Research on the Problems and Countermeasures of Marketing Channel Construction of Characteristic Agricultural Products
—–Take Baoying Lotus Root as an Example

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ABSTRACT
This paper takes the lotus root of Baoying as the object of research, and through the investigation and analysis of the current situation of Baoying lotus root marketing channel construction of this special agricultural product, it identifies its existing problems and proposes solutions. This paper firstly defines the definition of special agricultural products, secondly analyzes the development status of Baoying lotus root, identifies its problems, and finally proposes marketing channel optimization measures. Promote agricultural efficiency and increase farmers' income in Baoying County.

Keywords: Characteristic agricultural products, Marketing channels, Baoying lotus root, Research.

1. INTRODUCTION
The new pattern of agricultural development has promoted the vigorous development of local agricultural products with distinctive features. Against the background of the central government’s vigorous support for the three rural areas, lotus root, as a geographical symbol of Baoying County, Yangzhou, Jiangsu Province, has become one of the main ways for local farmers to get rich and has become the main economic product. In recent years, Lotus root has been planted on a total scale of 300,000 MU in Baoying County, with an annual output of 450,000 tons and an output value of 1 billion yuan. However, with the continuous improvement of productivity and output, the unsalable agricultural products have gradually become an important problem to the governments and farmers at all levels in recent years. The rapid expansion brought a serious negative impact —— Prices fell, Lotus root unsalable, the overall situation of the industry was depressed. With the expansion of Lotus root production in Baoying, some problems have become more and more serious. The mismatch between the Information asymmetry, small farmers and the big market makes the unsalable agricultural products an urgent problem to be solved. The supply of Lotus root far exceeds the demand, if we can not find a suitable sales outlet, the price of Lotus root is likely to continue to go down, which will seriously damage the interests of farmers and production enthusiasm, and adversely affect the development of Lotus root production.

2. THE CONCEPT DEFINITION OF CHARACTERISTIC AGRICULTURAL PRODUCTS
Xiao Dingjiu (2018) points out that products that have a long history and culture, enjoy characteristic geographical and climatic advantages, are widely known by the public, and have a high reputation in a certain region can be called distinctive agricultural products.

Baoying County, Yangzhou City, Jiangsu Province has a mild climate, four distinct seasons, abundant rainfall, with unique geographical advantages and climatic conditions. In recent years, Baoying County has stepped up efforts to promote local agricultural products with local characteristics, hoping to improve their popularity, increase farmers' income and help upgrade the industrial structure.
3. ANALYSIS ON THE PRESENT SITUATION OF LOTUS ROOT MARKETING CHANNEL IN BAOYING

3.1. Current Situation of Lotus Root Marketing Channel Construction in Baoying

Through a survey of the Baoying lotus root industry, we have grouped the existing marketing channel organization models in Baoying into the following categories:

3.1.1. Direct Marketing Channel Model (Farmers + Consumers)

The earliest distribution model of agricultural products was direct marketing. In the direct marketing model, the producers of agricultural products transported the products directly to the villages and other populated areas or agricultural markets, and sold the products directly to the end consumers. For agricultural products, farmers directly to sell, its high cost will inevitably lead to higher prices of agricultural products. At the same time, some manufacturers with a certain scale of production set up their own brand stores in the areas where the target consumers gather, which also belongs to a direct marketing channel model. Brand stores have a unified corporate image, coupled with a certain degree of advertising, easy to improve consumer trust and satisfaction. But the Baoying Lotus root is lower, the substitution is big, the specialized store sells in the research has not discovered the farmer uses.

3.1.2. Intermediary Channel Model (Farmers + Wholesalers/Buyers + Consumers)

This model is the main organizational model for the current Baoying lotus root industry. Most farmers will choose to sell to wholesalers and other traders, because the traders can go to the field to buy lotus root, saving farmers’ transportation costs. At the same time, due to the asymmetry of information, and root farmers’ low level of education, the production of large-scale farmers is difficult to find a timely sale of lotus root path, which leads to deepening dependence on traders, it is difficult to find other channels.

3.1.3. Farmers + Cooperatives + Consumers

In the Lotus Industry in Baoying, there are both small cooperatives formed by farmers themselves and professional cooperatives supported by the government. Most of the small cooperatives do not enter the threshold, contract agreements, etc., their main function is to provide a platform for information exchange. Professional cooperatives not only have a platform for information exchange, but also have technical guidance, production and processing sites to provide, unified purchase of seed within the cooperative, stipulate the quality of products, and at the same time, the support of the government enables professional cooperatives to have higher visibility, it will be of greater help to farmers.

3.1.4. Farmers (+ Cooperatives) + Leading Enterprises + Consumers

The leading enterprises of Lotus root in Baoying have a large base to provide fresh lotus root. In addition, they will cooperate with farmers to acquire fresh lotus root at an appropriate price by signing agreements, participating in shares and other means to ensure the flexibility of the supply of raw materials. In order to better cooperate with small farmers, enterprises will sign contracts with Lotus root farmers through cooperative organizations.

3.2. Model Analysis

In order to further study the impact of different sales channels on the income of farmers and put forward solutions, a binary selection of multiple regression model was established for analysis.

Because Lotus root has perishability, not suitable for online sales, so farmers sales channels mainly to wholesalers, dealers and other vendors. The four virtual variables of channel selection are: whether to sell to cooperatives, whether to wholesalers, buyers and other vendors, whether to sell to enterprises and whether to sell directly to consumers. The values of the four independent variables are 0 or 1. We choose to use Lotus root sales unit price to measure the effect of channel selection.

Using STATA. 14 software to carry on the multiple linear regression to the sample data, the regression result is as shown in the table 2, t the data shows that the main variables in the farmer sales channel model are statistically significant, after the regression of the model to the variables is 0.9820, it shows that the equation has a good fit.

The data show that farmers selling Lotus roots through cooperatives, wholesalers, other vendors and enterprises will have a significant impact on the selling price of Lotus roots, and all of them are positive, it can be seen that joining a cooperative or selling lotus root directly to wholesalers or enterprises has a significant effect on the price of Lotus root, which is consistent with the results of most studies. The standard error shows that the distribution of Lotus root samples sold through the other three channels, except for the cooperative channel, is not centralized by comparison.

Cooperative Organizations can bring together farmers and provide them with market information, which improves their bargaining position and
bargaining power, and cooperatives are mostly located in townships, which does not impose excessive transport costs on farmers. And traders can go deep into farmers’ production sites to purchase, saving farmers’ search transaction costs and transportation costs, and villagers in nearby locations can get price information more cheaply, although wholesalers, as an intermediate link, play a great role in promoting the sale of crops and the increase of farmers’ income, theoretically, from the perspective of a more advanced “super-docking” model, in fact, the wholesalers have increased the circulation of agricultural products and increased the cost of circulation. In this process, the wholesalers need to cut off part of their profits, which will have two adverse effects: first, the circulation of agricultural products has increased, the price elasticity of demand is still less than 1, even though Lotus root is Cash crop, which means that the increase in prices is less than the decrease in sales, still does not favor the lotus industry profit increase. Secondly, farmers will be lotus to sell to wholesalers, wholesalers need to obtain part of the profits, which will reduce the farmers share ratio. It seems that the “super docking” model for farmers to increase income is a better choice.

Enterprises cooperate with farmers in many ways to ensure the basic interests of farmers, usually agricultural processing enterprises will be located in the origin of raw materials, large enterprises in order to obtain a stable source of raw materials, will sign production agreements with a certain number of farmers - production contracts, or through "enterprise + Cooperative + farmers", "enterprise + base + farmers" mode of cooperation to ensure a stable supply of processing raw materials. Farmers in accordance with the enterprise agreement requirements to produce lotus root and directly sold to a higher organization, to ensure that the farmers’ sales volume and price, reducing inventory pressure. On the other hand, enterprises hope that the quality and quantity of their own raw materials are guaranteed, they will purchase lotus root at a higher price, so as to establish stable cooperative relations with farmers, in addition, the farmers who cooperate with enterprises may be their factory workers, under the influence of this relationship enterprises will often be more likely to take the initiative to assume social responsibility, thereby promoting the price of lotus root to achieve farmers' income.

However, the impact of selling directly to consumers in the market or farmers’ market is not statistically significant and the estimated coefficient of this variable is negative. Large losses increase the cost of negotiation for farmers and are detrimental to the transaction.

### 3.3. The Problems of Baoying Lotus Root Marketing Channel Construction

#### 3.3.1. The “Relative Surplus” of Agricultural Products with Distinctive Features is Serious, and the Difficulty in Selling Them is Getting Worse Year By Year

As shown in Table 3, market demand information asymmetry, agricultural products market substitutability, oversupply, low prices are still not very satisfactory sales situation, resulting in “grain injury farmers”, increase production not increase income tragedy occurred. Lotus root planting fertilizer costs are low, and without pesticides and other factors of production inputs, profit space, in the lotus root market is optimistic, lotus root can be sold to more than a dollar a pound, so many growers of farmland are used to plant lotus root, and even go to Zhejiang, Anhui and other places to contract paddy fields to plant lotus root, ignoring the market lag, blind expansion, market supply is much greater than market demand.

#### 3.3.2. The High Labor Cost of Lotus Root Planting Has Increased the Pressure on Farmers.

In the peak season of lotus root growth, planting lotus root farmers in urgent need of lotus root picking labor. Planting lotus root in the countryside, basically have a professional team of lotus root picking, they are mostly composed of farmers without other specialties, to a certain extent, lotus root picking has also become a means of wealth for some of these farmers, but also increased the cost of growing families. The current lotus pickers have been gradually changed to kilogram pricing, about 0.5-1 yuan / kg, the average remuneration for each worker in the 180-220 yuan, many growers sell price can not even make up for the wages of lotus pickers, individual growers reflect “in the cold weather, the lotus root price is low, the lotus root into a lotus root workers earn wages”, from the One side also reflects the increase in labor costs, which has seriously affected the efficiency of cultivation.

#### 3.3.3. Deep Reliance on Traditional Marketing Channels

As shown in Table 4, Baoying lotus root producers are weak and scattered, and have not formed a certain brand awareness, so they mainly rely on wholesalers, buyers and other vendors, resulting in middlemen bargaining power increased, the purchase price of their products to suppress. In the survey sample, 72.73% of the respondents chose the traditional marketing channel of middlemen, and the purchase price fluctuated around 0.5 Yuan/jin.
Table 1. Description of the variables in the empirical analysis

| variable name                  | property | variable definition    |
|-------------------------------|----------|------------------------|
| **Explained variables**       |          |                        |
| Lotus root unit price         | price    | Unit: Yuan/catty       |
| Agricultural household        | cost     | production costs       |
| **Key variables of the sales**|          | channel model          |
| Whether sold to cooperatives  | cooperation | Value Range [0,1]    |
| Whether to sell to wholesalers, buyers, etc. | pedlar | Value Range [0,1] |
| Whether to sell to a business | enterprise | Value Range [0,1] |
| Whether to sell directly to consumers | customer | Value Range [0,1] |

Table 2. Regression results of the farmers’ marketing channel model

| property    | modulus  | standard error | t-value | P-value |
|-------------|----------|----------------|---------|---------|
| cooperation | 54.425   | 2.852          | 19.08   | 0.000***|
| pedlar      | 246.407  | 29.729         | 8.29    | 0.000***|
| enterprise  | 199.142  | 30.337         | 6.56    | 0.000***|
| customer    | -6.258   | 65.062         | -0.10   | 0.924   |

Table 3. Change in profit from lotus root cultivation

| vintage | Net profit (Yuan/acre) | Increase in net profit ($/acre) | Increase in net profit | Cost Margin | Increase in cost margin | Net profit of sample root farmers (Yuan/acre) | Sample root farmers |
|---------|------------------------|---------------------------------|------------------------|-------------|------------------------|-----------------------------------------------|---------------------|
| 2018    | -1052.89               | -748.09                         | -245.44%               | -44.71%     | -29.47%                | -1009.54                                      | -64.08%             |

Table 4. Respondents’ sales route analysis

| Type of sales channel | Sales Path                                | Farmers who chose this path |
|-----------------------|-------------------------------------------|-----------------------------|
| Direct Channel        | sell to consumers                         | 3 households                |
| Multi-level intermediary channel | Selling to wholesalers, collectors, etc. | 24 households               |
| indirect channel      | Selling to cooperatives or enterprises    | 18 households               |

Table 5. Basic information of surveyed enterprises

| Company Name item                  | Yangzhou Huaxiang Food Co. | Jiangsu Lianxinyuan Food Co. | Yangzhou Lvbolian Food Co. | Baoying Jiping Lotus Root Food Processing Factory |
|------------------------------------|-----------------------------|------------------------------|---------------------------|-----------------------------------------------|
| registered capital                 | 20 million                  | 10 million                   | Two million.              | 1.3 million                                   |
| business model                     | Company + base + farmer     | Company + Base + Cooperative + Farmers | Company + base + farmer    | Company + farmer/wholesaler                   |

3.3.4. Weak Channel Relations

As shown in Table 5, most of the enterprises of the Lotus Root in Baoying lack long-term cooperation with the channel business, so the relationship with the channel business is not stable. In today’s society, the relationship between manufacturers and distributors is no longer a business relationship, but should be more of a cooperative relationship, and relationship marketing has gradually replaced the business transactions between the two sides. The focus of relationship marketing is the establishment of long-term cooperative relationship between the two sides, in the long-term cooperation to achieve mutual benefit and win-win situation. In the enterprises interviewed, the vast majority of large enterprises tend to "company + base + farmers" or "company + base + cooperatives + farmers" model, and channel the weak relationship between
intermediaries, only a registered capital of 1.3 million small processing plants to annual. Working with a wholesaler in the form of an agreement is a precarious channel relationship and carries a high business risk.

3.3.5. Low Organization and Lack of Competitiveness Upstream of Marketing Channels

In the characteristic agricultural product marketing channel, the farmer is in the upstream position. At present, although the number of cooperatives in Baoying County is large, their strength is weak, and they can only provide technical guidance and information exchange platform for farmers to join. Only 3.03% of the sample farmers have 110 joined the cooperative, while the other farmers still maintain the traditional agricultural mode of production, decentralized management, production scale is not large, the average planting area of the sample farmers is only 145.82 Mu per household, it’s hard to gain scale advantage.

4. COUNTERMEASURE RECOMMENDATIONS

4.1. Play the Role of Lotus Root Association, Improve The Distribution of Agricultural Information System Construction

In the process of agricultural sales, farmers mainly scattered individuals into the sales market, the ability to access information is low, while the circulation of agricultural products in the process of information flow between the main flow is not smooth, further play the role of Lotus root association, to provide farmers with technical guidance, advice and training and other services, to strengthen the effective connection between farmers and the market, to maintain the interests of farmers.

4.2. Cultivating the Main Channel to Improve Organizational Competitiveness

4.2.1 Increasing Support for Leading Agricultural Enterprises

Promoting leading enterprises of special agricultural products is conducive to establishing brand advantages and increasing product awareness, thus broadening the marketing channels of special agricultural products. Through the signing of agreements, equity participation and other ways to cooperate with farmers, to purchase fresh lotus root at the right price, to ensure the flexibility of raw material supply, better cooperation with scattered farmers.

4.2.2. Strengthening Cooperatives and Farming Households

As powerful managers and coordinators of the collective economy, cooperative organizations play an important role in farmers' production and cultivation, marketing and specialization. In recent years, the popular agricultural and super docking model and the "NGC" model, in which cooperative organizations have played a huge role, have successfully solved the problem of the limited power of individual farmers.

In the marketing aspect, the function of the relevant cooperatives in the Lotus root industry in Baoying is still not obvious, which makes it difficult for farmers to establish a fixed cooperative relationship with the consumer market, and the marketing risk of farmers is too high. Whether it is to establish sales and production contracts with enterprises, or to establish the model of super-docking or “NGC” model, the power of farmers alone is not enough, the cooperative must bear more responsibility.

4.3. Vigorously Strengthening Macro Policy Guidance

The utility of industrial cluster will be strengthened by guiding the superior industries to concentrate in the lotus root production areas, developing public services and popularizing the high-yield cultivation and cultivation techniques.

4.4. Increase Government Support for the Lotus Root Industry

The optimization of the marketing channel of agricultural products is the result of the cooperation of the invisible hand of the market and the visible hand of the government. In view of the serious losses in Lotus root planting in Baoying County, it is proposed to use the Price Adjustment Fund to Support Lotus root production and processing industries and stabilize farmers’ price expectations, guiding Lotus root industry to the road of healthy and sustainable development. We will increase investment in the Lotus Garden at Sheyang Lake and other scenic spots, focus on the endowment of Lotus root resources, deepen the cultural connotation of the Lotus root, create tourist products, raise the visibility of the lotus root in Baoying, and make full use of the brand effect of 13 the products marked by national geography.

5. CONCLUSION

Taking lotus root, the characteristic agricultural product of Baoying, as the main research object, paying attention to and analyzing the marketing dilemma of
lotus root farmers and exploring feasible solutions will help to improve farmers' planting income.

Through the analysis of this paper, we find that we mainly draw the following conclusions:

First, the main sales channels of lotus root farmers are sold to cooperatives, wholesalers, purchasers and other vendors, sold to enterprises and sold directly to consumers in bazaars or farmers' markets. Compared with the direct channel, the multi-level middleman channel has a more significant impact on the sales price of farmers. Second, farmers and enterprises guarantee their own sales quantity and price by signing production contracts, or through the cooperation model of "enterprise + cooperative + peasant household" and "enterprise + base + peasant household". Third, in the process of production and sales of lotus root, whether small farmers or enterprises, the biggest cost expenditure is labor cost, which is determined by the product characteristics of lotus root. Fourth, carrying out simple primary processing-family small workshop model and joining cooperatives both play a certain role in increasing income.

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