On Study of Functions of Development of Geographical Indication Products in the Process of Agriculture Standardization—Take Protection for Geographic Indications in Shanxi Province as an Example

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Abstract: As a process realizing agriculture standardization in agricultural field, the agriculture standardization is an essential approach to achieve the modernization, technologization and industrialization in agriculture. The paper takes the products of geographical indication in "three products and one indication" strategy in China's agricultural standardization as a point of penetration, and take the protection of geographical indications in Shanxi Province as an example to discuss a key role in promoting agricultural standardization by developing products of geographical indications and to sort out the standardization promotion models of products of geographical indications in Shanxi Province; the paper proposes relevant promotion ways on the basis of current problems existed.

Keywords: Agriculture standardization; Geographical indication products; Quality; Brand

The agriculture standardization refers a process that sets standards of advanced agricultural science and technology achievements and practical experience in the agricultural field and that conducts implementation in the whole process of agricultural production to reach standardize agricultural production and to ensure the quality and safety of agricultural products so as to realize the optimal orders and benefits in ecology, economy and society.

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The agriculture standardization is not only limited to the production process, but also involves in relevant technical standards and operating practices like primary processing, storage, packaging, preservation, transportation and sales and services of post-natal agricultural products. [1]

The year 1996 saw the implementation of agriculture standardization in China, and modernization, technicalization and industrialization in agriculture were made in agriculture standardization, which played a key role in promoting foreign trade development; however, in terms of the China's agriculture as a whole, compared with agriculture in developed countries the Chinese agriculture still operates small-scale production and business patterns which greatly prevent China's agriculture from integrating into the process of globalization.

1. The Significance of Promoting Agriculture Standardization

1.1 The Realization of Scale Economy of Agriculture Standardization in the Field of Production

The scale economy refers the increase of absolute amount of enterprise products and reduction in the unit cost in a particular time, which means that the expansion of scale of operation is in favor of reducing the average cost to raise profits. [2] The process of agriculture standardization is a process applying science and technology, popularizing science, summarizing science and technology and improving levels of science and technology. [3] The application of science and technology has improved the agricultural productivity, which not only achieves individual scale economy, but also is conducive to form the industrial chain and expand the scale of the industry so as to realize regional scale economies. Agricultural standardization is the only one way to realize agricultural scale economy.

1.2 The Reduction of Transaction Fees in Circulation Domain of Agriculture Standardization

There are transaction costs in the market for any product, which include information fees, contract signing fees and contract fulfillment fees. The standardization is able to provide predictable information for both parties, including production process and product quality; and it is conducive to improve information transparency in farmers and enterprises, reduce the cost of information in transactions, lower transaction costs to increase profits by enlarging transactions scale. [4]

Meanwhile, one basic requirement for products to enter into in the target markets is agriculture standardization in the international trade; the influence of "technical barrier" and "green barrier" on China will be alleviated when
products reach the international standards to improve the international competitiveness of China's agricultural products as well as the foreign trade. At present, one of ten products of geographical indication recognized by China and 27 member states of the EU is Shanxi apple; the export reached 26,400 tons as early as 2010 with a value of $1,993.2 million, and it was rated as a product with the highest comprehensive relative value by Development Report of China Geographical Indication in 2013.

1.3 The Reduction of Asymmetric Information of Consumers in Consumption Field by Agriculture Standardization

The asymmetric information of consumers on products will cause moral hazard and adverse selections in the market. Because the information is too limited for consumers to distinguish the products, the inadequate information will lead consumers to select products with low prices in the long term transaction process; as for high quality producers, they have to pay high costs to maintain a premium in order to maintain quality, and the low-cost selections of consumers eventually produce a phenomenon "bad money drives out good money" in the market. The product classification in agricultural standardization includes low quality standard, product standard, certification standard and process standard to guarantee consumers to screen products and service qualities, ease inferior market problems and create a good market environment to solve benefits lost issue caused by information asymmetry of consumers.

2. A Crucial Component in Agriculture Standardization of Developing Products of Geographical Indication

The product resources are rich in China's geographical indications products, as of 2015, and the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China has protected 1993 geographical indication products by 2015, of which, 16 are foreign geographical indications in China, and approves more than 6,107 enterprises and organizations to use special mark of geographical indications products. As an important part of the strategy of "three products and one standard", the development of geographical indication products in recent years has earned more and more attention from local governments.

The Provisions on the Protection of Geographical Indication Products of China clearly states that: "the geographical indications products are produced from a specific region, and their qualities, reputations or other characteristics essentially rest with the natural factors and human factors in the origins, and are named by geographical names after approval". [5]

A feature of geographical indication closely connecting to geographical
locations makes the majority products are agriculture-related products. The second national geographical indications survey results showed that in 2012, geographical indications products like vegetables and fruits were 793, a largest number, accounting for 40.69% of the total geographical indication products. Then came the grain oil accounting for 10.62% of the total with a total of 207, as well as Chinese herbal medicine accounting for 9.75%, and the total agricultural products were 1,850, accounting for 94.9% of the total products. Meanwhile, the unified production methods, manufacturing processes and product quality of geographical indications products make them play similar roles to agriculture standardization in guaranteeing product quality, reducing consumer information asymmetry, achieving scale economy, reducing transaction costs, facilitating international trade, increasing farmers' income and optimizing the ecological environment of origins. Therefore, it is an important part in promoting agriculture standardization to develop geographical indications products.

3. The Standardization Promotion Models of Geographical Indications Products in Shanxi Province

Stretching across the north subtropical zone, warm temperate zone, temperate zone, Shanxi Province boasts of diverse climates and rich biological resources as well as a large number of geographical indications product resources. The year 2003 saw Shanxi Province approve the first geographical indication product protected, and local governments gradually tapped products energetically and the products values of geographical indications products protected in Shanxi Province in 2009 reached ¥29.148 billion, accounting for 3.56% of our provincial GDP. The second national geographical indication product survey indicated in 2011 that the products values of geographical indications in Shanxi Province reached ¥38.439 billion, accounting for 4.59% of the geographical indication product values nationally and ranking eighth. At the end of 2016, there were total 60 protected geographical indications products in Shanxi Province, of which, 41 kinds were agricultural products, accounting for 68.3% of the total amount of protected products.

In order to protect and develop local geographical indications products, the regions in Shanxi Province vigorously promote the standardization production, and there are total two standardized models in provincial geographical indications products currently.

3.1 The Modes Dominated by Industries and Organizations

The industry and organization dominating models refer the domination of industry associations and conduct production guidance, quality supervision
and brand building of geographical indications products. Under this mode, the industry associations are in charge of guiding and coordinating the divisions of labor between farmers, processing enterprises and government in the whole industry. The advantage of this model is that the industry associations are relatively familiar with the product production processes and sales market, and are able to feed back needs in farmers and enterprises to the government and provide policies basis by directly connecting with the government; it serves as a bridge role in farmers, manufacturers and the government, which is conducive to the overall planning and industry development.

3.2 The Dominant Models in Agricultural Demonstration Zones

The dominant model of agricultural demonstration area refers to establishing demonstration areas of standardized modern agriculture which mainly produce geographical indications products with the assistance of the government; unify the decentralized farmers via the regional agricultural cooperation organizations for standardized training to establish production files and normalize operation process; the leading enterprises and agricultural cooperation organizations in the districts sign a supply and marketing contract with farmers to purchase primary agricultural products cultivated according to standardized procedures, and form one-stop characteristics industry of prenatal, in production and postpartum in regions according to processing products and marketing in the standardization process.

The advantages of the model of "demonstration area + agricultural cooperation organization + leading enterprise" rest with the domination of the government so that farmers in demonstration areas and enterprises are able to enjoy preferential policies in tax and subsidies; the leading enterprises have established brands and obtain quality or food safety certification which is capable of playing a favorable demonstration and leading role. Demonstration areas are in favor of regional economic development locally as a result of a strong integrity, high degree of industrialization and production-supply-marketing; the standardized production methods are conducive to the protection of local ecological environment.

4. Problems Existed in the Standardization Process of Geographical Products

4.1 High Standardization Levels and Imperfection in Standard Systems

First of all, the number of existing agricultural products with standard ages over 10 years accounts for 40%, and many indicators in quality and safety are out of time compared with current technology levels and market demand. For example, among the 32 local standards about Shanxi Apple local standards, 18 standards were issued before 2000, accounting for more than
half of the total numbers. These standards can not only meet the domestic requirements of domestic and foreign markets, and the international standard adoption rate is very low. Secondly, imperfect standard systems; the standards not only cover the production process, but also covers the whole process of products involving inputs, packaging, storage, transportation, marking, service and others. However, the current standards mainly are existed in the quality and technical regulations of agricultural products, while the prenatal and postnatal standards are insufficient. At present, the logistics standards account for only 4.4% of agricultural local standards in Shanxi Province, and method standards only 3.4%, [6] far from meeting the requirements of the standard systems.

4.2 Unawareness on Farmers of Standardization and Limited Results of Standardization Implementation

The agricultural production in China is characterized by family-orientation, small size, less capital and low level of technology; farmers are not educated well with inadequate standardization awareness, and their farming is based on experience; many farmers even are reluctant to adopt standard operation models as a result of high costs. Meanwhile, products processing enterprises are mostly workshop-styles in production with abnormal operation and different product qualities, making the existing standardized system fail to be applied.

4.3 Low Product Brand Degrees and Shortage of Effective Standardization Carriers

Brand refers an assessment and recognition in enterprises and their products, services, cultural values from consumer, which represents the product quality and recognition of consumers. The brand building itself contains a standardized process from input to logo adoption and after-sales service. However, many geographical indications products are mainly produced and manufactured by small and medium-sized enterprises and problems like "low, small, weak, scattered" are generally existed. Many producers still adopt the small batch production methods based on experience for lacking brand awareness. The products are characterized by "small but not fine, large but not strong", and especially many primary agricultural products without trademarks and professionalism, let alone brands.

5. Countermeasures Promoting Standardization Levels of Geological Indications Products

5.1 A Dominant Role of the Government and Macroscopic Management Coordination

Firstly, the government should be in charge of developing and improving
the standard systems. The government is able to effectively combine the planting, processing experience, science and technology and market information by integrating cultivation of farmers, production enterprises, research institutes and other resources to fabricate agricultural production, processing, wholesale and retail and consumer services as well as complete industrial chain standard systems combining environment protection. Secondly, establish standard service platforms of geographical indications products. Provide information and services such as standard content, technical training, product certification, quality inspection and testing and market information for market participants including local governments, agricultural companies, cooperatives, farmers and merchants. Provide a bridge for connection for various market bodies.

5.2 Enhancement in Standardization Awareness of Farmers and Improvement of Standardization Implementation Results

In terms of workshop-style business models based on individuals in production and manufacturing of geographical indications products currently; the top priority is to make farmers realize the importance of standardization and positive effects on them through ways like agricultural science and technology going to countryside, television newspapers, seminars, and experience to stimulate the enthusiasm of farmers in applying standards. Secondly, full play roles of associations and agricultural cooperation organizations to unify the decentralized farmers and train them with various standard operating procedures. Thirdly, cultivate a group of standardized professionals to go to rural areas to directly impart knowledge to farmers to the scene, or invite experts to answer questions for the farmers and solve their problems, implement standardization in real places.

5.3 Improvement in Standardized Management Levels by Launching Brand Strategies

An important approach to implement standardization is brand building. Firstly, sign contracts with primary agricultural farmers with enterprise as main subjects, and require them to provide raw materials according to standardization, which not only guarantees the quality of raw materials, but also solves market problems for farmers. Secondly, fully play the role of agricultural demonstration areas, and the leading enterprises strictly take charge of various processes according to products quality standards, strengthen quality management, plan and promote brands and publicize the whole process of standardization implementation in demonstration areas in virtue of demonstration industry chains and with demonstration areas as bases.
Acknowledgement
This paper is the 2016 Project Paper for Development and Prosperity of Philosophy and Social Sciences Achievements in Xi'an University of Science and Technology. Project name: Study on the construction of livable city in Xi'an under the background of the Silk Road Economic Zone Project number 2016SY11

This paper is the 2014 Project Paper for project of science and technology planning of General Administration of Quality Supervision, Inspection and Quarantine of the PRC. Project name: Study on the protection of geographical indication products in Shanxi Project number 2014QK128.

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