sell for a while, difficult to buy for a while”. In addition, the international agricultural products market fluctuates frequently, the domestic production conditions vary widely, the degree of agricultural industrialization is not high, and the production end of agricultural products is unstable, which leads to the mismatch between the production and consumption of agricultural products. The current situation of “difficult to buy” and “difficult to sell” will continue to exist.

B. *Ineffective supply and low-end supply are difficult to meet the effective demand of high quality and diversification of residents' consumption*

Some varieties of production are out of touch with market demand, coupled with the continuous expansion of China's opening to the outside world and the gradual differentiation and globalization of consumer choices, it is difficult for domestic agricultural products to meet the needs of consumers for high quality and diversification. For example, despite the rapid development of domestic livestock products and aquatic products in the past three years, the imports of livestock products and aquatic products are still growing substantially, especially the imports of beef and mutton, liquid milk and infant milk powder. In 2016, the trade deficit of livestock products reached 17.76 billion US dollars, an increase of 22.0% compared with the same period last year. Some agricultural products are single, which can not meet the diversified needs of the market.

C. *Excessive imports of non-essential agricultural products and significant increase in import substitutes*

Since the implementation of the structural reform of agricultural supply side, it has achieved initial results in solving the “three high” phenomena of high yield, high stock and high import in grain production in China. Destocking of maize has achieved remarkable results, but the stock is still as high as 210 million tons. Domestic rice stocks exceeded 100 million tons in 2016, and 29.97 million tons of grain were imported due to the upside-down price at home and abroad. Imports of some food substitutes have increased dramatically due to the absence of tariff quotas. For example, in 2015, barley imports increased by 98.3%, sorghum imports increased by 85.3%, and corn distiller's grains imports increased by 26%. The import of these varieties made the corn a structural excess, causing the reserve to expand. The phenomenon of “national goods entering the warehouse and foreign goods entering the market” is more serious.

D. *The lack of domestic agricultural product nutrition standards is out of line with the needs of modern processing industry*

China's agricultural product standards are mainly quality standards, nutrition standards are relatively too little, and modern agricultural products processing industry has certain nutritional requirements for agricultural products. A large number of domestic agricultural products can not meet the

needs of processing industry, and have to increase the import of agricultural products [1]. For example, strong gluten and weak gluten are mixed together after wheat harvest in China, while wheat processing enterprises attach great importance to the gluten content of different wheat. Often because the domestic wheat does not meet the nutritional standards, it is imported from abroad. Especially in baking industry, the standard of wheat varieties is too high, most of the domestic wheat varieties can not meet the requirements. This is an important reason why wheat imports are increasing in 2016 when the total grain imports are declining. The same is true for soybean imports, apart from the fact that domestic soybean prices are higher than those of foreign soybean prices, the more important thing is that domestic soybean quality and nutritional standards are difficult to meet the needs of processing industry.

II. THE DILEMMA FACED BY THE STRUCTURAL REFORM OF THE SUPPLY SIDE OF AGRICULTURAL PRODUCTS IN THE NEW ERA

A. *The urbanization of the population is accelerating, and the supply of agricultural products is not balanced and insufficient*

With the deepening of urbanization, more and more farmers move to cities and towns, from food producers to food consumers. Their food consumption concept and consumption structure also change. That is, the consumption of rations decreases, the consumption of meat, eggs and milk increases, and the total per capita food consumption increases [2]. Research shows that the daily consumption of forage grains by urban residents is about 713.7 grams, which is 250 grams higher than 463.6 grams of rural residents. It is expected that rice and wheat will remain self-sufficient in the future, but the self-sufficiency rate of feed grain (corn and soybean) will decrease significantly, and the contradiction between food supply and demand will gradually become prominent. In addition, as the rural poor achieve poverty alleviation and enter the country with a comprehensive well-off society, their food consumption structure will undergo major changes and upgrades. Among them, high-quality, safe, diversified and personalized agricultural products and food will become an important part of consumption.

B. *The middle class is growing rapidly, increasing the imbalance between supply and demand of agricultural products*

According to the definition of the National Bureau of Statistics, the annual disposable income of the family is 90,000 to 400,000 yuan, which is the middle income class. According to this standard, there are currently 334 million middle-class people in China, accounting for 24.3%. As the per capita disposable income continues to rise, the demand for high-quality and safe agricultural products in this part of people's consumption is more urgent. At the same time, the consumption of the rest of the population has been further improved in the process of well-off, but the overall improvement is still slow, and their agricultural products are still in the "rigid demand" level. The demand for agricultural products of all strata in our country is unbalanced, which also leads to the long-term differentiation of the production pattern of agricultural products in our country. Agricultural production

should pay more attention to providing different kinds of products to meet the needs of different groups. The formulation and adjustment of agricultural industry policy is more complicated.

C. *Comparative benefit of grain production is low, and farmers' enthusiasm for production is not high*

To ensure the effective supply of agricultural products, the first is to ensure food security. Although China's total grain output has stabilized at 600 million tons, the foundation of grain production security is still fragile. Data from the National Bureau of Statistics show that, after deducting production costs, the average income per mu of major grain in 2016 is 642 yuan, down 10.4% from the same period last year. The average income of winter wheat, rice, corn and soybean per mu is 510 yuan, 902 yuan, 568 yuan and 374 yuan respectively. If the deduction of labor costs and land costs account for more than 60% of the total cost of grain production, it is an important reason for the low efficiency of grain production. For farmers, the current grain price is no longer profitable, but there is still a certain profit margin for foreign grain imports in China. For example, the labor cost of wheat production in the United States is only 1% of China's, and the land cost is only one-third of China's. At present, the price inversion at home and abroad is inevitable, and domestic grain revenue is difficult to increase in the short term.

D. *With the continuous expansion of opening up, it is difficult for agricultural products to cope with international competition*

Since the financial crisis in 2008, due to the adoption of large-scale stimulus policies, the prices of land rent, labor costs, agricultural inputs and other factors have been rising, and the production costs of agricultural products have been continuously improved. In the same period, the international market demand was insufficient, and the prices of international bulk products fell again. Domestic prices are generally higher than international prices. For example, experts research shows that the price of domestically produced rice, wheat and corn in 2010 is higher than the international market offshore price. After 2013, it is higher than the import duty-paid price within the quota, and the import price is low [3]. In the "upside down" phenomenon of domestic production prices, it is difficult for agricultural products to cope with international competition. Our government adopts policies and measures such as agricultural subsidies, minimum purchase price and temporary purchases and other policy measures. On the one hand, we should protect the interests of farmers. On the other hand, we should also see that the negative effects of these policies and measures have accumulated for a long time and the prices of domestic agricultural products have gradually increased, which has caused new problems such as "foreign goods entering the market and domestic goods entering the warehouse". In the new era, how to deal with the competition of international agricultural products is related to the safety of agricultural industry and the increase of farmers' income in the future.

III. CONSTRUCTION OF OPTIMIZED PATH OF AGRICULTURAL PRODUCTS SUPPLY AND DEMAND BASED ON THE PERSPECTIVE OF SUPPLY-SIDE STRUCTURAL REFORM

A. *Meeting the demand for agricultural products from focusing on quantity to focusing on quality*

To further promote the structural reform of the supply side of agriculture, it is necessary to shift from focusing on satisfying the "quantity" demand to satisfying the "quality" demand. With the accelerated upgrading of the consumption structure of urban and rural residents, people not only need to eat well and satiate, but also eat nutritious and healthy, eat rich cultural characteristics, consumers pay more attention to the quality and safety of the agricultural products they consume. At present, agricultural development should conform to the upgrading trend of domestic food consumption structure, focusing on reducing low-end supply, increasing middle and high end supply [4]. We should optimize the regional distribution of agriculture, adjust the planting structure of grain, cash crops and feed as a whole, reduce the area of maize, focus on developing non-genetically modified high-protein soybeans, and stabilize the self-sufficiency level of cotton, edible oil and sugar; develop large-scale and high-efficiency breeding industry, promote breeding industry to scale, specialization and standardization step by step; enlarge and strengthen superior and characteristic industries, give full play to the important role of brand building in characteristic agriculture, promote modern agricultural production methods such as scale, standardization, informationization and improved varieties by brand, and improve the quality of agricultural products and food safety level.

B. *From Normal Development to Innovation and Green Development*

To improve the quality of agricultural supply, we must promote the transformation of modern agriculture from normal development to green and innovative development. Firstly, we should adjust the green agricultural production mode and enhance the sustainable development ability of agriculture. We should concentrate on tackling the outstanding problems of agricultural environment, reduce the excessive use of chemical inputs, withdraw production that exceeds the carrying capacity of resources and environment, utilize agricultural waste resources, and restore the overdrawn resources and environment [5]. The second is to continuously promote agricultural science and technology innovation and popularization and application. The contribution rate of China's agricultural science and technology progress is only 56%, and there is still much room for improvement. At present, it is urgent to solve the outstanding problems of modern seed industry upgrading, mechanization of major crop production, and agricultural informationization. It is necessary to speed up the improvement of the agricultural science and technology extension service system, fully mobilize social forces, and continuously apply scientific and technological achievements to production practice and form productivity. The third is to strengthen rural human capital investment. Pay attention to the cultivation of new-style farmers who understand technology, manage and love the countryside. In particular, it is necessary

to regard the cultivation of e-commerce talents as the key task of rural vocational education and skill training.

C. *From Government-driven to Market-driven*

With the continuous expansion of China's agricultural opening to the outside world, the market awareness of agricultural production and operation subjects is becoming stronger and stronger, relying entirely on the government-led, it is difficult to adapt to the changes in market demand. For local governments, whether it is to cultivate new agricultural management subjects, agricultural socialization service subjects, or to build modern agricultural industry parks, they must be market-oriented [6]. When formulating policies and introducing measures, the government should not only respect farmers' wishes, but also conform to market demand, and also prevent short-term performance behavior that is out of the relationship between supply and demand in the market.

D. *The Formation Mechanism of Agricultural Product Price Changed from Government Protected Price to Separation of Price and Compensation*

The 19th National Congress of the Communist Party of China "let the market play a decisive role in resource allocation" into the party constitution, means that the agricultural product price formation mechanism will gradually change from government pricing to "market pricing, price compensation separation" [7]. In order to eliminate the phenomenon of "three high" in grain production, we must rely on the market. In the future, the development trend of China's grains policy will be grain self-sufficiency and absolute security of rations. Therefore, the order of reform should be feed grain and rations first, and gradually withdraw from policies such as temporary storage system, market-based purchase and minimum protective price, so that prices can truly reflect the relationship between supply and demand, so that the price mechanism can effectively guide and configure agricultural resources. While adhering to the formation of agricultural product prices by the market, we should also take into account the protection of farmers' interests. The reform of Maize Storage System in 2016, the subsidies of grain-bean rotation and maize producers are changing to the direction of "price-compensation separation".

E. *Agricultural Product Production Transition from Primary Industry to Fusion of Three Industries*

In the whole process of agricultural industry, the production cycle is long, the branch system is many, and the industrial form is complex and diverse. In order to realize the benign interaction and coordination of the integration and industrialization of agricultural industry, it is necessary to give full play to the coordination of agricultural growers, agricultural professional cooperatives, leading agricultural enterprises and other agricultural production, operation and processing subjects. Consolidate the basic functions of farmers' professional cooperatives and family management in the process of agricultural industry modernization, based on family production and management, with cooperation and association as the link, socialized service as the support, and agricultural enterprises as the leader to cultivate diversified rural industries. Integrate the main body and build a modern agricultural management system. On the basis of the primary industry,

through improving the quality of cropping and feeding supply, we can improve the quality and efficiency of agricultural production and sustained increase of farmers' income. Making good use of the advantages of multi-function agriculture and the whole agricultural industry chain, we should change the industrial structure of the primary industry, link up the processing and production of the secondary industry and activate the service circulation of the tertiary industry. Through the synergy, co-construction, sharing and integration of the first, second and third industries, high-quality agricultural products supply and brand characteristics of agricultural products will be formed, the comprehensive benefits of agricultural industry supply will be improved, and agricultural efficiency and farmers' income will be promoted.

IV. CONCLUSION

Under the background of the upgrading of consumption structure and regional economic integration, China's agricultural product market environment is rapidly changing, consumption is rapidly upgrading, and both supply and demand are facing a new situation. By promoting structural reforms in the supply side of agriculture, we will optimise the quality of agricultural products, adjust the vegetable baskets of residents, adjust the production methods of green agriculture, break down institutional barriers, and promote the convergence of supply and demand of agricultural products. Improving the structure and quality standards of agricultural products planting, docking with international dietary and nutritional standards, improving the quality and market competitiveness of agricultural products, promoting high-end supply of agricultural products and meeting the consumption needs of residents in the new era are the optimization objectives of the supply-side reform of agricultural products in the new era.

REFERENCES

- [1] Zhang Bei. International Reference for Structural Reform of Agricultural Products Supply Side[J]. *Reform*.2016(05):123-130.
- [2] Ye Dan, Huang Qinghua, Liu Hao. Research on the Optimization Path and Mechanism of China's Agricultural Products Structure under the Background of Supply Side Reform[J].*World Agriculture*.2016(06):199-202.
- [3] Li Dalei, Zhong Weizhou. Agricultural Supply-side Reform, Regional Brand Building and Quality Improvement of Agricultural Products[J].*Theory Monthly*.2017(04):132-136.
- [4] Huang Jun Ping. Research on Innovation of E-commerce Model of Agricultural Products under the Background of Agricultural Supply-side Reform[J]. *Chinese Market*.2017(12):44-45.
- [5] Li Jingyu. Agricultural Product Quality Safety Management Strategy under Agricultural Supply-side Reform[J].*Modern Rural Technology*.2018(06):94.
- [6] Xu Lu. Study on the Structural Reform of Rural Supply Side[J].*Rural Technology*. 2018(14):10-11.
- [7] You Feng, He Puming. Research on the Development of Rural Integration of Three Industries under the Background of Agricultural Supply-side Reform[J].*Cooperative Economy and Science and Technology*.2018(15):4-6.