

Construction Situation and Countermeasure Analysis of Agricultural Products Logistics System in Beijing-Tianjin-Hebei Region

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Abstract: Agricultural products logistics commonly refer to the supply chain system about agricultural products circulation from producing to the table. This paper analyze main agricultural products supply, consumption, production and marketing docking in Beijing-Tianjin-Hebei Region, and integration of agricultural products logistics channel construction, and emphatically summed up the state of agricultural products cold chain logistics system construction and the policies and measures of agricultural products logistics system construction in Beijing-Tianjin-Hebei Region.

Keywords: Beijing-Tianjin-Hebei, Agricultural Products Logistics, Development Suggestions

1. Major Agricultural Production, Consumption and Docking of Production and Marketing in Beijing-Tianjin-Hebei Region

In Beijing-Tianjin-Hebei Region, Hebei province is a typical agricultural production province while Beijing and Tianjin are typical modern urban agriculture. Agricultural production in Beijing, Tianjin and Hebei have large difference and consumer demand is also very different.

From 2006 to 2015, the output of meat in Beijing-Tianjin-Hebei Region have showed a downward trend; the output of milk in Beijing and Hebei remained stable while there have been a large increase in Hebei; the output of aquatic products have showed a trend of increase on the whole while there have been a slight increase in Beijing and Tianjin but a large increase in Hebei.

The output of Poultry and Eggs in Beijing have shown the trend of increase, in the meanwhile, the output of Poultry and Eggs in Tianjin and Hebei have showed a downward trend and there have been a large decline in Hebei especially; the output of fruits in Beijing have showed a downward trend while showed a trend of increase in Tianjin and Hebei; the output of

vegetables in Beijing and Tianjin keeps a trend of decline while there have been an increase in Hebei (see annex 1 for details).

From the perspective of urban residents' consumption of agricultural products in Beijing and Tianjin, Beijing urban residents' family per capita consumer spending on main agricultural products (food) was more than that in Tianjin, except eggs and aquatic products in 2007. Among them, there was an obvious difference in meat, cakes, milk, milchigs, dried and fresh fruits and aquatic products between Beijing and Tianjin. By 2012, Beijing urban residents' family per capita consumer spending on main agricultural products (food) was lower than that of Tianjin while the spending on dry and fresh fruits and cakes, milk and milchigs was more than that of Tianjin (see annex 2 for details).

From 2006 to 2014, in Beijing-Tianjin-Hebei Region, the annual Per capita consumption on pork, beef and mutton of rural residents' showed a growth trend and Beijing rural residents' annual per capita consumption on pork, beef and mutton quantity have been higher than that of Tianjin and Hebei. By contrast, there was a slight fluctuation in Beijing and a large fluctuation in Tianjin and Hebei. Table 3 shows that the increase trend of rural residents' annual per capita consumption on pork, beef and mutton is to realize in the process of gradually narrowing the gap between Beijing,

Tianjin and Hebei (see annex 3 for details).

From 2006 to 2014, in Beijing and Tianjin, rural residents' annual per capita consumption on vegetables showed a downward trend while there was a trend of increase in Hebei. Rural residents' annual per capita consumption of vegetables in Beijing maintain around 100 kg while that was maintained from 80 kg to 90 kg in Tianjin and Hebei (see annex 4 for details).

It can be seen from the above data, self-sufficiency rate of agriculture in Beijing and Tianjin is low and therefore the vast majority of species rely on field market supply. Hebei province is rich in natural resources, species diversity. Nature resources superiority in Hebei have provided good conditions richly endowed to the agricultural development and also make Hebei become an important agricultural production base for Beijing and Tianjin. In order to intensify efforts of agricultural products distribution, Hebei Province set up many agricultural products direct sales outlets in Beijing. For example, Anci Langfang opened vegetables regular chain in Beijing, docking 30 communities in Beijing [1]; Guan County use direct distribution to Beijing supermarkets and catering companies [2]; Shangyi Zhangjiakou rely on 49 vegetable cooperatives to dock 10 supermarkets in Beijing like Beijing Shouhang supermarket, Wumart, Jingkelong supermarket, Chaoshifa supermarket and so on [3]. In addition, Hebei province focus on Beijing and Tianjin market supporting the eight vegetable brand to meet the domestic medium and high end market demand of large and medium-sized city (see annex 5 for details).

2. Agricultural Logistics Channel Construction Situation in Beijing-Tianjin-Hebei Region

Development of logistics industry planning during the "Twelfth Five Year Plan" period in Beijing put forward that strengthen regional logistics, especially strengthen the depth of cooperation with Tianjin and Hebei, strengthen the linkage development of Beijing logistics industry and the surrounding areas, improve the logistics system of the capital economic circle, and serve the construction of regional economic integration. Strengthen regional logistics cooperation channel construction and rely on the Beijing-Shanghai, Beijing-Tianjin expressway to strengthen logistics construction of the main channel in Beijing and Tianjin; rely on Beijing-Haerbin, Beijing-Hong Kong-Macao, Beijing-Kaifeng, Beijing-Tibet expressway to promote logistics cooperation of Beijing and Hebei, and build a comprehensive regional logistics cooperation network in Beijing-Tianjin-Hebei Region. Adjust and optimize the spatial layout of logistics industry of capital economic circle and encourage large-scale logistics project strengthen convergence with the surrounding areas.

Relying on the Tianjin port, with the Beijing, Tianjin and Tangshan Industrial Zone as the extension direction, Tianjin structures the construction of Beijing, Tianjin logistics

development zone. And during the "Twelfth Five Year Plan" period, Tianjin built a number of regional cold chain logistics distribution centers, extending the cold chain transportation logistics and distribution to realize that the entire cold chain seamless docking of frozen foods from the library to the consumers, providing cold chain distribution within 1 hour in the area of Beijing, Tianjin and Tangshan and there will be an extension to the Northeast, North China and Northwest in this basis.

In "Twelfth Five Year Plan", Hebei province put forward the development thought that give play to the advantage of perfect supporting facilities and perfect city effect in Beijing and Tianjin Urban Agglomeration, focus on the construction of green economic circle of the capital, focus on the construction of one hour traffic circle, one hour economic circle, one hour living circle in Beijing-Tianjin-Hebei Region to meet the rapid growth of the city group logistics demand, build a professional logistics service base. In the spatial distribution, according to the requirements of space layout of "one logistics industrial belt and two logistics channels". Hebei province lead the major logistics resources to the coastal areas and agglomeration around Beijing and Tianjin, promote the construction of major logistics projects, strengthen the logistics industry gathering belt around Beijing and Tianjin function, promote the integration of transportation system and logistics management in Beijing-Tianjin-Hebei Region, speed up the construction of 7 modern logistics park around capital.

3. The Construction of Cold Chain Logistics System of Agricultural Products in Beijing-Tianjin-Hebei Region

In 2011, the turnover of agricultural products wholesale market of cold chain logistics was 2345.8 million tons, among which the volume of the fruits and vegetables, pork, beef, mutton, aquatic products is respectively for 2254.7 million tons, 56.9 million tons, 96.8 million tons. in 2012, cold chain circulation rate of fruit and vegetable, meat, aquatic products is respectively around 10%, 30%, 50% and the refrigerated transportation rate of fruit and vegetable, meat, aquatic products is respectively for around 11%, 61%, 58% [4]. In 2013, the value created by the cold chain distribution in Beijing was up to 646.8 billion Yuan, an increase of 9.7% than that in 2012. During the period from 2010 to 2013, the average annual growth rate of cold chain distribution demand scale in Beijing have reached 10.1%.

Pre-and post-2008, a complete and independent food cold chain system in Tianjin has not yet formed so that 90% of meat products and 80% of the aquatic products circulated without almost no cold chain security, and primary agricultural products especially lacked cold chain. 80%-90% fruit, vegetables, poultry, aquatic products were mostly transported in ordinary truck, railway refrigerated truck only accounting for about 2%. The proportion of highway cold storage thermal

insulation vehicles was only about 0.3% [5]. In 2010, Tianjin set to do focus on supporting the local leading cold chain logistics enterprises. In 2012, Tianjin was identified as the "cross strait food logistics industry cooperation pilot city", which was a good development opportunity for Tianjin to further promote the development of cold chain logistics. At present, with the development of cold chain logistics industry standard implementing and key construction project beginning, the construction of modernization of cold storage in Tianjin is accelerating. There are 43 cold storages above the existing scale, about 760 thousand tons warehouse capacity, more than 10 transport enterprises with cold chain distribution capability, more than 650 distribution network, which forms one hour cold chain distribution system radiating surrounding cities of Beijing and Hebei with Tianjin as the core.

In 2009, there are 972 cold storages above scale in Hebei, whose Warehouse capacity was up to 56 million tons. There were more than 900 professional ice vehicles and 2800 sets temperature control processing and sorting equipment. In recent years, all kinds of agricultural products trading market generally increase refrigerated, frozen, low temperature processing facilities, business area of fresh, frozen food has increased significantly in shopping malls and supermarkets, production and processing enterprises generally established standardized production workshop and low temperature transport fleet, which promote the formation of cold chain logistics system [6].

The rapid rise of cold chain logistics of agricultural products in Beijing-Tianjin-Hebei Region, promoting the innovation and development of agricultural products cold chain logistics operation mode. At present, there are several mature models:

First, direct purchase model of large supermarket. Large supermarkets mainly cooperate with farmer professional cooperatives and leading enterprises and formulate program of planting operation management process. In the respect of logistics distribution, there is a complete set of standard delivery in the sector of fresh agricultural products logistics. For example, Carrefour supermarket began to do the source of origin by direct purchase to farmers in early 2007 and purchase high quality agricultural products directly through professional cooperatives. Currently Carrefour have carried out agricultural super docking in more than 30 cities in the country and there are more than 40 kinds of agricultural super docking direct purchase products.

Second, "cooperatives or supply and marketing cooperatives plus supermarket chain" mode. This mode is farmer cooperatives or supply and marketing cooperatives and chain supermarkets dock and establish stable relationship between supply and marketing, to solve the problem of cold chain logistics of agricultural products by farmer cooperatives or chain supermarkets or cooperation between the two sides. For example, supply and marketing cooperatives in the districts and counties of Tianjin use network resources to extend to the community and village level small supermarket, open agricultural products direct supply area and counters, deliver quality brand agricultural products to hundreds of

community shops or village store, and by this way residents and farmers can buy inexpensive and high-quality agricultural products in front of the house [7].

Third, agricultural products wholesale market distribution model. As the core of supply chain, agricultural products wholesale market connects agricultural products suppliers upward and connects farmer's market, supermarket, community outlets and big consumers downward. This mode bear more than 90% supply of fresh agricultural products and more than 95% supply of vegetables.

Fourth, e-commerce marketing model. This model is through the B2B, B2C electronic trading, selling agricultural products from production base and professional cooperatives, structuring docking mode of production and marketing of "Online transactions, under the net distribution". Like COFCO I buy nets to sell grain and oil, SF preferred network mainly selling meat, Beijing Fresh Direct Co., Ltd, mainly selling fresh agricultural products, Benlai life network mainly selling fruits, Tootoo community network mainly selling organic agricultural products [8].

4. Measures for the Construction of Agricultural Product Logistics System in Beijing-Tianjin-Hebei Region

Beijing have always played a leading role in process of promoting agricultural products logistics system construction in Beijing-Tianjin-Hebei Region. In 2011, Development of circulation system of agricultural products planning during the "Twelfth Five Year Plan" period in Beijing proposed that during the "the Twelfth Five-Year", Beijing will establish modern agricultural products circulation system that makes the wholesale market as the core, with the logistics distribution center supported, the retail network for the protection. Beijing will realize that agricultural products wholesale market is closely connected with production base and retail terminal, ensure adequate supply and form the modern circulation system of agricultural products with reasonable layout, smooth channel, high efficiency and safety, strong guarantee. Beijing also issued a series of policies around the circulation of agricultural products and gives specific measures. For example, Development of circulation system of agricultural products planning during the "Twelfth Five Year Plan" period in Beijing clearly proposed that we will focus on supporting to carry out direct docking activities between agricultural production base, farmers or professional associations and consumers and encourage large and medium-sized chain supermarkets and agricultural base to carry out agricultural super docking and so on.

In 2011, Development of modern logistics industry planning during the "Twelfth Five Year Plan" period in Tianjin makes planning on the construction of agricultural products logistics system, propose building safety, convenient, professional agricultural products logistics system and supply chain, enhancing the radiation distribution function, realizing the agricultural products

market supply timely, green, fresh and low freight. Tianjin will also build a number of regional cold chain logistics distribution center, extending the cold chain logistics distribution, realizing the whole cold chain seamless docking of frozen goods from the library to the consumer, supplying 1 hour cold chain distribution in Beijing, Tianjin and Tangshan and on this basis extending to the northeast, North China and northwest regions.

As an important agricultural products processing and machining base for Beijing and Tianjin, Hebei has been committed to the establishment of an efficient, smooth, safe, orderly fresh agricultural products circulation system. In 2012, Opinions of the general office of Hebei Provincial People's Government on strengthening the construction of the circulation system of fresh agricultural products make clear requirements from seven respects: strengthening the market layout, fostering the growth of the main circulation body, strengthening the circulation infrastructure construction, vigorously promoting the production and marketing, improving market regulation, strengthening the quality supervision of the entire process, promoting the typical pilot. The opinion proposed to take the initiative to dock Beijing and Tianjin, accelerating the construction of fresh agricultural products circulation infrastructure and logistics base in Beijing and Tianjin region to better meet the fresh agricultural products demand of Beijing and Tianjin market.

In July 2014, Beijing Municipal People's government and the Hebei Provincial People's government signed "jointly promote the coordinated development of the logistics industry cooperation agreement (2014-2017)" and reached consensus that Beijing and Hebei will strengthen the docking between the capital market and the main origin of agricultural products in Hebei Province, promote the construction of the circulation system of integration of production and marketing of agricultural products, establish the cold chain logistics marketing channel like "Farming-Super market Docking", "Farming-School Docking", "Farming-Enterprise Docking" from the origin to the sales, increase the distribution of cold chain logistics improve the cold chain logistics level of agricultural products, jointly promote a number of agricultural products market project to service the capital and the surrounding areas, promote the agricultural products cold chain logistics cooperation, the two sides actively support enterprises in Beijing to promote the application of cold chain logistics technology, supporting the construction of cold storage and cold transportation facilities in main vegetable production areas in Hebei Province.

In September 2014, the Beijing Municipal Commission of Commerce, the Tianjin Municipal Commission of Commerce, the Hebei Provincial Department of Commerce jointly formulated and signed the the implementation of the joint development of Beijing, Tianjin and cooperation framework agreement to promote cooperation in the process of business action plan. In the action plan scheme there are some matters related to the logistics of agricultural products and circulation: explore and establish important commodity supply emergency

coordination mechanism, strengthen the information docking in Beijing-Tianjin-Hebei Region, mutually support to stabilize the market, promote the integration of agricultural production and marketing, adopt joint protection, agricultural super docking, direct marketing, further deepen the cooperation with the main vegetable producing areas and agricultural leading enterprises in Hebei, support the establishment of direct sales outlets in Beijing to ensure the smooth easy access of fresh agricultural products and improve circulation efficiency.

5. Problems and Development Suggestions of Agricultural Products Logistics in Beijing-Tianjin-Hebei Region

5.1. Agricultural Products Logistics Problems in Beijing-Tianjin-Hebei Region

5.1.1. Supply and Demand of Agricultural Products Is Relatively Large Differences in Beijing-Tianjin-Hebei Region

As a typical urban agriculture, the production is very small in Beijing and Tianjin, but the population is large and consumer demand is great so that most agricultural products in Beijing and Tianjin are short in supply. Hebei province is a big province of agricultural production, the supply of major agricultural products are greater than demand.

Hebei is "vegetable garden", "rice bag", "fruit basket" for Beijing and Tianjin and most of the supply of agricultural products in Beijing and Tianjin is from Hebei Province. The big difference in supply and demand of agricultural products in Beijing-Tianjin-Hebei Region objectively determined great demand of agricultural logistics. In addition to the number of agricultural products to be guaranteed, Beijing and Tianjin have higher requirements on the quality and safety of agricultural products. The development of brand agricultural products in Hebei province is still a big gap that brand awareness is not high, the famous agricultural products docking of Beijing and Tianjin is not much and the advantage in Beijing and Tianjin market is not significant [9].

5.1.2. Agricultural Logistics System Construction Is Still Very Backward in Beijing-Tianjin-Hebei Region

Although the desire to promote Beijing and Hebei logistics cooperate and construct comprehensive regional logistics cooperation network in Beijing-Tianjin-Hebei Region is consistent, but there are still many difficulties gradually to be resolved in the actual operation.

The measures large and medium-sized freight car ban and by pass traffic control in the urban district in Beijing and Tianjin not only improve transaction costs of circulation but also is not conducive to the solution of the "last mile" problem. Platform of Integration of information communication has not been established so that the information of production and

marketing is not smooth. Wholesale market is still limited to the traditional way of spot trading and negotiation and some logistics infrastructure in the wholesale market is backward or construction is just a mere formality. The seamless channel of agricultural products production, supply and sale in Beijing-Tianjin-Hebei Region is single, which have an effect on the agricultural products arriving in Beijing and Tianjin market timely, durability and in low cost.

5.1.3. The Development of Cold Chain Logistics of Fresh Agricultural Products Is Slow

The cold chain seamless docking system for fresh agricultural products from postharvest precooling, origin refrigeration, refrigerated transport, refrigerated marketing, retail refrigerator, refrigerated homes develop slowly. Although certain agricultural products in some areas made an attempt, but the cost of cold chain keeps high, restraining a wide range of promotion.

Economy in Beijing and Tianjin is advanced, but development environment, the technique, equipment of agricultural products cold chain logistics need to be improved. Most fruits and vegetables in Beijing and Tianjin are transported mainly at room temperature. Some cold chain logistics enterprises generally only provide low temperature transportation but operation throughout the cold chain is difficult to ensure. Postharvest precooling under the environment of low temperature and pretreatment, grading, processing, packaging in most areas have not yet been implemented, key cold chain logistics node of refrigeration facilities is lack and full temperature automatic control technology is not widely used.

5.1.4. Agricultural Logistics Development Policy Needs to Be Coordinated in Beijing-Tianjin-Hebei Region

During the "Twelfth Five Year Plan" period, Beijing, Tianjin and Hebei introduced a series of policies about the logistics of agricultural products and circulation development. While having accommodated regional development in Beijing-Tianjin-Hebei Region, the regional development remains the top priority. In this context, it is inevitable that the regional policy is not coordinated.

At present, in order to promote the coordinated development of agricultural products logistics in Beijing-Tianjin-Hebei Region, it's urge to introduce collaborative supporting policies in the following aspects: promote agricultural products logistics cooperation in Beijing, Tianjin and Hebei; promote the key logistics park construction; build a regional public logistics information service and electronic commerce platform; improve the logistics network of agricultural products in Beijing, Tianjin and Hebei Province; promote the effective docking of agricultural production and marketing; implement the "green channel" policy for the transportation of fresh agricultural products; reduce the logistics cost of agricultural products; Strengthen the construction of cold chain logistics facilities such as warehousing, transportation and distribution of the main agricultural products.

5.2. Suggestions on the Development of Agricultural Products Logistics in Beijing-Tianjin-Hebei Region

5.2.1. Promote the Brand and Standardization Construction of Agricultural Products in Beijing-Tianjin-Hebei Region

Strengthen the cultivation of brand awareness of the producers of agricultural products, Increase the publicity of brand agricultural products and Increase the certification efforts to Pollution-free agricultural products, green food, organic food and geographical indications products. To do a good job of agricultural product logistics standard system, agricultural product quality standard system and agricultural standardization technology promotion system construction.

5.2.2. Promote the Construction of Agricultural Products Logistics System in Beijing-Tianjin-Hebei Region

Strengthen agricultural market integration of Beijing-Tianjin-Hebei Region, and promote the formation of production and marketing docking and the formation of the supporting industry chain. Increase the input on infrastructure construction of the main node of the infrastructure investment including the wholesale market of agricultural products logistics, and build an integrated information communication platform. Create the "green channel" of agricultural products circulation in Beijing-Tianjin-Hebei Region to reduce the cost of logistics.

5.2.3. Promote the Development of Cold Chain Logistics of Fresh Agricultural Products

Guide docking in the wholesale market and agricultural intermediary organizations to the third party cold chain logistics enterprises and improve the whole cold chain docking system of fresh agricultural products. Encourage and support cold chain logistics enterprises make investment and service extension on key cold chain logistics nodes of refrigeration facilities. Explore the establishment of agricultural products circulation industry development fund and other models and cultivate a number of regional fresh agricultural products cold chain logistics enterprises [10].

5.2.4. Promote the Cooperation of Agricultural Product Logistics Development Policy in Beijing-Tianjin-Hebei Region

Establish a high-level consultation mechanism to coordinate the interests of the three party and have good top-level design. Establish a regional problem investigation and research mechanism to understand the situation, to find the problem, to make real-time analysis, to do the implementation of the policy. Set a goal of agricultural logistics development in Beijing-Tianjin-Hebei Region comprehensively and cooperate mutually, drive mutually and seek common development.

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Appendices

Appendix 1. Comparison of Main Agricultural Products in Beijing, Tianjin and Hebei Province (Unit: 10000 Tons).

category	region	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
meat	Beijing	45.24	47.85	45.11	47.19	46.27	44.42	43.19	41.8	39.3	36.4
	Tianjin	59.91	33.76	36.31	39.5	42.86	42.98	45.8	46.48	46.4	45.7
	Hebei	406.18	396.19	421.1	426.6	416.8	418.2	442.9	448.8	468	462
milk	Beijing	61.93	62.24	66.38	67.39	64.08	63.98	65.05	61.46	59.46	57.2
	Tianjin	65	67.21	68.12	66.38	69.12	69.09	67.87	68.24	68.9	68
	Hebei	407.6	489.52	504.5	451.5	439.8	458.9	470.4	465.7	487.8	473.1
seafood	Beijing	5.39	6.03	6.08	5.82	6.34	6.12	6.38	6.36	6.82	6.6
	Tianjin	35.8	32.5	33.67	34.17	34.49	35.21	35.94	39.86	40.8	40.12
	Hebei	87.14	90.64	96.64	100.4	106.3	106.7	116.3	123.1	126.4	129.3
egg	Beijing	15.18	15.56	15.24	15.4	15.14	15.15	15.24	17.5	19.5	19.6
	Tianjin	24.2	19.4	21.01	19.6	18.73	18.65	18.86	18.89	19.8	20.20
	Hebei	382.3	396.45	411	353.21	339.1	339.8	342.6	346.1	362.7	373.6
fruit	Beijing	113.38	124.89	118.8	120.13	115.17	120.87	113.6	103.85	96.45	71.4
	Tianjin	30.35	30.2	62.3	67.05	60.1	61.58	59.91	54.17	62.7	-
	Hebei	1453.1	1491.54	1532.89	1578.62	1612.42	1719.16	1814.9	1863.31	2018.98	-
vegetable	Beijing	341.2	340.1	321.31	317.11	302.98	296.87	279.9	266.86	236.16	205.1
	Tianjin	540.13	274.37	312.76	373.85	419.31	444.23	445.41	455.06	460.2	441.54
	Hebei	6646.8	6623.9	6684.6	6742.1	7073.6	7384.3	7695.1	7902.1	8125.7	8243.7

Appendix 2. Comparison of Main Agricultural Products (Food) Consumption Expenditure of Urban Residents in Beijing and Tianjin (Unit: RMB).

category	2007			2009			2012		
	Beijing	Tianjin	Difference	Beijing	Tianjin	Difference	Beijing	Tianjin	Difference
Meat & egg & seafood	1127	1068.94	58.06	1254	1374.34	-120.34	1528	1885.5	-357.5
meat	669	510.4	158.6	745	696.33	48.67	909	951.78	-42.78
Poultry	150	112.45	37.55	157	144.35	12.65	176	176.87	-0.87
egg	99	122.7	-23.7	106	139.01	-33.01	147	192.1	-45.1
seafood	209	323.39	-114.39	246	394.65	-148.65	296	564.75	-268.75
fruit	366	351.32	14.68	441	459	-18	583	614.19	-31.19
Dry and fresh fruits	490	361.9	128.1	563	444.67	118.33	773	664.4	108.6
Pastry, milk and dairy products	453	301.27	151.73	549	365.62	183.38	679	541.15	137.85

Appendix 3. Rural Residents' Annual per Capita Consumption of Meat in Beijing-Tianjin-Hebei Region from 2006 to 2014 (Unit: kg).

region	2006	2007	2008	2009	2010	2011	2012	2013	2014
Beijing	19.1	16.8	16.3	18.5	17.5	19.5	19.1	21.3	20.3
Tianjin	13.4	10.8	10.4	12.7	13.2	15	14.8	15.6	17.9
Hebei	8.4	6.8	6.17	7.21	7.84	9.47	10.18	11.73	12.36

Appendix 4. Annual per Capita Consumption of Vegetables in Rural Areas of Beijing-Tianjin-Hebei Region from 2006 to 2014 (Unit: kg).

region	2006	2007	2008	2009	2010	2011	2012	2013	2014
Beijing	151.1	89.1	91.1	99.1	95.6	97.9	109.0	100.5	102.8
Tianjin	132.2	134.9	139.2	146.6	140.3	83.5	86.6	84.3	90.3
Hebei	61.61	55.17	59.75	53.66	55.38	78.74	71.80	72.49	79.80

Appendix 5. The Market Positioning of Supporting Eight Major Brands of Hebei in Beijing and Tianjin.

Key Brands in Hebei Province	Market Positioning
"lvlong" in Langfang	Focus on State ministries and commissions, Beijing government organs, the capital of the university canteen
"Jiajiayuan" in Shijianzhuang	Open the chain store in Beijing to exploit the Beijing Market steadily
"Cuixian" in Langfang	Expand hotels more than three star and holiday gift market in Beijing by renting store
"Puchun" in Guan	Focus on big supermarket to realize brand sales
"Sheng" in Tangshan	Develop fresh vegetables and frozen vegetables boutique for high-income people in Tianjin, Beijing and Hebei
"Jifa" in Qinhuangdao	Make use of favorable conditions in Qinhuangdao to create domestic and international market visibility
"Qingqing" in Qingxian	Increase sales of refined packaging vegetables mainly in Tianjin and Beijing
"Chengda" in Chengde	Make use of own geographical and climate advantages to produce brand vegetables of high quality

References

- [1] Anci District in Beijing to set up seven vegetable direct sales stores. http://hebnews.cn/2013-01/30/content_3072104.htm.
- [2] Hebei for Beijing vegetable distribution center settled in Yanjiao. <http://zx.lf.gov.cn/zx2010/item/Print.asp?M=1&ID=1172>
- [3] Guan County Shunzhai vegetable cultivation professional cooperatives. <Http://news.010lf.com/system/2012/12/08/010301076.shtml>.
- [4] Beijing Municipal Commission of Commerce. Beijing logistics development blue book [M]. Beijing: China Fortune Publishing House, 2013. 88.
- [5] Cao Zuojun. Analysis on the operation status of food cold chain logistics in Tianjin [J]. Modern economic information, 2008 (11): 99.
- [6] Development plan of Hebei agricultural products cold chain logistics "12th Five-Year" [EB/OL]. (2012-12-26) [2016-03-15]. http://www.hbxinfadi.com/article_show.asp?article_id=114.
- [7] METRO Supermarket and Supermarket Detailed. <Http://wenku.baidu.com>.
- [8] Li Qingguo. Peking Union of Farmers' Professional Cooperatives [N]. Peasant Daily, 2014-01-01.
- [9] Yang Lei. Research on the modernization of agricultural products wholesale market in Hebei Province [D]. Agricultural University of Hebei, 2007.
- [10] Wang Yinhua, Wang Shuangjin, Liu Yan. Problems and suggestions on the market circulation of fresh agricultural products in Hebei Province [J]. Rural economy and science and technology, 2015 (4): 108-109.
- [11] Ministry of Agriculture designated market list [EB/OL]. (2015-12-16) [2016-02-20]. <http://wenku.baidu.com/link?url>.