

# Research on Developing Tendency of Xiaozhan Rice in Tianjin

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**Abstract:** To make sustainable industrial development of Xiaozhan Rice better, Tianjin Experimental Forest Farm set up research group of development trend of Xiaozhan Rice. From April 5 to October 15 in 2016, the research group carried on a special investigation and research on rice production and marketing in Tianjin. During the course of investigation and research the research group adopts many kinds of forms: historical materials, interview, field trips, random inquiry, and so on. Based on the random sampling investigated data of the consumption situation of rice in Tianjin, the authors analyzed the characteristics of the residents of Tianjin in rice consumption market. Combining with the facing opportunities and challenges of the production and marketing of rice in Tianjin, the suggestions about promoting the production and marketing of rice were put forward.

**Keywords:** Tianjin; Xiaozhan rice; Developing tendency

## 1. Introduction

Due to the lack of accurate market positioning and effective market operation, the brand influence of Xiaozhan Rice gradually becomes smaller and smaller. The brand of Xiaozhan Rice has ever enjoyed high reputation in the world, but now it becomes a regional one, many people born after 1990 don't even know there is a rice brand named Xiaozhan Rice. To reshape the reputation of the traditional brand-name products, and to make sustainable development of Xiaozhan Rice industry better, Tianjin Experimental Forest Farm set up research group of development trend of Xiaozhan Rice. From April 5 to October 15 in 2016, the research group carried on a special investigation and research on rice production and marketing in Tianjin. During the course of investigation and research the research group adopts many kinds of forms: historical materials, visits, field trips, random inquiry, and so on. It took the research group seven months respectively to visit scientific research institutes such as Tianjin Foundation Seed Stock Farm and Tianjin Corp Research Institute, large scale growers on rice production which producing at Zuoxianwo Village Bamencheng Town Baodi District and Zhangxin Zhuang Village Ninghe Town Ninghe District, to investigate production process of Xiaozhan Rice on the spot. At the same time, the group has carried on the investigation and research on representative large retailers in Tianjin and Beijing.

## 2. Xiaozhan Rice Status

### 2.1. Brand protection

In July, 1999, Xiaozhan Rice got national certification trademark, in 2009, China gained well-known trademark. Jinnan district of Tianjin agricultural technology extension center is the owner of Xiaozhan Rice brand. The relevant enterprises using Xiaozhan Rice trademark has strict rules. Xiaozhan Rice is the first to enter the China geographic indication list" of agricultural products of Tianjin, and it is also the first to enter the Chinese list of geographical indication of food crops. According to Protection regulations of geographical indication products in China, The rice must plant in Tianjin area, and must be approved by Jinnan district agricultural technology extension service center, the trademark of Xiaozhan Rice can be used. If you don't have both conditions above, any enterprise has no rights to use the Xiaozhan Rice brand.

### 2.2. Production status

#### 2.2.1. Scale and yield per mu

Rice planting area remained at about 800, 000 mu in Tianjin since the 1990s, and the average yield per mu reached a stable level of up to 500 kilograms since 1993, the rice planting area was 780,000 mu in 1998, the yield per mu has been above 580 kilograms, the small planting area even broke through 750 kilograms, it met the national level of super rice in advance. But before ten years of the 21st century, with the situation of the continuous shortage of water resources, planting area in Tianjin fell sharply, the city's rice planting area is only 80,000 mu in 2003, this is the least area of rice planting since the liberation. Since 2014, because of declining benefit of crops such as cotton, corn, rice planting area in the city re-

turned to 400,000 mu or so, the average yield per mu was about 650 kilograms.

### 2.2.2. Cultivation methods and their effects on quality

At present, Planting pattern of Tianjin Xiaozhan Rice adopted close planting, widely using chemical fertilizers, high-dose early preventive intervention of farming in general. Production water supply is given priority to with surface runoff, surface water are greatly influenced by external factors, so the water quality is not stable and quality is generally poor. When water shortage happened, it was supplemented by underground water. According to the current state related evaluation standards, Tianjin Xiaozhan Rice basically belongs to first or second level of high quality rice yet, but its palatability is far lower than that of the northeast rice.

## 2.3. Marketing situation

### 2.3.1. Brand influence

Through the visit of the large retail market in Beijing and Tianjin, combining with random inquiries, we find that more than 91 percent people over the age of 55 know and agree with Xiaozhan Rice; people of 45-55 years old are over 86 percent ; people of between 35 and 45 years old are about 57 percent; people of under 35 years old are less than 28 percent .For the cognitive situation of Wuchang Rice and Daohuaxiang Rice presents a gradient in the opposite .As a result, we believe that brand influence of Xiaozhan Rice belongs to medium level, downward trend of the rice is remarkable.

### 2.3.2. Status of sales channels

Through interview and survey of large grain producers and distributors, we know that in the past two years sales channels present below situation: 33 percent rice is sold to the northeast food purchase agency by dealers, 61 percent rice is sold to rice factory of the city and surrounding areas, 2.3 percent rice is retention (inclusive of reserving seed for planting and selling through its own channels) by growers, 1.5 percent rice is sold with their own brand and 0.8 percent rice is sold by the way of customization, only less than 1.4 percent rice is sold with trademark of Xiaozhan Rice.

### 2.3.3. Occupancy of the goods shelf of large retailers

Through this survey, we find that Tianjin local brands accounts for 17 percent sales of the packaging rice in the major retail markets. self-production rice accounts for 31 percent sales in Bulk; Among them, the brand of Xiaozhan Rice appears less than 6 percent. The situation in Beijing is that in the packaging of rice, the brand from Tianjin accounts for 11 percent, Bulk rice from Tianjin accounts for 23 percent; Among them, the brand of Xiaozhan Rice appears less than 3 percent.

### 2.3.4. The situation of market positioning

Based on the survey of large retail markets, community group markets and farmers' wholesale markets, we find that it is not clear for the current market positioning of Tianjin self-produced Xiaozhan Rice, and it is in an awkward situation. There is no price advantage in the low-end market, on the other hand there is lack of the support of material and quality in the high-end market, and for the middle-end market, it is short of quality characteristics in market operation, promotion means and consumers attraction.

## 3. The problem of the development of Xiaozhan Rice

### 3.1. Deviation in the thought of development

From the level of government, it has the thought of looking down on agriculture and paying attention to industry and commerce. The development of the industry development and the brand maintenance of the Xiaozhan Rice has the lack of feasible development planning and operational measures. In addition, the administrative department of agriculture is based on the resource reality of small-scale agriculture in Tianjin, but it uses the idea of big agriculture to plan the development of Tianjin agriculture.

From the level of agricultural science and technology and extension service, the problem is that they only emphasize on the importance of high-yield, scale, seeds and farming technology, but ignore the synergy of all elements including the water and soil environment, culture and value ,the stability of variety traits and market demands.

From the level of industry, it is widespread for practitioners to be eager for quick success and instant benefits ,they are short of the consciousness of sustainable development and contract spirit, think little of the standardization construction, industry control, industry self-discipline, quality control, technical service, brand maintenance and brand culture construction, etc..They emphasize particularly on the importance of the appearance of packing and commodity, ignore the importance of intrinsic quality and retaining quality. They use the thought which making a product or packing to do industry and brand instead of making the market and the culture.

### 3.2. Lack of water resources and low planting efficiency

With the quickening pace of agricultural modernization of Tianjin, the changes of lifestyle and the effects of global warming, the urgency of the lack of water resources is steadily on the increase, and rice is most affected of all kinds of crops .Per capita water resources in Tianjin is only 160 cubic meter, it is less than one fif-

teenth of the national per capita water resources, water diversion from other areas is 370 cubic meter, the sum of them are far lower the level of per capita 1000 cubic meter (world recognized the cordon of water ), so Tianjin becomes one of the most serious water shortage city. In the past 20 years, the city's maximum annual storage capacity is only 400 million cubic meter. In 2010, only 210 million cubic meter of water is stored, and only 0.05 billion cubic meter of agricultural water is available. With the decrease of water supply, rice production has become increasingly dependent on the use of underground water which leading to the increment in electricity consumption, making the cost of rice production go up.

### 3.3. Poor farming technology and low production efficiency

To sum up the experience of various industries in our country, it is not hard to find that any successful industry is inseparable from the coordination between the government and the market. Due to rice planting area in Tianjin is lesser, the demand market of agricultural materials is limited, therefore, many enterprises consider from the angle of input-output, they are unwilling to provide services such as experiments, demonstrations and technical training to sale their new products or new technology in this city, meanwhile we do not hope that they can especially develop products and technology for Tianjin market. So the main products and technologies which using in rice production in our city are mainly the outdated and backward things obtained by the natural conduction of time and space, So comparing with those of advanced provinces, the current level of rice planting in our city lag behind 5-6 years. For example, the drought-transplanting technology of cold shed has been widely used in Heilongjiang province in 2007, and our city only began to popularize on a large scale in 2011. It can be seen that the agricultural market in our city is very small, and it is not enough to be promoted by the government alone.

### 3.4. Serious damage to agricultural ecological environment

With the rapid development of industry and commerce in our city, due to the impact of industrial and commercial activities and the impact of agricultural backward production methods, the ecological environment of agricultural production in our city has been seriously damaged. Surface fresh water resources is both shortage and heavy pollution, in the cultivated land ,the content of organic matter is lower and lower , heavy metal content is more and more, natural environment provides less biological nutrient for rice growth, therefore, the inner quality of rice is becoming worse and worse, market influence of Xiaozhan Rice is gradually reduced.

### 3.5. Backward production and marketing having seriously restricted the industrial development of Xiaozhan Rice

Because of the low degree of Rice production and sale about specialization, scale, standardization, industrialization, standardization, order, under the background of metropolis, the dispersible system of Xiaozhan Rice production and sale, facing with northeast big-scale agricultural production, the rice is forced to compete with northeast rice on the front. In 2015, the price (about 1.4 RMB per kilogram) of paddy rice was as same as that of in 1995, and the economic benefits of planting rice were poor, Xiaozhan Rice and the rice farmers struggled on the line of cost. At the same time due to the development of rice production in northeast China, the increase of yield, the improvement of quality, all of those factors make fundamental changes which having taken place in the supply and demand of Tianjin rice, rice prices continue to fall from 2.0 - 2.4 RMB per kilogram in mid 1990s, to 1 - 1.2 RMB per kilogram .The low efficiency of rice production has severely injured rice farmers' enthusiasm, and the rice planting area has decreased year by year.

## 4. Analysis on the industrial development trend of Xiaozhan Rice

### 4.1. The development trend of international "japonica rice" market

With the progress of science and technology and the advancement of the global integration process, the production level of the world "japonica rice" has been rapidly improved, and the supply capacity of commodities has been oversupplied. The "japonica rice" has its own palatability, and it is easy to eat and handle, but it is not easy to be processed. It is determined that the rice is mainly in the market in the form of rice. Affected by production efficiency, the price of " japonica rice" is close to that of the "indica rice", although the price is still higher than that of "indica rice", but influenced by palatability, it has become the first rations crops in the world. At present, the international market demand of "japonica rice" is showing that the trend of positioning is from three level of high-end, middle-end and low-end to multiple level. With the development of transportation industry, the Internet of things, cloud computing, processing, preservation storage technology, and the promotion of consumer culture level and food safety consciousness, the direction of international market of "japonica rice" will inevitably develop toward safety, diversification, personalization and differentiation.

### 4.2. Development trend of domestic "japonica rice" market

At present, the market of "japonica rice" in China is generally presented as an oversupply, and the high-end, mid-

dle-end and low-end market is initially formed, but the whole level of market is lower. The low-end market is a serious problem which being full of fake and poor quality commodities, and it is affected by low-end imported products. In the middle-end market, excessive reliance on advertising promotion and price war makes the competition stiff, it leads to the lack of control over their own quality, generally not to cultivate a fixed consumption crowd; The high-end market, relying excessively on the packaging, the concept hype, the lack of new technology factor input, not meeting the high-end consumption crowd's experience requirements in personalized, differentiated and customized. Therefore, the market of "japonica rice" in China is not mature enough to meet the changing demand of consumers. The demand determines the market trend, so we expect the development of Chinese market of "japonica rice" to show the following trend: the low-end market tends to standardize, high quality and low price become the theme; The middle market places more emphasis on gaining consumer confidence in safety and health; The high-end market will be based on satisfying the consumers' safe ecology and fresh taste, and emphasize the diversified demands of consumers' exclusive, individual, experience, participation, design and interaction.

#### **4.3. Challenges to the industrial development of Xiaozhan Rice**

Xiaozhan Rice has ever been first-class Chinese brand in the world, but at present it becomes the famous second-rate brand in the region, which indicates that there are many problems and deficiencies in its own development. Facing the current situation is the foundation of development. Finging direction, solving problems and shortages are key to development. In the current situation of Xiaozhan Rice industry, it is indeed necessary to face many challenges if it is to break out of the dilemma and reshape the first brand of "japonica rice". Through this survey, we believe that the industrial development of Xiaozhan Rice mainly faces the following challenges:

- The challenge of ideological shift;
- The challenge of adjustment of working ideas;
- The challenge of adjusting to define the positioning of its industry;
- The challenge of making the relevant factor resources realize synergistic action by governmental coordination;
- The challenge of overcoming resource constraints;
- The challenge of improving the industrial level of its comprehensive capacity building.
- The challenge of balancing short-term and long-term interests of the relevant parties.

#### **4.4. Tendency to the industrial development of Xiaozhan Rice**

Through the analysis of all aspects of the survey, we make the following judgment on the developing tendency of Xiaozhan Rice :

- Maintaining the status quo, Xiaozhan Rice will completely withdraw from the market within 5 to 10 years;
- Maintaining the current market share, it should strengthen the control of the industry itself, define the industry positioning and formulate feasible measures;
- Getting big industrial development, the government and industrial system overcome all kinds of challenges together.

### **5. Suggestions on the industrial development of Xiaozhan Rice**

#### **5.1. Making clear the industry positioning of the Xiaozhan Rice by the government**

Rice which selling in Tianjin market at present is mainly from the local, northeast China and Thailand, its brands are numerous, and there is no strong brand of rice and high-end market is absent, market competition is not prominent. Under the circumstances, according to comprehensive advantages and unique advantages of our city, the government can make reasonable industry development planning. At the same time, taking full advantage of the characteristics which owning rich water of Baodi district , the government can build industry collaborative development platform ,which building highlands of Tianjin rice market transformation and upgrading and innovation, of rice planting, commerce and logistics. Such as the party's general secretary Jin-ping Xi in the report of the 19th national congress of CPC clearly put forward: To develop moderate scale management of various forms, to cultivate main body of new type of agricultural management, to perfect the agricultural socialized service system, to realize organic link of small farmers and modern agriculture development, to promote the integrative development of the 1st and 2nd and 3rd industry in rural area", it should realize the farmers, cooperatives docking with the collection and storage and processing enterprises, realize the processing enterprises docking with the market and supply and demand and realize the procurement enterprises docking with logistics enterprises, and then, put forth effort to develop the brand of Xiaozhan rice.

#### **5.2. Starting with improving the quality of rice**

With the improvement of people's living standard, people have higher requirements for the quality of life. They are no longer satisfied with being full up, still to eat well, it is the same for rice on the table too. Rice consumption is not big in every household every day, so people pay more attention to rice flavor, the pursuit to high quality rice has become their consensus. Therefore, it is necessary for the rice to improve its quality, and then win attention of the market again. Suppliers should adopt a

mode which binding company, base and peasant household together, and realize whole process of Xiaozhan Rice from seed selection , planting, field management to processing and sales control through the base of production and contract farming, thus ensure the quality of the each grain of rice.

### **5.3. Taking the first step by agricultural science and technology promotion agencies**

To optimize the quality of rice must start with its seed. Complying with the requirements of agricultural supply-side structural reform, agricultural scientific research institution should intensify research and development of new rice varieties, and promotion institution should do their best to popularize the varieties. After breeding new rice varieties named Jinyuan E28 and Jinyuan 89, Tianjin Foundation Seed Stock Farm has vigorously promoted them. In order to further strengthen rice quality, the farm

standardizes planting technique reasonable and directs farmers to apply fertilizer and medication reasonably. At the same time to further improve agricultural ecological environment, the farm also promotes soil- testing formula fertilizer, green manure and non-pollution prevention and control technology, such as reasonable application of chemical fertilizer, non-use or limiting-use high toxic and high-persistent pesticide.

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