

The Research of Lushan's Agricultural Industrialization in Post-disaster Reconstruction

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Abstract—The “4.20” earthquake caused enormous economic loss for Lushan, which restricted the local economy to some extent, therefore, speeding up the reconstruction according to local conditions, exploring new models of economic development, promoting the development of agricultural industrialization effectively are tasks which brooks no delay. This paper uses SWOT analysis to study the agricultural industry of Lushan, to explore the new model which is suitable for the development of Lushan's agricultural economy, and to put forward reasonable suggestions and countermeasures.

Keywords—SWOT; agricultural industrialization; farmer cooperatives

I. THE DEVELOPMENT SITUATION OF LUSHAN'S AGRICULTURAL INDUSTRY

After the earthquake, the government formulated the development planning of recovering agricultural economy, on the one hand, restoring the production facilities, such as the damaged farmland, agricultural greenhouses and so on, and strengthening the construction of the well-bred breeding system. On the other hand, speeding up the development of farmer cooperatives, supporting the leading enterprises, cultivating agricultural brand, and then improving farmers' income. After two years, the characteristic industries, such as kiwi fruit, edible fungus, and the teas, have reached their levels before the earthquake.

A. The Tea Industry

The local tea garden and the processing buildings were collapsed by the earthquake, and caused the county a total of Forty thousand acres of mountain ecological tea garden, more than thirty tea processing enterprises, and six farmer

cooperatives of tea were damaged. After the earthquake, Lushan built twenty thousand acres of tea garden based on the original tea base, and formed fifty thousand acres of mountain tourism ecological tea industry area. In the face of the market, Lushan goes the way of high quality, famous brand, and high efficiency, encourages and supports tea production enterprises to declare green organic certification, and creates high-end tea brand.

B. The Kiwi Fruit Industry

Kiwi fruit is another major agriculture economic crop of Lushan, but in the pollination period, they suffered earthquakes, and in the growth period, they suffered flood, so the fruit trees were troubled by germs. Because of the disinfection and sterilization, the production capacity of kiwifruit was allowed to be controlled, to 2013, Lushan owned four thousand and one hundred acres of kiwifruit area, and built twenty thousand acres of high-quality kiwifruit base, at the same time, Lushan regarded the modern ecological agriculture demonstration park as the core, then constructed the high quality kiwifruit industry area from the Feixianguan to the east side of Longmen road, driven Luyang - Siyan - Qingren to develop forty thousand acres of high-quality kiwi fruit planting base, and built a integrated processing factory for processing kiwi fruit wine.

II. THE AGRICULTURAL DEVELOPMENT MODE AFTER DISASTER

A. Regarding “Agriculture Makes County Rich” as the Strategic Target, forming the Advantage of Industry Chain

According to the target of “agriculture makes county rich”, Lushan combined agriculture and tourism, made agriculture drive industry, and developed the ecological organic agricultural industry. According to “three areas, a center”, Lushan constructed about 10 square kilometers of 4 A grade modern ecological agricultural demonstration

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garden, driving the development of characteristic agriculture industry of about a hundred and fifty thousand acres of arable land and large tracts of forest land. Lushan also developed precious wood mainly contains machilus, ginkgos and Taxus chinensis, Lushan introduced processing enterprises to develop ecological agriculture projects, especially konjak,goose,tea,kiwi fruit, bamboo and cultivation,these series of measures make agricultural producers master professional cultivation technology, strengthen the foundation of agricultural industry, so as to improve the efficiency of agricultural production and promote industrial system to improve gradually.

B. Settling High-quality Enterprises, Upgrading Characteristic Agriculture Industry Overall

In order to transform the mode of developing agricultural, realize the transition from traditional agriculture to modern agriculture, and increase farmers' income, the government regarded developing the characteristics of ecological organic agricultural industry as the direction, then attracted high-quality enterprises and drove the agricultural to upgrade comprehensively. According to statistics, Sichuan Shuguang Group, Sichuan Kesike fruit industry co., LTD, Sichuan Xinsanhe modern agriculture development co., LTD have settled modern ecological agricultural demonstration garden, planted nearly seven thousand acres of kiwi fruit seedlings and four thousand and five hundred acres of rests, finished investing more than fifty-three million Yuan, the base finished planting more than a thousand acres of trees, and constantly improved the park service center, the workshop, the main and supporting infrastructure.

C. Increasing Investment in Agricultural Projects, Laying Solid Foundation Industry Gradually

Due to the longer period of the construction of the agricultural industry and the demand for money, the journey of focusing on developing modern agriculture needs to attract investment and increase investment in industrial projects. At present, Lushan's agricultural projects are roughly divided into four categories, the organic kiwi fruit and tea planting industry base which characteristic agricultural industry plays a leading role, ecological agriculture demonstration garden industry integration, planting herbs, flowers and nursery stock, processing and supporting facilities which can storage eight thousand tons of fruit and vegetable.

III. AGRICULTURAL ECONOMY COMPARISON BEFORE AND AFTER THE EARTHQUAKE-TAKING LONGMNE AS EXAMPLE

A. The Distribution of Rural Economic Income

With the support of the government and the efforts of local people, the development of Longmen's agricultural industrialization after disasters have achieved good results. The rural economic income distribution data that gotten through field research before and after the earthquake of Longmen is as followed:

TABLE I. THE DISTRIBUTION OF RURAL ECONOMIC INCOME (UNIT: TEN THOUSAND RMB)

projects			Percentage of revenues		The percentage of increase or decrease
	In 2012	In 2013	In 2012	In 2013	
agricultural	5205	5744	30.30%	29.11%	10.36%
forestry	458	777	2.67%	3.94%	69.65%
Animal husbandry	7300	8291	42.50%	42.02%	13.58%
fishery	12	13	0.07%	0.07%	8.33%
industry	822	727	4.79%	3.68%	-11.56%
Construction	1131	1627	6.58%	8.25%	43.85%
transport	913	1237	5.32%	6.27%	35.49%
drink	803	876	4.67%	4.44%	9.09%
service	420	429	2.45%	2.17%	2.14%
others	113	10	0.66%	0.05%	-91.15%
total	17177	19731	-	-	14.87%

^a. Source: The agricultural comprehensive annual economic data table from Longmen township government of Lushan

From the table we can see, Longmen's agricultural economic income accounted for a larger proportion in the total revenues. As the local pillar industry, agricultural development has been recovered; the major economic projects of economic development were rise absolutely. Even if it fell, the total revenue of rural economy in 2013 rose 14.87% from a year earlier.

B. The Farmers' Income

We can see after the disaster, farmers' per capital income rose 14.64% from a year earlier, and farmers' business income rose 25.58% from a year earlier, which shows that a series of measures, such as increasing agricultural industry support, reducing related taxes, reducing agricultural producers' economic burden, had got remarkable achievements.

TABLE II. INCOME DISTRIBUTION OF FARMERS (UNIT: TEN THOUSAND RMB)

Projects	In 2012	In 2013	increase or decrease	The percentage of increase or decrease
Incomes from famers work	14322	17985	3663	25.58%
Collective redistribution	10	133	123	1230.00%
Incomes of farmers	14332	18118	3786	26.42%
Per capita annual incomes of farmers (Yuan)	6488	7438	950	14.64%

^b. Source: The agricultural comprehensive annual economic data table from longmen township government of Lushan

IV. THE SWOT ANALYSIS ON THE ECONOMIC DEVELOPMENT OF LUSHAN'S POST-DISASTER AGRICULTURAL INDUSTRIALIZATION

A. *The Advantages of Lushan's Agricultural Industrialization*

1) *Excellent ecological environment, rich in natural resources*

Lushan is a famous historical and cultural city; there are multiple national cultural relics' protection units in the county. And it is rich in natural resources, combines land resources with subtropical climate, there are large areas of fertile land and favorable agricultural environment, which is in favor of developing the high efficient ecological agriculture and driving the interactive development of primary and tourism industry.

2) *The coordinated development of "agriculture" and "rural", the prominent regional characteristics*

Lushan vigorously promotes urban and rural areas as a whole and three linkage, focuses on the development of ecological agriculture, characteristic agriculture, and agriculture. Lushan also focuses on building mountain ecological tea industry area with "Shejianping" and "Mabei Mountain" as the center, making the three big industries—tea, konjac, and bamboo become better. It explores forests cultivation pattern actively relying on bamboo resource, and the green shell eggs go into the west lake expo, go out of the country, which improves its popularity.

B. *The Disadvantages of Lushan's Agricultural Industrialization*

1) *Low degree of industry business scale, lagged standardization base construction*

The agricultural production varieties lack scientific planning, mostly rely on small groups of peasants, especially the economic crops, such as kiwi fruit, vegetable, are optional in their layout, present some wide, complex and disordered characteristics, and the concentration is poor in regional production and scale development.

2) *The low level of agricultural management organization, weak competitiveness of agricultural products' overall market*

The farmers' professional organization in Lushan has a late start, it's on a smaller scale, the structure and the linkage of interests are a little loose, besides, the weak awareness of farmers' land circulation causes the low level of agricultural management organization. Moreover, with the development of the characteristic agriculture industry in Sichuan, the agricultural products of Lushan have a late start, so it is vulnerable to be attacked, which makes it own weak market competitiveness.¹

3) *The short agricultural industrialization chain, the little space for agricultural products' value to grow*

Most of agricultural products are at an early stage, Lushan is short of enterprises to process these agricultural products and is short of leading enterprises, besides, the lack of innovation consciousness, the underdeveloped logistics industry and the narrow agricultural products marketing channel make it is difficult to preempt the favorable market position. In addition, leisure sightseeing agriculture is limited to small farmhouse, the low added-value and the lack of feature make it still has a way to attract customers' attention.

4) *Comprehensive agricultural service system remains to be perfected, it is difficult to provide high quality agricultural services*

That comprehensive agricultural service system needs to be improved is mainly showed in the aspect of service system for popularizing agricultural science and technology. The staff of science and technique spreading organization in Lushan is relatively small, Lushan lacks means for modern information service, it is difficult to keep up with service quality, and the public service function is weakened, so it is hard to promote the latest and the most effective technology in the shortest time, it is also hard to transfer the scientific and technological achievements.

C. *The Opportunities of Lushan's Agricultural Industrialization*

1) *The policy of reconstructing agriculture industry, the support of special funds*

In order to promote the post-disaster reconstruction in Lushan, the government issued "The overall planning of Lushan's post-disaster reconstruction" and other documents, to adjust the focus of policy and pay attention to the earthquake disaster areas from the perspective of fiscal policy, tax policy, financial policy, land policy, industry policy, geological disaster prevention and ecological restoration.

2) *Increasing the resources of agricultural industry reconstruction*

Governments at all levels respond to post-disaster reconstruction actively, determine the rebuilding cities, and social groups organize to participate in reconstruction work, which has brought a lot of money, human resources and professional advanced agricultural technology for the earthquake disaster areas, and has brought good development opportunities for agriculture industry development.

D. *The Threats of Lushan's Agricultural Industrialization*

1) *The homogeneity threat*

The agricultural status quo in Lushan is highly similar to the natural resources and the ecological environment of the surrounding areas, so It's easy to have a convergence about agricultural industry reconstruction, and it is difficult to make full use of advantages. Such as the tea industry, Lushan is competition for Mingshan, which increase the

¹ Xu Wangchong: "Research on tea market competitiveness of Lushan", Sichuan Agricultural University, 2010.

difficulties to attract high-quality enterprise, high quality factor and the high quality resources.

2) *The challenge of high quality*

The living standard of people is improving; they are more and more strict to the food quality, at the same time, the demand structure of agricultural products changes, and causes contradiction between supplying and demanding. The high-value market of agricultural products which is characterized by high quality, safe, green, organic still reflects that consumers have the right to speak, therefore, that the ecological agricultural products in both place occupy the market undoubtedly forms the challenge for agricultural industry technology, capital and environment.

V. SUGGESTIONS AND COUNTERMEASURES

Lushan faces both advantages and disadvantages, opportunities and threats in the process of agricultural industrialization after disaster; therefore, the following recommendations are put forward aim at the disadvantages and threats.

A. *Developing Agricultural Tourism, Promoting a Coordinated Development of Agriculture and Tourism*

Based on the modern agriculture industrial park and the high-quality kiwi fruit industry area, Lushan mixes ecologically combines famous town, village with park to create activities, and develops new countryside of different types, such as urban agriculture, ecological sightseeing, tourism and leisure, cultural experience, business logistics and so on. Lastly, Lushan will develop the modern agriculture of combining agriculture and tourism.

B. *Innovation Management*

Implementing innovation Management, such as the mechanism of "government + company + farmers", government provides special support fund, enterprises invest high-level technical personnel, farmers provide field, so that farmers can become one of the shareholders, farmer's production enthusiasm can be improved, through these ways, it is good for rebuilding after disaster, and if is also good for improving farmers' income.

C. *Developing and Improving the Rural Cooperative Economic Organization*

Organization for economic cooperation is organization guarantee to promote agricultural industrialization. The bridge driven by intermediary organizations between farmers and enterprises, farmers and the market guarantees the interests of both sides. We must actively support individuals, collective, institutions and social organizations to set up all kinds of rural cooperative economic organizations, explore multi-channel, multi-area, multi-level joint and cooperation, and give full play to the roles of intermediary organizations of economic cooperation in intermediary organizations.

D. *Strengthen Talent Development*

We should improve the talent training mechanism to attract more enterprises leaders and top management talent to invest, we also should directionally train the leader of leading enterprises and specialized cooperatives by further studying in universities and gather-training.

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