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Development of Agricultural Product Logistics in Tianjin in the Context of the Coordinated Development Strategy of Beijing – Tianjin – Hebei Region

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Abstract Since February 26, 2014, Chinese president Xi Jinping of the Central Committee of the Communist Party of China listened to the report on the coordinated development of Beijing – Tianjin – Hebei Region and delivered an important speech, and officially raised the coordinated development of Beijing – Tianjin – Hebei Region as a major national strategy, the integration of Beijing – Tianjin – Hebei Region has entered the "fast lane". Guided by accelerating the construction of agricultural product supply areas, agricultural high-tech industry demonstration areas, and agricultural product logistics center areas, Tianjin seizes the opportunity of coordinated development of Beijing – Tianjin – Hebei Region, brings into full play to the advantages of Tianjin's three-dimensional transportation network, perfect market system, high-quality port services, rapid growth of cold chain and e-commerce, to promote the faster and better development of Tianjin's agriculture. In addition, focusing on comprehensively improving Tianjin's regional agricultural product logistics service capabilities, Tianjin is establishing a distribution center for agricultural products, an e-commerce center, and a high-end agricultural product distribution center serving the Beijing – Tianjin – Hebei Region, to promote the construction of Tianjin agricultural product logistics center.

Key words Coordinated development strategy of Beijing – Tianjin – Hebei Region, Agricultural product logistics, E-commerce, Cold chain

1 Current situation of agricultural product circulation in Beijing – Tianjin – Hebei Region

1.1 Beijing Municipality Beijing Municipality is a megacity of consumption with a population of 20 million, and its average annual total consumption amount of agricultural and sideline products is about 100 billion yuan. About 80% of its market supply of agricultural products depends on other cities, and most of the varieties are supplied by Hebei, Shandong, Liaoning and other provinces and cities. Among agricultural products, the bulk varieties of cabbage, potatoes, ginger, garlic, cucumber, and tomato are mainly coming from the surrounding areas of Hebei and Shandong provinces. In addition to the eight large-scale agricultural product wholesale markets in Beijing, wholesale markets at all levels, supermarkets, convenience stores, fruit and vegetable stores and other retailers are extremely dense, which provide a complete market system for the circulation of agricultural products and better guarantee the demands of different levels of urban and rural residents in Beijing. In the agricultural product circulation system of Beijing – Tianjin – Hebei Region, Beijing Municipality plays the

role of "demand terminal".

1.2 Tianjin Municipality Tianjin Municipality has a sufficient supply of local vegetables throughout the year. It has established more than 190 large, medium and small agricultural products specialized, comprehensive and trade markets, and 60% of its annual vegetable transaction volume is local vegetables in Tianjin. However, the varieties, types, and time of putting into market of local agricultural products have obvious seasonal concentration, so it is difficult to achieve a balanced production and supply throughout the year. In the context of the coordinated development strategy of Beijing – Tianjin – Hebei Region, Tianjin Municipality takes Wuqing, Baodi, Jixian, Jinghai and Ninghe as key areas to build a number of high-end, high-quality and high-quality agricultural production bases, and the products are supplied for sharing in Beijing – Tianjin – Hebei Region.

1.3 Hebei Province Hebei Province is a large important agricultural province and a major grain-producing province in China and has a strong ability to guarantee the supply of agricultural products. In the context of the coordinated development strategy of Beijing – Tianjin – Hebei Region, Hebei Province is promoting the construction of standardized production bases for green agricultural products, and establishing a vegetable logistics system for Beijing and Tianjin, to realize the direct connection between the "vegetable garden" in Hebei and the "vegetable basket" in Beijing and Tianjin, and improve the logistics project of agricultural production materials, so as to provide logistical support for docking with Beijing and Tianjin.

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2 Advantages of Tianjin Municipality in developing agricultural product logistics

2.1 The three-dimensional transportation network provides the basic conditions for the development of agricultural product logistics

Tianjin Municipality will take the integration of transportation as the interface to realize the interconnection between Tianjin, Binhai New District, Beijing and Hebei, and form an efficient and fast modern transportation network. Tianjin has the largest foreign trade port in the north and an airport that is one of the four major air cargo bases in China. Now a three-dimensional transportation network of sea, land and air has been formed in Tianjin. Besides, Tianjin has routes all over the world's major ports and airports, as well as an extensive road and railway network, which are the basic conditions for the development of agricultural product logistics. In addition, 12 key logistics parks, including Tianjin Port Bulk Logistics Center, Container Logistics Center, Bonded Logistics Park, Airport International Logistics Zone, Logistics Freight Center and Postal Logistics Center, have basically taken shape as typical demonstration projects for the logistics development of Tianjin. The development momentum is good, and these play a good leading and demonstration role for the development of the agricultural product logistics center area.

2.2 Tianjin Port provides high-quality services for the development of agricultural product logistics

Tianjin Municipality is a gathering place for the import and export of fresh agricultural products in the north China. According to customs statistics, Tianjin would import a total of 77.09 billion yuan of agricultural products in 2021, of which aquatic products, dairy products, fresh fruits and nuts, grain, sugar, and alcoholic beverages would achieve positive growth. Due to the COVID-19 epidemic, the import of traditional frozen products has dropped sharply, while the import of aquatic products has a strong growth momentum. The total import was 438 000 t, realizing an increase of 14.8% over the same period of the previous year; the import value was 13.34 billion yuan, realizing an increase of 18.2%.

In addition, the opening of Tianjin electronic port and logistics information platform in Tianjin has effectively improved customs clearance efficiency and customer service level. In 2021, the level of cross-border trade facilitation at Tianjin Port would continue to improve. The overall customs clearance time for imports and exports would be 34.93 h and 0.74 h, respectively, a decline of 17.3% and 48.6%, respectively, compared with the previous year. Various reform and innovation measures have driven the continuous improvement of port efficiency. Among them, the upgraded version of Tianjin Smart Platform for Gathering and Distributing Ports has been promoted and applied in the Beijing – Tianjin – Hebei Region, and the proportion of import and export declarations in advance has separately reached 62% and 92.2%. Among the top ten shipping ports in the whole country, these two figures separately ranked second and first.

2.3 Cold chain food consumption promotes the development of agricultural product logistics

In the current environment of China, the radiation radius of the cold chain is 50 km for its own market, and 200 km for the strong radiation circle; if greater than

200 km, it is a "decreasing distance and weakening" radiation circle; if the radius exceeds 400 km (except for extremely scarce products), the competitive advantage is getting smaller and smaller, or even at a competitive disadvantage. In the radiation zone with a radius of 50 – 200 km, Beijing is the main target market of Tianjin, especially the high-end market of fresh food, Beijing has a huge consumption. In the 200km radiation circle with Tianjin as the radius, in addition to Beijing, there are medium-sized cities such as Baoding and Tangshan cities, and small and medium-sized cities such as Cangzhou and Langfang cities. The cold chain consumption of agricultural products has stimulated the development of the cold chain industry in Tianjin, establishing a logistics center area for agricultural products, serving the Beijing – Tianjin – Hebei Region, and radiating Bohai rim region.

2.4 E-commerce promotes the development of agricultural product logistics

Tianjin Municipality has accelerated the development of e-commerce, showing the characteristics of late start but rapid development. The top 20 national e-commerce companies have all settled in Tianjin, and e-commerce giants such as Alibaba, Amazon, JD.com, Dangdang, Vipshop and Jumeiyopin have set up regional logistics centers and settlement centers in Tianjin. In order to promote the development of agricultural e-commerce, the Tianjin Municipal Commission of Agriculture has included the construction of agricultural product e-commerce into the three key projects of the National Agricultural Internet of Things (IoT) Regional Test Project from 2013 to 2015, to actively promote the various work of the agricultural product e-commerce demonstration project, which has laid a solid foundation for serving the consumption demands of agricultural products in the Beijing – Tianjin – Hebei Region.

3 Challenges in the development of agricultural product logistics in Tianjin

3.1 Insufficient regional coordinated development

Beijing has undertaken excessive agricultural product distribution functions that are inconsistent with the functions of the capital; Hebei Province is the agricultural agglomeration area of Beijing – Tianjin – Hebei Region, but agricultural products supplied by Hebei to Beijing and Tianjin only account for about one third of the overall market; Tianjin, as a transportation hub and logistics center in the north China, has not played its role in cross-regional distribution of agricultural products.

3.2 Advantages of imported fresh agricultural products are outstanding, and the development of cold chain logistics is uneven

Fresh agricultural products of Tianjin can reach the consumer market of Beijing within one hour, and cold chain logistics is a necessary condition to ensure the quality of fresh products. At present, the capacity of cold storage in Tianjin has exceeded 1.5 million tons, ranking among the top in the whole China. Large-scale refrigerated warehouses with capacity above 10 000 t accounted for more than 86%, and the per capita refrigerated warehouses held nearly 1 000 kg, ranking among the top three in the whole country. However, the one hour circle of fresh agricultural product logistics around Beijing and Tianjin still needs to be improved. In

the first place, the structural contradictions of cold storage are more prominent, mainly manifested in the need to optimize the layout of the cold storage, the unreasonable design of the cold storage, and the lack of basic conditions for pre-cooling in the production area. In the second place, the development of cold chain transportation is relatively lagging behind, and the modes of "trolley + cotton-wadded quilt" and "foam + ice cubes" still exist. In the third place, the level of standardization, informatization and intelligence of the cold chain needs to be improved.

4 Recommendations for the development of agricultural product logistics in the context of the coordinated development strategy of Beijing – Tianjin – Hebei Region

4.1 Accelerating the development of e-commerce of agricultural products and improving the level of networked service of agricultural product logistics information It is recommended to establish a logistics service system for agricultural products that supports the development of e-commerce, and to support e-commerce enterprises of agricultural products to strengthen the construction of logistics and distribution networks, encourage e-commerce enterprises to carry out in-depth cooperation with agricultural product logistics enterprises to realize the integrated development of e-commerce and agricultural product logistics. Besides, it is recommended to take entering the communities and campuses as a pilot project, realize the standardization of information, regionalization of distribution, and centralization of services, optimize the "last 1 km" agricultural product distribution service network, and also improve the living convenience of residents.

(i) Supporting leading agricultural enterprises to develop e-commerce platforms: it is recommended to support the development of agricultural product e-commerce and the leading enterprises that have made remarkable achievements in the development of agricultural product e-commerce through third parties. In addition, it is recommended to give certain subsidies to leading enterprises with e-commerce teams, independent brands, warehouses, and delivery sites, as a policy guide for the development of agricultural product e-commerce.

(ii) Encouraging and supporting the development of e-commerce in agricultural product wholesale markets: The agricultural product wholesale markets already have good conditions for developing e-commerce and have products, places, and operation experience. It is recommended to encourage market operators to open online stores on third-party e-commerce platforms, and support agricultural product wholesale markets to set up e-commerce companies. In addition, it is recommended to develop the construction of public e-commerce platforms and online payment platforms for agricultural products, encourage online sales of agricultural products, and promote the integration and interaction of online and offline transactions, as well as the coordinated development of virtual and physical markets.

(iii) Promoting the construction of agricultural information service platform to realize information sharing in Beijing – Tianjin

– Hebei Region: use online public platforms to publish supply and demand information, and use public service platforms such as Tianjin Agricultural Products E-commerce Public Service Platform, China Agricultural Online Exhibition Hall, and the Ministry of Commerce's New Rural Commercial Network to publish agricultural product supply and demand information to promote production and sales.

4.2 Promoting the agricultural product logistics park to take the road of alliance, scale and brand development The agricultural product logistics park should implement the strategy of going out and extend the industrial chain towards the Beijing – Tianjin – Hebei Region and even the whole country. First: extending to upstream fields: it is recommended to establish a production base jointly with professional cooperatives to stabilize the supply of high-quality agricultural products, especially to connect the resources of local high-quality agricultural products in Tianjin. Through the high-end agricultural wholesale market, Tianjin should take the road of brand development, implement the strategy of going out, and develop the Beijing – Tianjin – Hebei Region and even the national market. Second: extending to downstream fields. It is recommended to cooperate with large supermarket chains, shopping malls, catering enterprises, agricultural product processing enterprises, *etc.* to distribute agricultural products for them, and organize the development of community stores, supermarket chains, and chain operations of agricultural wholesale markets, and establish an agricultural industry chain system based on wholesale markets. Furthermore, it is necessary to strengthen the supply and marketing connection with Beijing and Hebei, especially the main planting bases in Hebei Province, make overall planning and coordination, dislocate development, and take the road of alliance, scale and brand development.

4.3 Promoting the development of emerging circulation channels such as Farming – Supermarket Docking, and improving the diversified service level of agricultural product logistics Tianjin should encourage and guide the development of emerging distribution channels for agricultural products such as Farming – Supermarket Docking, e-commerce, and high-end distribution, reduce circulation links, and reduce circulation costs. It is recommended to consolidate and develop the cooperative relationship between the city's main large and medium-sized supermarkets and farmers' cooperatives, strengthen support for farmer professional cooperatives to develop deep processing, storage and marketing facilities for agricultural products, encourage supermarkets to establish exclusive production bases, and continuously expand the scope of Farming – Supermarket Docking, and improve the level of docking. Besides, it is recommended to encourage wholesale markets to open agricultural product sales stores or use mobile sales vehicles in communities or residential districts. In addition, Tianjin should vigorously promote the online sales link of agricultural enterprises, encourage enterprises to cooperate with brand e-commerce, cultivate a number of emerging agricultural products logistics that organically combine physical transactions and e-commerce, and encourage the intensive, standardized and brand development of various emerging circulation modes of agri-

cultural products.

4.4 Improving the cold chain logistics system of agricultural products and the cold chain service level of the whole process of agricultural products logistics Tianjin should support enterprises that already have a certain cold chain logistics foundation, and improve the construction of the cold chain logistics system for agricultural products, to realize the seamless connection of the whole cold chain of frozen products from warehouse to consumers, provide one hour cold chain distribution in Beijing – Tianjin – Hebei Region, and accordingly radiate northeast, north and northwest regions. Relying on construction projects such as the central fishing port in Binhai New District, it is recommended to integrate the existing frozen product bases such as aquatic products, live-stock products, fruits and vegetables, flowers, *etc.*, and build a large-scale regional modern intelligent cold storage with automatic temperature adjustment and intelligent storage capabilities. Besides, it is recommended to accelerate the upgrading of cold chain logistics equipment and technology, improve the monitoring and traceability system of cold chain logistics, strengthen the independent research and development and application promotion of temperature control equipment and refrigerated transportation tools, build a group of cold chain logistics enterprises with abundant resources and international competitiveness, and comprehensively improve the cold chain service level of agricultural product

logistics.

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During the continuous creation and dissemination, the Legend of King Yu Tamed the Flood has an horizontal confluence of multi-cultural elements of different nationalities, there is deeper interaction to promote its localization with the help of various transmission methods of cultural media, "corridor effect" is reflected from the fusion of legends and regional landscapes, spread effect of legends and ethnic identity, and in the field of memory and folk identity of legends. In the overlapping of history, it is an effective path for the spread of cultural media that various ethnic groups have jointly built and constructed in this cultural corridor, which has become such as the Legend of King Yu Tamed the Flood, cultural beliefs, infiltrating common cognition of regional cultural integration and harmony, and condensing cultural beliefs of national identity and symbiosis.

5 Conclusions

The Legend of King Yu Tamed the Flood is part of the Kunlun myth of the entire Hexi Corridor, and contains much information such as the origin and integration of the Chinese nation. The national spirit in the legend that nature is conquered by King Yu embodies the need for harmonious coexistence between human ecology and natural ecology. In addition, the spread of the Legend of King Yu Tamed the Flood cannot be this time-space channel "corridor". As an entity space, "corridor" provides the conditions of the integration and spread for symbiotic theme of oral tra-

dition, which provides convenience for the "corridor effect" generated by the Legend of King Yu Tamed the Flood in the horizontal space. Common value orientation of multi-ethnic humanities and religions are put into practice through multicultural elements in the Legend of King Yu Tamed the Flood. This kind of common value presents the hidden historical form of "cultural integration" with the cultural media as the carrier. It is the integration of multiculturalism in the corridor that the common value of "cultural integration" can be fully realized. The Legend of King Yu Tamed the Flood is one of the cases in the corridor that shows the coexistence of multi-ethnic cultures. Perhaps this is what we need to keep prying into: actively looking for more legends and stories in the corridor, understanding more cultural relics, inheriting more integrated and intertwining legends, telling the real Chinese legends that belong to the corridor.

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