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Effect of Regional Crop Structure Adjustment on Agricultural and Forestry Economic Management

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Abstract: As China enters the World Trade Organization, opportunities and challenges also emerge, especially in agriculture. In this context, whether China can benefit from participating in the multilateral trading system depends on whether China's economy as a whole and various region can give full play to its comparative advantages. Therefore, it is very necessary to actively carry out research on the role of crop regional structure adjustment on agricultural and forestry economic management. The purpose of this article is to explore the effect of regional crop structure adjustment on the economic management of agriculture and forestry. Through the research on the regional structure adjustment of four crops of early indicia rice, corn, wheat, and soybean, to understand that there are certain differences in the production of different crops in different regions of China. Comparative Advantage. The results show that the area planted between the main early indicia rice-producing areas in 2015 was relatively dispersed, with the highest share of 17% in the west of Haiyan District and the lowest share of Haiyan in the south of 8%, a difference of about double; and 2019 early indicia rice The areas with the highest and lowest share of sown area in the main producing areas were 24% and 6% respectively, a difference of nearly three times.

1. Introduction

Agriculture is the most important and basic sector of the three major industries, and planting is the most special component of agriculture [1]. On the one hand, plantation production cannot be separated from the natural environment and resources, and is greatly affected by factors such as weather and geography. Therefore, the spatial layout of the plantation industry is often imprinted with a deep natural geographical imprint; on the other hand, the main body of production and operation in China's plantation industry is a large number of scattered farmers, with a small scale of operation and scattered organizations. Especially after the implementation of the market economy

system, farmers have gradually mastered the autonomy of production and operation, and they can choose the cultivation of crops according to their own preferences and market benefits [2]. This change in the spatial layout, through the supply and demand of the market, in turn affects farmers 'income, which further affects farmers' production and management decisions, and cyclically and repeatedly affects the spatial layout of the plantation industry [3].

Since the reform and opening up, with the improvement of living standards, people's consumption of food and consumption structure have changed tremendously, and agriculture, the forefront of the food chain, has also undergone profound changes [4]. In the past three decades, the production and supply of agricultural products in China have been greatly enriched. On the one hand, it is reflected in the continuous evolution of the country's agricultural production structure. The proportion of food crops is declining, while the proportion of cash crops has gradually increased [5]. The structure of the planting industry in most provinces is becoming more and more specialized. For example, the planting area of Heilongjiang's first-season rice and soybean crops has increased sharply, while the planting area of wheat has rapidly decreased. Xinjiang ’s cotton planting area has rapidly increased, becoming China ’s largest the main cotton-producing region of Guangxi; Guangxi has significantly increased the cultivation of sugarcane, becoming China's largest sugarcane-producing region, and has driven the rapid development of its sugar industry [6].

Liu pointed out that with the continuous increase of China's grain output, major changes have taken place in the regional pattern of China's grain production. In history, the long-term "South Grain to North Diversion" situation has ended, and it has been replaced by "North Grain South Diversion". Many of the major commercial grain bases in the south have become net food transfer areas; some northern low-yield areas with poor production conditions have become new commodity grain production bases [7]. The regional characteristics of China's grain production have persistent and stable changes. Per capita arable land resources and the pulling force of non-agricultural employment are important reasons that affect the characteristics of China's grain production regions 14 days after 1982. In general, China's grain production areas have begun to shift from "central" areas such as Sichuan, Hubei, and Hunan to "marginal" areas such as northeast and west [8]. Tattnall analyzed the regional changes in China's food crop production over the years, and pointed out that although the rice planting area in the main rice-producing areas such as the middle and lower reaches of the Yangtze River, Southeast and South China showed a downward trend, and the proportion of total planted area was It has declined, but it is still in an absolutely dominant position [9]. LI Sheng-me research in recent years, great changes have taken place in China's rice production. On the one hand, the total planting area of rice in the country has decreased significantly, and on the other hand, the layout of rice has changed dramatically: traditional rice in the southern region, the middle and lower reaches of the Yangtze River The area of rice planted in the main producing area has decreased a lot, while the area of rice planted in the Northeast has increased significantly [10].

The main research content of this article is roughly divided into four parts: the first part is the introduction part, which aims to make a systematic review of the main research content of this article from the research background, research purpose, research ideas and methods; the second part is the theoretical basis, details Moreover, the research methods and research theories of this paper are introduced systematically. The third part is the experimental part. It studies the regional structure adjustment of the four crops of early indicia rice, corn, wheat, and soybeans to understand that China has certain comparative advantages in the production of different crops in different regions. The fourth part is the summary and recommendations of this article, which is a summary of the results of the article.

2. Proposed Method

2.1. Comparative Advantage Theory

Adam Smith believes that if a country has less labor per unit of resources used in the production of a product, then it has an absolute advantage in the production of that product. The international division of labor is based on the natural advantages and acquired advantages of a country. The reason for trade between countries is that there is an absolute difference in the cost of producing goods between countries. But the theory cannot answer whether any country can benefit from participating in the international division of labor if any country does not have a comparative advantage in the production of each product. Ricardo's comparative cost theory solves this problem. As long as there is a relative difference in productivity between countries, there will be a relative difference in production costs and product prices, so that countries have a comparative advantage in different products, making the international trade becomes possible. Orin and Huckster use modern microeconomics methods to analyze economic structural problems, and use the theory of supply and demand to study the abundance of production factors, the combination and substitution of factors in production, and the price relationship determined by them. They explain the differences in the relative prices of production factors and commodity prices, and the generation of comparative advantage from the perspective of differences in resource endowments among countries, rather than differences in production technology. As a result of trade, commodity prices are equalized, and to some extent, the prices of factors of production can also be equalized. Therefore, under the conditions of a market economy, manufacturers seeking to maximize profits are looking for the best production location in space and forming a reasonable industrial structure layout. But like Ricardo's model, Olin's doctrine is static. He discards differences in technology and economic conditions, and ignores dynamic changes in comparative advantage. Porter's research on the industry's international competitiveness has proposed the major factors that can influence or determine the international competitiveness of specific industries in various countries. Production factors, demand conditions, the status of related and auxiliary industries, corporate strategic structures and competitors, government behavior, and opportunities. Starting from the "national diamond" system of the industry's international competitiveness, research was started. Neoclassical trade theory explains the reasons for international trade from the perspective of resource allocation.

Neoclassical economics believes that the market is the most effective of all resource allocation methods, especially a completely competitive market that can most effectively guide social resources to achieve optimal allocation, and analyzes consumer equilibrium and producers in a mathematical and mathematical form. The internal mechanism of market allocation of resources such as equilibrium and the realization of Pareto efficiency. The scarcity of resources is the basic premise for analyzing resource allocation in neo-classical economics. Scarcity has led producers to make reasonable choices on product types and quantity arrangements within the “probability of production boundary”, and to maximize profit, consumers can only make a limited set of consumer goods with limited income. The right choice to maximize utility. The economic system analyzed by neoclassical economics is a closed system consisting of only two major economic entities: consumers and producers. Among them, all production factors and products are exchanged through the market to achieve the circulation of material flow and information flow in the system. The allocation of scarce resources among different subjects. Due to the assumption of the behavior of rational economic people, there is an interest-driven mechanism inherent in the market exchange process, which prompts market participants to continuously adjust their demand and supply according to their own best-interest criteria, and to adjust in this kind of repeated margins China finally achieved a certain market equilibrium point that both parties in the transaction accepted, that

is, demand equals supply, and the market was cleared. As for consumer behavior, neoclassical economics is based on the theory of utility and analyzes the law of diminishing marginal utility as the basic assumption. Consumers can obtain the same utility from different combinations of the quantity of goods. Under the given price, the total budget required by different combinations is different. Therefore, under the constraints of a given utility function and the amount of resources or wealth, consumers will choose a set of optimal consumption combinations to achieve the economic behavior goal of maximizing utility. The consumer equilibrium condition of neoclassical economics is that the marginal utility brought by the last unit of currency that consumers spend on various commodities is equal, that is, the ratio of the marginal utility of various commodities to their prices is equal.

For producer behavior, neoclassical economics uses the basic assumptions of production cost theory and the law of diminishing marginal returns. In a similar way to the theory of consumer behavior, the condition of the producer equilibrium is that under the given cost and production technology conditions, the enterprise continuously adjusts the input of factors to make the last unit of money cost spent on all factors. The resulting marginal output is equal, that is, the ratio of the factor's marginal output is equal to its price ratio. In a perfectly competitive market, the producer is the receiver of the price. The marginal revenue is equal to its price when the unit sells one more product. The condition for maximizing profit is that the marginal revenue is equal to the marginal cost. At this time, the market price is equal to its average. The lowest point of cost, that is, the producer's maximizing behavior only manifests in the optimal output decision, and can only obtain normal economic profit, and there is no excess profit. Producers provide the society with the best output at the lowest production cost, which not only achieves the goal of maximizing their own profits, but also achieves the highest efficiency of resource allocation.

2.2. Structural Change Theory of Economic Growth

The core question of theoretical research on structural change of economic growth is: What economic mechanism does the underdeveloped economy use to transform the domestic economic structure from traditional agriculture that can only survive, to modernized, urbanized, diversified manufacturing and Service industry economy. In the mid-1950s, American economist Arthur Lewis put forward the well-known theory of the economic structure transformation of underdeveloped countries—the dual structure model. Lewis's basic theory is that non-renewable resources (such as land, etc.) are used extensively within the traditional agricultural economy. Therefore, as the population continues to increase in large numbers, the marginal productivity of agricultural labor forces is declining, or even reduced to zero. Under the circumstances, the income of agricultural workers is very low, and they can only maintain the lowest standard of living. In the modern industrial sector, a large number of renewable resources such as factory buildings and equipment are used, and the scale of which has continuously expanded with the development of production and the accumulation of capital. Therefore, the development of the economy is to continuously absorb the surplus labor in agriculture through the expansion of the industrial sector, so as to eliminate the various structural imbalances existing between workers and farmers and within them.

The core question of theoretical research on structural change of economic growth is: What economic mechanism does the underdeveloped economy use to transform the domestic economic structure from traditional agriculture that can only survive, to modernized, urbanized, diversified manufacturing and Service industry economy. The basic theory is that a large number of non-renewable resources (such as land, etc.) are used within the traditional agricultural economy. Therefore, as the population continues to increase in large numbers, the marginal productivity of agricultural labor forces is gradually reduced, or even reduced to zero. The income of agricultural

workers is very low, and they can only maintain the lowest standard of living. In the modern industrial sector, a large number of renewable resources such as plant and equipment are used, and its scale is continuously expanding with the development of production and the accumulation of capital. Therefore, the development of the economy is to continuously absorb the surplus labor in agriculture through the expansion of the industrial sector, so as to eliminate the various structural imbalances existing between workers and farmers and within them. At the same time, according to the neoclassical analysis method, the transfer of agricultural labor force was due to the increase in agricultural labor productivity greater than the population growth rate, and there was a surplus in agriculture, so agricultural labor began to shift to the industrial sector, giving Industry brings growth. As long as the agricultural surplus is increasing, the growth of the Ministry of Industry can also be sustained. The larger the agricultural surplus, the larger the labor transfer scale, and the faster the industrial sector develops. Therefore, the necessary conditions for economic development are, firstly, agricultural surplus, and secondly, the growth rate of industry must be fast enough.

2.3. Economic Growth Dependence Theory

The idea of the growth stage is to divide the process of economic development into different stages, so as to study the conditions and laws for the transition from the lower stage to the higher stage. The dual economic model explores the methods and laws of industrial structure transformation from the inside of the national economy, and expounds the laws of economic development. The dependency theory studies the relationship between the "center" and the "periphery" in the process of economic development. According to the theory, the world economic system is composed of two parts, the central region and the peripheral regions. Developed countries are at the center of dominance, and developing countries are at the center or dominated by the center. The products exported by developed countries are high-tech industrial products, while the products exported by developing countries are mostly agricultural products. In this way, the "peripheral" products imported by the "central" are products with low prices and low-income elasticity, while the "central" products imported by the "peripheral" are products with high prices and high demand elasticity. At the same time, the "peripherals" are in competitive markets Sells its products on the Internet, and the "center" is selling its products in a monopoly market. Because "peripheral" products are mainly primary products, with homogeneous and indifferent characteristics, they can only be sold in monopoly production. In contrast, "central" products, such as industrial equipment and durable consumer goods, are different. Their producers can squeeze monopoly prices from "peripheral" consumers.

The dependency theory's interpretation of agricultural development contrasts sharply with the growth stage and dual economic theory. The growth stage theory attempts to explain the transition from primitive agriculture to modern industry: the final conclusion of the dual economic model is that farmers are absorbed into the market and the duality disappears. Attachment theory attempts to explain the reasons for peripheral backwardness. This backwardness will continue and the duality will not disappear.

3. Experiments

3.1. Experiment Preparation

(1) Data source

The data of various crop yields, sown area, irrigation rate, GDP per capita, affected area and affected area during in recent years are from China Agricultural Statistical Yearbook and Xinhua Online Database, one year the unit area input data by province comes from the "National

Agricultural Product Cost Survey Data Collection". The data of other variables are compiled based on the "China Statistical Yearbook", "China Rural Statistical Yearbook" and "China Agricultural Statistical Yearbook" over the years. Because the input per unit area adopts the value index, the impact of inflation must be eliminated. After using the price index of the means of production to eliminate the impact of inflation on input costs, an analysis database is constructed. Due to the discontinuity of sample observation points and the existence of many problems in China's agricultural statistics system, the quality of the data is not very reliable. As a result, the results obtained may be affected by data quality issues.

(2) Analysis of crop frontier stochastic production function

In estimating the model in this study, a likelihood function ratio test was performed for a production function, a neutral technological progress hyper log production function, and a biased technological progress hyper log production function. The results show that the form of the hyper logarithmic production function with neutral technological progress is the most ideal. See the attached table for the estimation results. Because the hyper-logarithmic model reflects the complex substitution and supplementary relationships between the elements, it is not possible to directly compare the sign and size of the estimated parameters in different models. In order to solve this problem, this paper uses the estimated frontier production function to calculate the output elasticity of various input factors by crop.

(3) Experimental objectives

The objectives of agricultural land resource allocation are divided into two types: one is to use the least amount of agricultural land resources in order to achieve predetermined benefits; the other is to create the maximum benefits with limited agricultural land resources. The former is to achieve the predetermined benefit goals, adjust the structure of agricultural land, reduce costs, and determine the minimum cost of the benefit value as the objective function, which is actually to minimize the optimal planning problem. The latter is based on a certain number of factors, and optimizes the allocation of agricultural land, adjusts the structure of agricultural land, and finally obtains the maximum benefit. The limiting condition is the amount of resource input, which is actually the optimal planning problem. The allocation of agricultural land resources includes economic, social, and ecological benefits.

The allocation of agricultural land resources is to create more agricultural products or provide more services with limited agricultural land. The main indicators of the value of products produced or services created in a country or region within one year are the gross output of the primary industry, the primary industry has added value and the per capita income of farmers and herdsmen. Following the principle of economic benefits, these indicators are required to grow as much as possible.

In terms of social benefits, the allocation of agricultural land resources requires agricultural products or services provided by agricultural land resources to better meet social needs, not only to achieve effective production, but also to effectively distribute these agricultural products and services to society and promote efficient consumption. If the benefits of distribution and consumption are considered, the production and economic benefits have no meaning. Social benefits include not only standards for distribution and consumption, but also standards for social culture, social stability, and social security.

When judging whether land resources are optimally allocated, an important factor is the ecological environment. If only the maximum output and fair distribution are obtained without considering the ecological environment, then the allocation of land resources cannot be said to be reasonable. Only when economic, social and ecological benefits are taken into account in land use can the necessary conditions for reasonable allocation be met. Eco-environmental resources are common in the world, and any method of land use is a kind of communication with the ecological

environment. For the input of any engineering project, people often ignore the ecological environment as a resource and also an input. Eco-environment input cannot be measured by physical value scale, the ecological environment cannot be quantified, and there is no corresponding measurement standard. Therefore, there is no unified and clear evaluation standard for the ecological benefit evaluation of agricultural land resource allocation.

(4) Experimental methods

It is based on the calculation of single-use land, using the approaching approach to achieve a quantitative balance in farmland and a reasonable spatial layout. Quantitative methods, also called mathematical methods. It builds a mathematical model based on the basic information obtained from the survey. Quantitatively reflect the relationship between the allocation of agricultural land and other factors, and use computers to solve the problem to obtain multiple choice modes. Through the response to multiple policy measures, multiple schemes are obtained. According to the different types of models, it can be divided into multi-objective programming, gray linear programming, linear programming, and fuzzy linear programming. As an effective method of resource allocation, linear programming is a method with clear objectives under certain limited conditions, and comprehensively considering the selection of the optimal solution from multiple alternatives. This paper uses a linear programming model to study the optimal allocation of agricultural land resources in Xinjiang.

3.2. Experimental Data

Since the reform and opening up, major changes have taken place in the structure of China's crop industry. On the one hand, the national average cropping structure has changed significantly, mainly due to the decline in the proportion of food crops planted and the increase in the proportion of cash crops. From in recent years, the proportion of China's food crops fell from 80.1% to 68.7%, a decrease of about 11 percentage points; while the proportion of cash crops has shown an increasing trend, with the largest increase being vegetables, an increase of nearly 9 percentage points, followed by oil crops, an increase of about 1 percentage point, the proportion of sugar and tobacco planting has increased, see Table 1. On the other hand, the spatial layout of China's plantation industry has also undergone profound changes. Taking food crops as an example, the direction of change in the center of gravity of food production has changed from "toward the southeast" to "toward the northeast." 2. The central region was transferred or concentrated. From 2015 to 2019, the proportion of grain production in the eastern region decreased by 5.45%, the central region increased by 4.78%, and the western region increased by 1.23%. The most obvious change is the Northeast Plain, which gradually evolved from the original "Great Northern Wilderness" into China's important rice, corn and soybean production base. Among them, the area of rice planted in Heilongjiang Province in the first quarter of the year increased by more than 8 times, and the output growth rate was as high as 12 times. Fan. On the contrary, the proportion of wheat planting has dropped sharply, and the area of wheat planted in Heilongjiang Province has decreased by nearly 6 times year-on-year.

Table 1. Basic situation of planting industry

Years	Food	Oil	Cotton	Sugar	vegetables
2015	80.1%	5.4%	3.4%	0.6%	2.2%
2019	68.7%	8.6%	3.1%	1.2%	11.6%

4. Discussion

4.1. Analysis of Crop Regional Structure Adjustment

Rice, also called rice, is one of the main food crops in China. The annual rice output accounts for 36% of China's total grain output, which is higher than that of corn (and wheat (the largest grain variety). According to different planting, growth and maturity periods, rice can be divided into three types: early, middle and late rice. Early rice Planting and harvesting are earlier, and later rice or other crops can usually be planted later; medium rice can only be planted for one season because it is planted and grown in the middle of each year; late rice includes two types, one type is planted with early rice The early and late double seasons are suitable for tropical and subtropical regions, such as Hainan, Hunan, Jiangxi, and Guangdong. The other type is single-season late rice, which is generally of good quality and suitable for cultivation in temperate and cold regions, such as Heilongjiang. In addition, according to the difference in quality, rice can also be divided into indicia rice and japonica rice. India rice is generally planted in tropical and subtropical regions with short growing seasons and matures many times a year in long frost-free periods. The taste is relatively dry and coarse. Locally grown rice is indicia rice; and japonica rice is mainly grown in temperate and cold regions, with long growing seasons and good taste, with Northeast rice as a typical representative. Take Huaiyin District of Huaian City as an example.

Table 2. Planting area share of early indicia rice

Years	Central	East	West	South	North
2015	14%	16%	17%	8%	10%
2019	24%	23%	17%	6%	2%

As shown in Table 2, early indicia rice is mainly distributed in the southern regions where China has more sunlight, abundant rain, and higher temperatures. In 2019, the different areas of early indicia rice cultivation in Huaiyin District of Huaian City are central (24%), eastern (23%), western (17%), southern (16%) and northern (6%). Overall, the area planted between the main early indicia rice-producing areas in 2015 was relatively dispersed, with the highest share of 17% in the west of Huaiyin District and the lowest share of 8% in the south of Huaiyin District, a difference of approximately double. The areas with the highest and lowest share of sown area in the main producing areas were 24% and 6% respectively, a difference of nearly three times. This shows that the cultivation of early indicia rice in China has a more obvious trend of centralization, which indirectly reflects the growing regional specialization of rice in China and even the planting industry.

As shown in Figure 1, from the true value of the planting area, the planting area of early axis rice in the three areas of central Huaiyin, eastern Huaiyin and southern Huaiyin all showed a downward trend, but the decline was different. The largest decline was in the southern Huaiyin District, which fell by 51.9%, followed by the eastern Huaiyin District, which decreased by 31 percentage points; the smallest was in the central Huaiin District, which declined by only 16.7%. The decline in planting area in these three areas is smaller than the national level, so from the perspective of the share of planting area in Huaian City, the share of the three areas has increased.

As shown in Figure 2, among the main wheat-producing regions in Huai'an, Huaiyin District is the most. In 2019, the area planted to wheat in eastern Huaiyin District, western Huaiyin District, southern Huaiyin District, central Huaiyin District and northern Huaiyin District will account for Huai'an 64% of the total wheat sown area means that nearly two-thirds of wheat in Huai'an is produced in these five regions. If we consider that wheat will account for 22% of the total food crop in 2019, these five regions alone will contribute 15% to the food supply of Huai'an City.

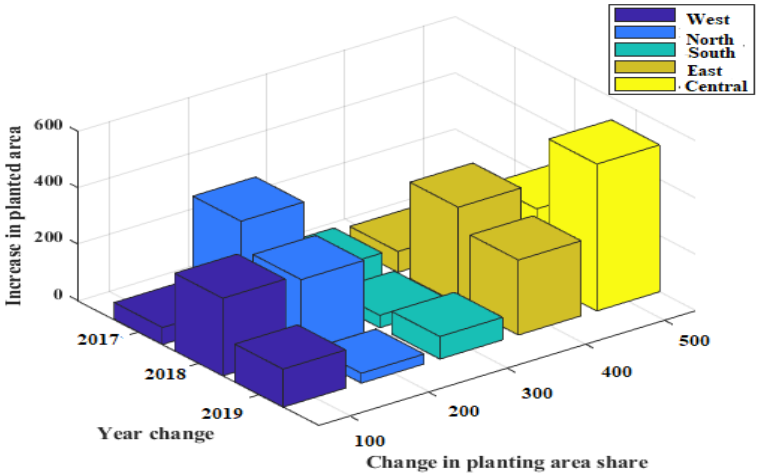

Figure 1. Changes of early indicia rice in different region

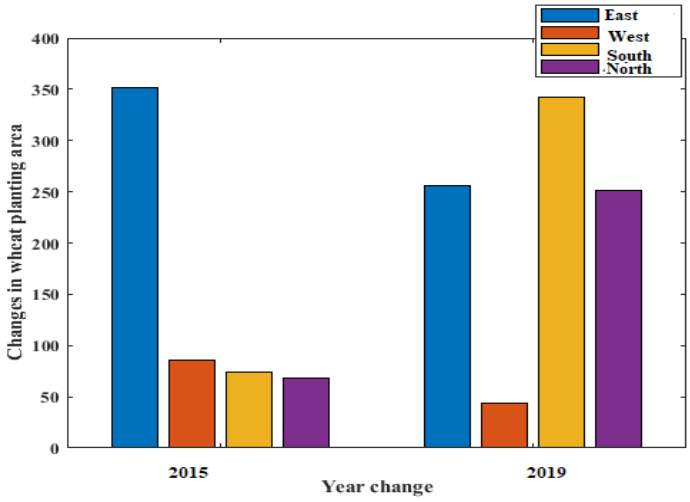

Figure 2. Changes in wheat planting area

Although the area of wheat planted in the eastern part of Huaiyin District has decreased slightly, the decrease is the smallest, only 4.5%, which is far less than the overall national level. Therefore, reflected in the change in area share, the eastern Huaiyin District has a slow growth trend. In the past three decades, wheat sown area has increased rapidly in several regions, such as the northern three provinces of Huaiyin, western Huaiyin and southern Huaiyin, with increases of 35%, 36%, and 47%, respectively. Because the three regions have different proportions in Huai'an, the changes in wheat area share in the three regions are not consistent with the increase in the area of wheat planted. It can be seen from the figure that the fastest growth in area share is in the west of Huaiyin District, with an increase of 9 percentage points. This is the great contribution of Huaiyin District as the main food producing region of Huaian City to China's food security. The northern Huaiyin area and the southern Huaiyin area have relatively flat area share growth rates of about 4 percentage points.

4.2. Analysis of Crop Structure Adjustment on Agricultural and Forestry Economic Management

China's corn is mainly distributed in the northern region. Since the reform and opening up, with the great changes in the production and consumption environment at home and abroad, China's corn

production structure and spatial layout have changed significantly. Judging from the sown area, the sown area of maize in the country and in all regions basically showed an upward trend. As shown in Figure 3, from 2015 to 2019, the nation ’s corn sown area increased by half in the three to forty years, becoming the largest food crop. One aspect is that the rapid development of China's feed processing industry has a large demand for corn, an important raw material. At the same time, foreign countries (mainly the United States) have vigorously developed bioethanol, which has greatly increased the demand for corn.

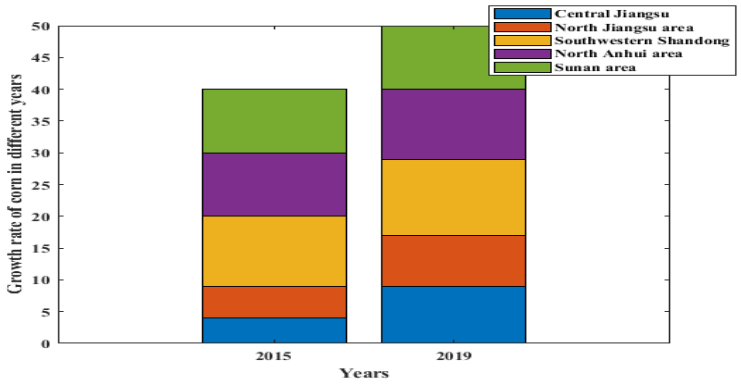

Figure 3. Changes in maize quantity in different region

As can be seen from the figure, the increase in the share of corn sown area is mainly in the three regions of central Jiangsu, northern Jiangsu and southwestern Shandong, with growth rates of 5 percent in central Jiangsu, 3 percent in northern Jiangsu, and 1 percent in southwestern Shandong. These three regions are also the regions with the fastest net increase in corn plantings nationwide. In terms of planting area share, the top five are central Jiangsu, southern Jiangsu, northern Jiangsu, southwestern Shandong, and northern Anhui. The corn sown area in the five regions in 2019 will account for 50% of the total corn sown area in central China. These areas are the main grain producing areas in northern China.

Since the reform and opening up, China's soybean planting area and regional layout have undergone great changes. From the perspective of the whole country, the total area of soybean planting in China has increased from 2015 to 2019, an increase of about 28%, which is a large increase. The sharp increase in soybean planting area has a great relationship with the changes in residents' consumption structure, which is mainly reflected in the rapid growth of soybean products and soybean oil consumption, especially the rapid expansion of soybean oil consumption. At present, China's imported soybeans have exceeded two-thirds of the total soybean consumption, and they are growing rapidly every year.

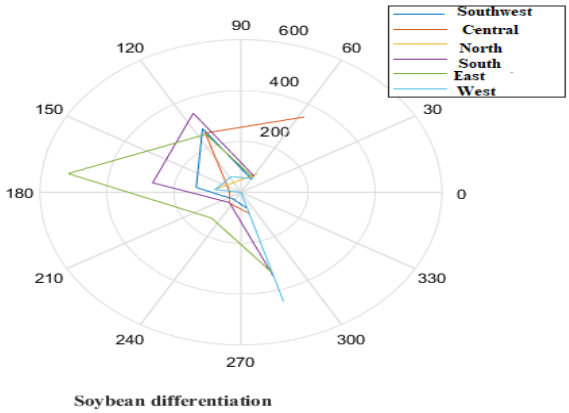

Figure 4. Soybean differentiation

As shown in Figure 4, from the perspective of regional layout, the distribution of soybeans in China shows a large difference. Due to differences in consumption habits, natural conditions, and planting traditions, the cultivation of soybeans is extremely uneven. The traditional main producing areas of soybeans in China mainly include central China. In 2015, the soybean sown area in these six regions accounted for about 69% of the total soybean sown area in Central China. It declined slightly in 2019, but has remained at about 68%. Six regions account for more than two-thirds of central China. Soybean planting area tends to be concentrated in 2019. Among them, the planting area in southwestern Shandong alone accounts for 43.25 of the total soybean area in central China, becoming the largest soybean producing area in central China. Followed by the southern and central Huaiyin District, the share is about 7%. More than or close to 4% of the provinces also have western Huaiyin District and northern Huaiyin District, these are the traditional main soybean producing areas.

5. Conclusion

(1) The research background of this article is that as China enters the World Trade Organization, opportunities and challenges also emerge, especially in agriculture. In this context, whether China can benefit from participating in the multilateral trading system depends on whether China's economy as a whole and various region can give full play to its comparative advantages. Therefore, it is very necessary to actively carry out research on the role of crop regional structure adjustment on agricultural and forestry economic management.

(2) The purpose of this article is to explore the role of regional crop structure adjustment on agricultural and forestry economic management. Through the regional structure adjustment study of four crops of early indicia rice, corn, wheat, and soybean, to understand the production of different crops in different regions of China It has certain comparative advantages. From the perspective of supply, comparative advantages based on resource endowment, technological level, and the development level of related industries such as forestry, animal husbandry, and fishery are important factors affecting the change of agricultural structure.

(3) Experimental data shows that the soybean sown area in these six regions accounted for about 69% of the total soybean sown area in central China in 2015, and it declined slightly in 2019, but it has remained at about 68% in general. More than two-thirds. Soybean planting area tends to be concentrated in 2019. Among them, the planting area in southwestern Shandong alone accounts for 43.25 of the total soybean area in central China, becoming the largest soybean producing area in central China. Followed by the southern and central Huaiyin District, the share is about 7%. More than or close to 4% of the provinces also have western Huaiyin District and northern Huaiyin District, these are the traditional main soybean producing areas. The state can influence the process of education and factor accumulation through appropriate policy measures, thereby affecting future comparative advantages.

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Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Conflict of Interest

The author states that this article has no conflict of interest.

References

[1] LI Shi-Peng. (2016). "Empirical Analysis of the Impact of Adjustment of Agricultural Structure on Agricultural Economic Growth in Xinjian", Asian Agricultural Research, 56(24), pp.116-125.

[2] Dai Fang, Yang Xiaobo, & Dong Qian. (2017). "The Construction Idea of Agriculture and Forestry Economic Management as the Brand Discipline——Based on the Survey of 61 College Students in Agricultural University of Hebei, who Major in Agriculture and Forestry Economy and Management% Agriculture and Forestry Economic Management", Journal of Agricultural University of Hebei, 22(3), pp.390-395.

[3] LIU Xing-yuan, WANG Sue-min, & GUO Zheng-gang. (2018). "The Compound Management Model of Agricultural Resources and Its Eco-Economic Coupling Effects in the Semi-Arid Area of Northwest China", Journal of Natural Resources, 10(1), pp.1-8.https://doi.org/10.3390/w10111602

[4] Wang, & Cen, K. (2017). "Experimental Study on Bio-Oil Production from Biomass of Some Agricultural and Forestry Residues", Journal of Inner Mongolia Institute of Agriculture & Animal Husbandry,149(3), pp.660–668.

[5] Kenyan Wang, Wei Ouyang, Fang Hua Hai, Yun Luan, & Bo Hu. (2016). "Spatial Impacts of Climate Factors on Regional Agricultural and Forestry Biomass Resources in North-Eastern Province of China", Frontiers of Environmental Science & Engineering, 79(1), pp.14-17.https://doi.org/10.1007/s11783-019-1097-4

[6] Ennui Zhang, Zhao. (2016). "The Study of Training the Innovative Agriculture and Forestry Talents on the Basis of the Teaching Management System", Journal of Ningbo Institute of Education, 56(206), pp.198-205.

[7] Liu, Yang, Lug, Yu, & He. (2018). "Effects of Different Adjustment Measures on Improvement of Light-Moderate Saline Soils and Crop Yield", Transactions of the Chinese Society of Agricultural Engineering China, 24(7), pp.486-495.

[8] Deering, Sacks. (2017). "Simulating the Effects of Climate and Agricultural Management Practices on Global Crop Yield", Global Biogeochemical Cycles, 23(1), pp.46-49.

[9] Tattnall, Valuate, B, & Gilled. (2018). "Unravelling the Effects of Soil and Crop Management on Maize Productivity in Smallholder Agricultural Systems of Western Kenya", Application of Classification and Regression Tree Analysis, 23(52), pp.153-164.

[10] LI Sheng-me, & CHEN Zo-yen. (2016). "Empirical Analysis of the Agricultural Industrial Structure and Agricultural Economic Growth in Qinghai", Science & Technology of Qinghai Agriculture & Forestry, 62(2), pp.365-375.