

Comparative study on the geographical indication protection between China and the European Union – From the perspective of the China-EU Geographical Indications Agreement

WEIWEN QIAN, YINGUO DONG*

School of Business, East China University of Science and Technology, Shanghai, China

**Corresponding author: dongyinguo2005@163.com*

Citation: Qian W.W., Dong Y.G. (2023): Comparative study on the geographical indication protection between China and the European Union – From the perspective of the China-EU Geographical Indications Agreement. *Agric. Econ. – Czech*, 69: 185–201.

Abstract: Geographical indication (GI) represents the specific good quality and reputation of the regional characteristics of agricultural products, which is a positive approach for stabilising the export of agricultural products, realising high quality and high prices for agricultural products and rural revitalisation. Based on the China-EU Geographical Indications Agreement, this paper discusses the differences between China and the European Union (EU) in terms of GI protection from three aspects: the institutional framework, the operational system, and the operational status of GIs. The purpose of the study is to identify the differences between China and the EU in the protection of GIs, China's shortcomings, and gaps, and to propose policy recommendations for China to protect GI products better, exploit the economic impact of GIs and enhance the competitiveness of China's exports.

Keywords: institutional framework; intellectual property rights; operational status; operational system; trade

Geographical indication (GI) indicates that a commodity comes from a certain region, and its specific quality, reputation or other characteristics are thought to be mainly determined by the natural or human factors of the area (Josling 2006; Sorgho

and Larue 2018). In recent years, China has continuously strengthened the protection of GI products, constantly adjusted and improved laws, and regulations, strengthened communication and cooperation with the international community and sought to es-

Supported by National Natural Science Foundation of China (Project No. 71673087) and China Scholarship Council (Project No. CSC202206740009).

© The authors. This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0).

establish a mutually beneficial GI industry and trade pattern. In 2007, China and the EU launched the '10 + 10' pilot project for mutual recognition of GIs. The former General Administration of Quality Supervision, Inspection and Quarantine of China (AQSIQ) and the EU delegation officially exchanged documents related to 10 GI protection products that applied for protection in both countries. In November 2012, all '10 + 10' were certified by both countries, marking the substantive stage of the pilot work on mutual recognition of GIs between China and the EU. Consequently, the mutual recognition of GIs has been developed further. On March 1, 2021, the Agreement on the Protection and Cooperation of Geographical Indications between the Government of the People's Republic of China and the European Union (hereinafter referred to as the China-EU Geographical Indications Agreement) was officially enforced. The first batch of 100 GIs mutually recognised by China and the EU will be protected from the date of entry into force. The second batch of 175 GI products will also be guaranteed within four years, and more agricultural products are being covered. The mutual recognition of GIs between China and the EU protects the mutual recognition of agricultural products through institutional norms and trade flows, enabling them to leverage their respective comparative advantages and achieve healthy and steady growth of bilateral trade in agricultural products.

There are three kinds of literature related to this paper. The first is the study of GIs from the perspective of laws, regulations, and international conventions. The practice of incorporating GI into the protection of the rules of international law can be traced back to the Paris Convention for the Protection of Industrial Property in 1883 and then to the Madrid System for the International Registration of Marks in 1891 and the Lisbon Agreement for the Protection of Appellations of Origin and their International Registration in 1958. However, the term GI was not used then, but its related concept was stipulated. That is, the source mark and the name of origin are used to provide protection (Addor and Grazioli 2002; Marie-Vivien and Bienabe 2017). The Trade-Related Aspects of Intellectual Property Rights (the TRIPS Agreement), which was promulgated in the 1990s, defines its concept clearly and in detail for the first time, and has become the guiding concept of the current international GI system, with a landmark significance (Josling 2006). The TRIPS Agreement is one of the most important multilateral agreements in the field of international

protection of intellectual property rights. It establishes the protection of GIs as a separate category of intellectual property rights and regulates it with three provisions (Kirevai and Connor 2010). After reaching the minimum standards of the TRIPS Agreement, each member can also further protect its GI products by concluding Free Trade Agreements (FTA) (Engelhardt 2015; Filippis et al. 2022), such as the Comprehensive Economic and Trade Agreement (CETA), the China-EU Geographical Indications Agreement (Knelser 2020; Ferrante 2021).

The second category is the research on the protection mode of GIs. Meloni and Swinnen (2018) believe that the choice of protection methods for GIs mainly depends on whether the countries concerned regarding GIs as independent intellectual property rights. Under the trademark protection model, it believes that GIs are only a component of trademarks and not independent intellectual property types, while special protection believes that GIs are different from trademarks and should be treated independently (Leufkens 2017; Le Goffic and Zappalaglio 2017; Liam 2021). Huysmans and Swinnen (2019) found that the 'Old World' represented by European countries, and the 'New World' represented by the United States and Australia have significant differences and conflicts in the protection of GI. Chinese scholars have not reached a consensus on the protection mode of GIs. Hu (2008) proposed that China adopt the dual-track protection mode of special law and trademark law and select different GI protection modes for various products, such as tea and Chinese herbal medicine, while other products can be protected through trademark law. Wang and Kireeva (2010) proposed that China should formulate special rules on GIs. Sun (2019) suggested that the protection of GIs in China needs a new dual-track road that combines and coordinates the protection of smuggling rights and product quality monitoring.

The third category is the research on the effect of GI on trade. Josling (2006) was the first to suggest that the degree of protection of GIs would impact bilateral trade and, to some extent, competition in third-country markets. Subsequently, many scholars have conducted empirical studies on the trade effects of GIs. Through regional specialisation, standardisation, large-scale production and brand image building, GIs can not only effectively motivate firms to produce higher quality products (Deng et al. 2011; Mérel and Sexton 2012), simplify inspection and quarantine and customs procedures (Wang and Kireeva 2010),

<https://doi.org/10.17221/98/2023-AGRICECON>

breakthrough 'green barriers' and are more likely to be favoured by foreign consumers (Lu 2019), resulting in higher export unit values (Agostino and Trivieri 2014; Feng 2018; Filippis et al. 2022). Some studies have also found regional, sectoral, and firm heterogeneity in the trade promotion effects of GIs. GIs have been found to have a positive impact on high-income countries (Zhang et al. 2022) and destination markets with similar GI endowments (Raimondi et al. 2019), state-owned and foreign-owned enterprises (Sun et al. 2019), dairy products and cereals (Sorgho and Larue 2018), wines and spirits (Leufkens 2017) have a more significant trade facilitation effect, and GIs have a greater impact on the export expansive margin than the intensive margin (Duvaleix et al. 2021). In addition, there are other studies on the trade effects of including GI protection in trade agreements. Curzi and Huysman (2022) found that GI products with higher quality and market share benefit from stronger external legal protection, for example, the inclusion of legal protection for GIs in 11 FTAs in EU countries has promoted a binary margin for cheese exports from EU countries.

Throughout the existing research literature on the protection of GIs, most study the protection mode of GIs for a single representative country, and there is a lack of systematic comparison and experience of the protection mode between countries. The EU is the first cross-national entity to protect GIs and has an arguably perfect system. Since China promulgated the Measures for the Registration and Administration of Collective Marks and Certification Marks in 1994, the GI system has continued to develop; however, it has also exposed many problems, such as the long-term parallel management of GIs in the system, and the emphasis on certification over supervision of various departments, resulting in low product quality standards for GIs and difficulty in effectively supervising after registration (Zhao et al. 2014). Although there are many certified products, most of them are nameless. As the origin of GI, the EU has a sound legal and policy system, and the signing of the China-EU Agreement on Geographical Indications also provides a new perspective for reflecting on China's GI system. Studying the protection system of GIs of agricultural products in the EU is of great significance to developing and improving the protection of GIs of agricultural products in China. Thus, based on the China-EU Geographical Indications Agreement, this paper uses comparative research methods to compare and analyse the differences between the

protection of GIs in China and the EU from the perspective of the institutional framework, the operating system and the operational status, and draws on the experience of the EU to propose policy recommendations for China to protect GI products better, exploit the economic impact of GIs and enhance the competitiveness of China's exports.

MATERIAL AND METHODS

GI is based on the unique natural and human factors of agricultural products with distinctive qualities that command higher premiums in the market. Promoting such advantages presents an important approach and effective strategic measure for developing a characteristic-driven agriculture industry and a positive approach for stabilising the export of agricultural products (Su 2013). To better understand the differences between China and the EU in the protection of GIs and the bilateral economic and trade relations and to better put forward countermeasures to improve the protection of GIs in China, this paper employed the three-stage approach using comparative research methods to analyse the differences of protection of GIs between China and the EU.

At stage 1 and 2, this paper compared and analysed the differences between the protection of GIs in China and the EU from the perspective of the institutional framework and the operational system of GIs. The research materials on the institutional framework and operational system of GIs in the EU were obtained from the official website of the European Commission and the websites of the National Ministry of Agriculture of each country and compiled by the author, while the materials for China were obtained from the Ministry of Agriculture and Rural Affairs (MARA) and the China National Intellectual Property Administration (CNIPA) and also compiled by the author.

At stage 3, this paper compared the operational status of GI protection between China and the EU, including the number of GIs, the economic benefits of GIs, and the dynamic bilateral trade between China and the EU. GI data are obtained from the GIview database and the China Green Food Development Center. Trade data are obtained from the Eurostat database.

The implications of the obtained findings for GI protection are further discussed in relation to a summary of good practices for the protection of GIs in the EU, the improvement of the GI protection system in China, exploiting the economic impact of GIs and enhancing the competitiveness of China's exports.

RESULTS AND DISCUSSION

Institutional framework of GI protection in China and the EU

Institutional framework of GI protection in the EU. Table S1 in Electronic Supplementary Material (ESM) lists the issuing time, issuing agency, and main content of the important policies on geographical indication (GI) of the EU. The GI system of the EU originated from the French and Roman protection modes and adopted special legislative protection for agricultural products, food, and alcohol GIs. In 1992, the EU Commission established the EU GI system by formulating the Council Regulation (EEC) No. 2081/92 of July 14, 1992 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs. Overall, GI protection in the EU can be divided into three types: protected designation of origin (PDO), protected geographical indication (PGI), and traditional speciality guaranteed (TSG). According to EU regulations, food and agricultural products can apply for PDO, PGI or TSG protection, and wine can apply for PDO or PGI, but spirits and flavoured wine can only apply for PGI. What's more, EU countries have also formulated regulations on the protection of GI for special products. For example, the French Ministry of Agriculture has formulated a law on the Protection of Names of Origin, focusing on protecting wine, spirits, and dairy products. Similarly, the Italian Ministry of Agriculture, Food and Forestry has formulated the DOC (Name of Origin Control) Law, which focuses on the protection of wine, olive oil, cheese, and ham (see Table S2, ESM).

Institutional framework of GI protection in China. China's construction of GI originated from Measures for the Registration and Administration of Collective Marks and Certification Marks issued by the former State Administration for Industry and Commerce (SAIC) in 1994 (see Table S3, ESM). Since then, the former General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) and the Ministry of Agriculture have also successively issued a series of laws and regulations to clarify the use and management of GIs and gradually formed three management systems of geographical indication trademark (GI), geographical indication product (PGI), and geographical indication of agricultural product (AGI), which the former SAIC, the former AQSIQ, and the former Ministry of Agriculture manage.

The mixed protection system of the three ministries and commissions acting independently has increased the difficulty and cost burden for producers to apply for

certification and also brought great confusion for consumers wanting to purchase identification. Three different systems of registration protection, supervision and management have also led to problems such as unclear rights and attributes of GI products, multi-sector law enforcement and multi-sector management friction. Therefore, in 2018, the Central Committee of the Communist Party of China issued the Deepening Reform of Party and State Institutions, integrating the trademark management responsibilities of the former SAIC and the GIs of origin management responsibilities of the former AQSIQ into the newly established China National Intellectual Property Administration (CNIPA) to address the problems of trademark and patent separation management and duplicate law enforcement. In 2020, the CNIPA issued the Administrative Measures for the Use of Special Geographical Indications (Trial) to unify and standardise the use of special GIs. Consequently, the three departments have simplified the management responsibilities and assumed by the CNIPA and the Ministry of Agriculture and Rural Affairs (MARA).

Comparison of the institutional framework of GI between China and the EU. Upon comparing the institutional framework of GI between China and the EU, it is found that, first, from the perspective of the legislative system, the EU belongs to the particular law protection mode and sets up special laws and regulations on GI to manage GI products, and the GI regulations of the EU cooperate, closely linked, and the system design is highly consistent. However, China implements the mixed protection mode of 'GI + trademark'.

Second, from the perspective of the internal design of the system, the EU has divided GI into different types according to the product quality, characteristics, and strictness of standards implemented in different GI management systems for agricultural products, food, wine, and other products and established special systems (Huysmans 2022). However, China still adopts a 'one size fits all' approach and has not formulated different GI systems for different products (Feng 2020).

Third, from the perspective of protection mode, the EU GI system is a system in essence and at root, while China implements three systems of geographical indication trademark (GI), geographical indication product (PGI), and geographical indication of agricultural product (AGI).

Operational system of GI protection in China and the EU

Operational system of GI protection in the EU. The EU has clear requirements for the naming

<https://doi.org/10.17221/98/2023-AGRICECON>

of GI products, product description, regional definition, certificate of origin, production method, registration application materials and qualification of registration applicants, and has detailed regulations on specific matters such as protection period and coexistence period, supervision and management, the scope of protection, revocation (Curzi and Huysman 2022). The General Department of Agriculture and Rural Development of the European Union and the official regulatory agencies of its member countries are responsible for accepting applications for GIs of the EU. For example, France, Italy, Portugal, Greece, and other countries are all handled, reviewed, protected, and coordinated by the Ministry of Agriculture.

The operational system of GI protection in Italy is based on a self-monitoring network. The network system consists of internal and external parts. The internal network includes enterprises and producers' associations, and the external network includes government management agencies, third-party institutions, and other public institutions (Zhang et al. 2019). In the internal network structure, producer associations are spontaneously formed by enterprises in the industrial chain and recognised by the Ministry of Agriculture and Forestry Policy. Their main responsibilities include drafting applications for GI products and supervising, inspecting, and adjusting the production specifications and quality of GI products. In the external network structure, the Ministry of Agriculture and Forestry Policy and the congresses of major regions (autonomous provinces) are the main regulators of GI in Italy, responsible for the registration of GI. As virtual government agencies, various national committees provide opinions on the specifications of products applying for GIs, such as the National Committee of Cheese GIs and the National Committee of Grease and the National Committee of Wine Origin Protection. Non-profit institutions play an important role in the technical services, promotion, and industrial research of GI, such as the Institute of Services for the Agricultural Food Market, the Council for Agricultural Research and Economics, the Italian Association of Geographic Indication Consortia, and the Designation of Origin of Italian Consortia. Third-party independent agencies play an important role in the certification and inspection of GI. Each registered GI product must have a corresponding inspection agency authorised by the Ministry of Agricultural Policy. The Department of Central Inspectorate for Fraud Repression and Quality Protection of the Agri-food Products and Foodstuffs and relevant local

government departments supervise these inspection agencies, such as the first national certification agency of Italy, Valoritalia, which is the first red wine origin certification agency.

Operational system of GI protection in China.

The operational system of GI protection in China is mainly composed of national and local levels (see Table S4, ESM). At the national level, the main institutions related to GIs are the CNIPA and the MARA. The CNIPA is responsible for identifying and managing the geographical indication trademark (GI), and geographical indication product (PGI). Geographical indication trademarks (GI) are protected through collective trademarks and certification trademarks. Geographical indication product (PGI) shall be subject to technical review by the expert review committee of GI products, and different subcommittees shall be established according to the professional fields and product categories. The MARA is responsible for identifying and managing GIs of agricultural products. The China Green Food Development Center under the MARA reviews and revises the application for GIs, and a special expert review committee for the registration of geographical indication of agricultural product (AGI) is set up to take charge of the expert review.

At the local level, local governments' work is mainly performed by the CNIPA and the MARA. In terms of geographical indication trademark (GI) and geographical indication product (PGI), the provincial quality inspection institutions are responsible for the preliminary examination of the application for geographical indication product (PGI), the examination of the application for the use of GIs by producers, the designation of inspection institutions and the investigation and punishment of illegal acts. The local quality inspection institutions are mainly responsible for assisting in applying GIs, conducting the preliminary examination of the application of producers for the use of GIs and investigating and punishing the infringement. The geographical indication trademark (GI) is submitted directly to the national or local trademark acceptance window. The local government or industry-competent department only needs to issue relevant approval documents. In terms of geographical indication of agricultural product (AGI), the provincial agricultural administrative department is responsible for accepting applications for geographical indication of agricultural product (AGI) and conducting preliminary and on-site examinations. Furthermore, various groups

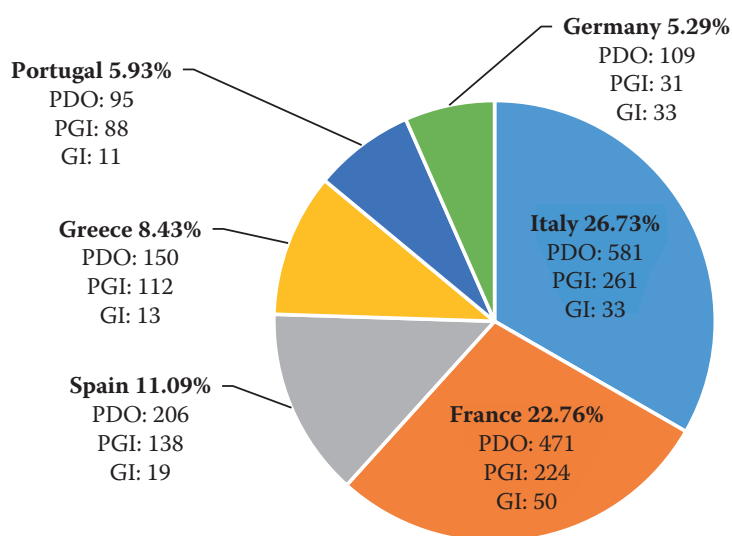


Figure 1. Top five countries with the highest number of geographical indications (GIs) in the EU and product categories

PDO – protected designation of origin; PGI – protected geographical indication; GI – geographical indication

Source: Authors' own elaboration, based on the GIview database

and institutions are also the key subjects of GI autonomy. GI is a collective right jointly used by multiple subjects. In principle, it should be applied for and held by the collective of the subjects that use the GI. Through the search of GI application subjects, it is found that the application subjects of GIs in China include a large number of Workstations, Management Stations, Development Offices, Technology Promotion Stations and various public institutions and semi-government institutions.

Comparison of the operational system of GI protection between China and the EU. When comparing the operating system of GIs in China and the EU, it is found that, first, from the perspective of major national government management agencies, GIs are managed by the agricultural sector at the national level in the EU. China is managed by the 'agricultural sector + intellectual property sector', which covers both geographical indication trademark (GI) and geographical indication product (PGI). The national sector has dispersed and consumed more public resources. Second, from the operational mode perspective, the operation of GI protection in the EU belongs to the bottom-up mode, while China prefers a top-down way.

Operational status of GI protection in China and the EU

Development status of GIs in China and the EU. In terms of GI products, as of July 2021, the EU had registered 3 273 GI products, including 1 412 food

products, 1 617 wine products, and 244 spirits. Figure 1 shows the top five countries with the highest GIs in the EU and product categories. Among them, Italy, France, Spain, Greece, Portugal, and Germany account for a relatively high proportion, and PDO > PGI > GI (see Table S5, ESM). Figure 2 shows the number and proportion of GIs of the subcategories. In the number of product categories, wine > food > spirits. Among the foods, fresh or processed fruits, vegetables, and grains, cheese and meat products (cooked, salted, smoked) account for the highest proportion (see Table S6, ESM).

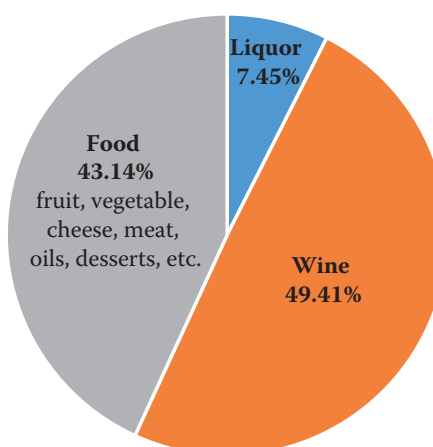


Figure 2. Number and proportion of geographical indication (GI) by category in the EU

Source: Authors' own elaboration, based on the GIview database

<https://doi.org/10.17221/98/2023-AGRICECON>

In terms of the law enforcement inspection of GIs, since May 1, 2009, the EU has mandated that the special signs protected by GIs must appear on the labels of agricultural products or foods protected by PDO, PGI, or TSG. Wine producers can choose whether to display the corresponding special signs. Spirits and flavoured wines have no mandatory requirements for these special signs. In 2021, the Department of Central Inspectorate for Fraud Repression and Quality Protection of the Agri-food Products and Foodstuffs launched 955 law enforcement procedures against looting and revocation, involving 931 cases of Italian GI products and 24 cases of non-Italian GIs. In terms of the economic benefits of GIs, the European Commission's research study shows that sales of geographical indications (GIs) and traditional speciality agricultural products (TSGs) in the EU amounted to 77 157 million EUR in 2017, representing around 7% of total food and drink sales in the EU that year, with sales of GI products amounting to 74 760 million EUR. By sector, sales of agricultural products and foodstuffs amounted to 39 400 million EUR, accounting for 35% of the same category, while sales of spirits amounted to 10 350 million EUR accounting for 13%. By the way, the 3 207 GI products covered by the study are sold at twice the average price of their counterparts, with a premium of 2.85 times for wine, 2.52 times for spirits and 1.5 times for other agri-food products. Exports of GI products account for 15.5% of EU agri-food exports. Wine is the most exported GI product, accounting for 51% of total GI exports. The top three export destinations are the United States, China, and Singapore.

By the end of 2019, the MARA, the CNIPA and the Trademark Office had approved a total of 10 474 GIs, 10 229 domestic GIs, and 245 foreign GIs. There are 9 861 GIs for domestic agricultural products, accounting for 96.40% of all GIs in China. Of the 9 861 GIs of agricultural products, 2 778 were registered by the MARA, accounting for 28.17%. The CNIPA approved 2 190 cases, accounting for 22.21%; the Trademark Office reported 4 893 cases, accounting for 49.62%. Figure 3 shows the top three GI products by region in China, and Figure 4 shows the number and proportion of GIs by category. By Northeast China we understand following provinces: Liaoning Province, Jilin Province, and Heilongjiang Province; North China: Beijing Municipality, Tianjin Municipality, Shanxi Province, Hebei Province, and Inner Mongolia Autonomous Region; Central China: Henan Province, Hubei Province, and Hunan Province; East China: Shandong Province, Jiangsu Province, Zhejiang Province, Anhui Province, Fujian Province, Jiangxi Province, and Shanghai Municipality; South China: Guangxi Zhuang Autonomous Region, Guangdong Province, and Hainan Province; Southwest China: Chongqing Municipality, Sichuan Province, Guizhou Province, Yunnan Province, and Tibet Autonomous Region; Northwest China: Shaanxi Province, Gansu Province, Qinghai Province, Ningxia Hui Autonomous Region, and Xinjiang Uygur Autonomous Region.

In terms of GI products, from the perspective of the distribution of GI certification the quantity of agricultural products in different regions varies greatly and the quantity is closely related to agricultural resource endowment. The GI agricultural products in North

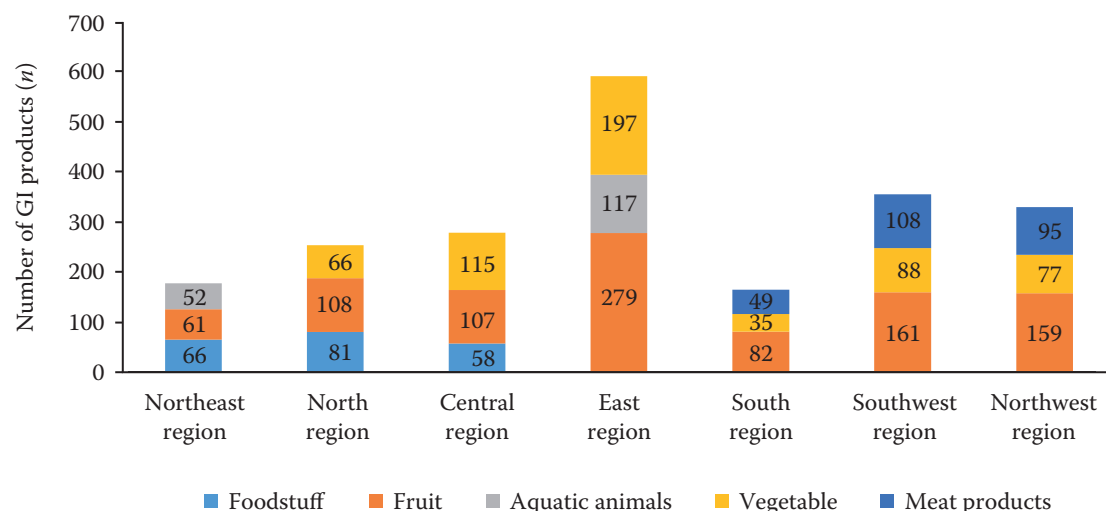


Figure 3. Segmented categories with the top three highest geographical indication (GI) products by region in China

Source: Authors' own elaboration, based on the China Green Food Development Center

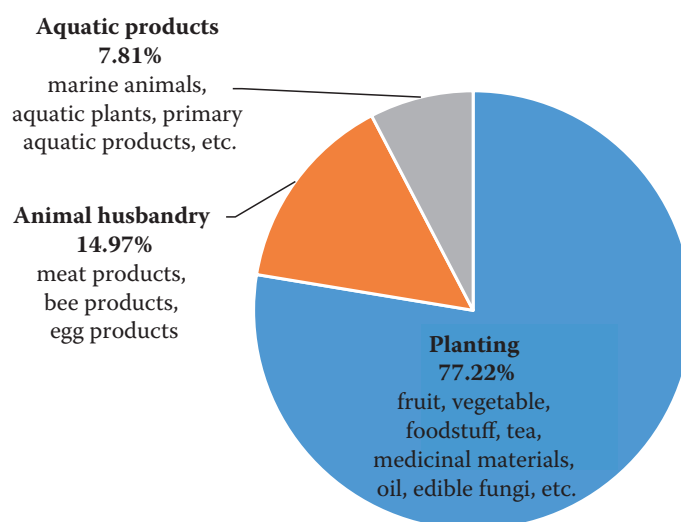


Figure 4. Number and proportion of geographical indication (GI) products by category in China

Source: Authors' own elaboration, based on the China Green Food Development Center

China, East China, South China, and Northwest China are mainly fruit products, in Northeast China are grain products, in Central China are vegetables and in Southwest China are meat products, accounting for more than 20% (see Table S7, ESM). From the perspective of product categories, the overall category of planting accounted for 77.22%. In the subdivision category, the planting category is mainly fruit, vegetables, grain, tea, and medicinal materials, and the livestock products are mainly meat products and bee products; aquatic products are mainly marine animals (see Table S8, ESM).

In terms of GI law enforcement inspection, as the popularity and influence of GI products continue to expand, counterfeiting and infringement occur frequently, and the number of cases involving landmark disputes increases year after year. In 2012, the number of judgments by people's courts at all levels on GIs was 6, compared with 623 in 2021, a 100-fold increase. This shows that the number of GI products is increasing, and China's law enforcement and supervision intensity of GIs are also increasing. Regarding the economic benefits of GIs, the Second National Geographic Indications Research Report released in 2011 showed that the total output value of 1 949 GIs exceeded 109.40 billion EUR, with an average value of 56.68 million EUR. In 2021, the direct output value of GI products will reach 92.72 billion EUR.

Comparison of the development status of GIs between China and the EU. Compared with the current situation of the development of GIs in China and the EU, it is found that, first, from the perspective

of the protection objects, the protection objects of GIs in the EU mainly focus on wine, while most of the GIs in China are agricultural products, and the scope of products covered is relatively broader. Second, from the law enforcement perspective, China has not yet formed a complete law enforcement system for GI products. At present, the law enforcement of the MARA on GI products is usually combined with other agricultural administrative law enforcement, while the law enforcement of the CNIPA system on GI products is generally combined with different types of administrative law enforcement of intellectual property (Zhang et al. 2021). One of the peculiarities of administrative law enforcement in the field of GI products is that the technical parameters of products are an important basis for law enforcement, which depends on professional testing agencies and forces, thus increasing the difficulty of law enforcement. Third, regarding economic benefits, the number of GIs registered in China is approximately three times that of the EU (Figure 5). This not only reflects that China has rich agricultural resources but also reveals that its true value has not been fully exploited against the background of rapid growth in the number of GIs registered.

Bilateral trade of GI products between China and the EU

Status of the bilateral agricultural trade between China and the EU. As shown in Figure 6, China's agricultural exports to the EU grew from 21 906.72 million EUR in 2000 to a peak of 77 319.88 million EUR in 2019, with an average annual growth rate of around 9.40%,

<https://doi.org/10.17221/98/2023-AGRICECON>

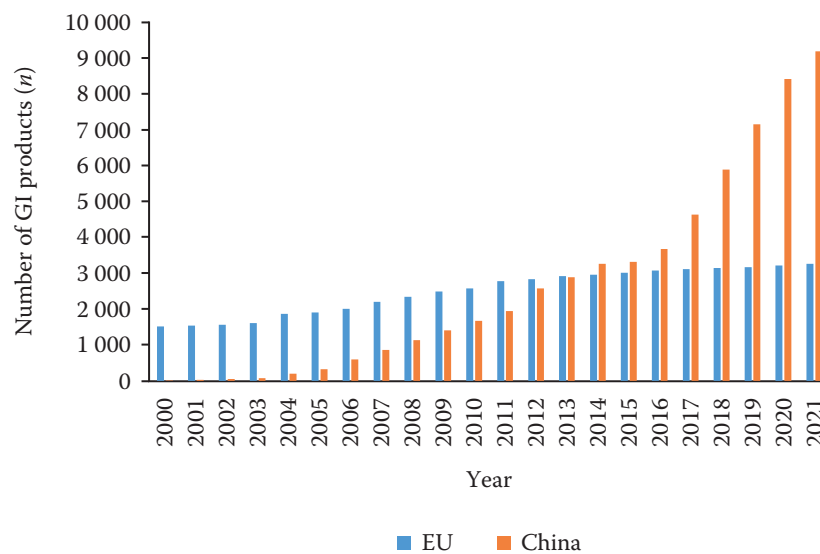


Figure 5. Cumulative number of geographical indication (GIs) in China and the EU

Source: Authors' own elaboration, based on the GIview database and the China Green Food Development Center

maintaining a high growth rate. China's agricultural imports from the EU grew from 6 072.98 million EUR in 2000 to 164 717.52 million EUR in 2021, with the highest export value of 172 466.35 million EUR in 2020, an average annual growth rate of around 6.02%, not as fast as China but already faster among the developed economies. However, with the continuous rise of the 'quality threshold' for agricultural products in the international market, China's exported agricultural products are frequently detained and returned on the grounds of substandard quality. In 2013, the first trade deficit in agricultural products occurred

between China and the EU, reaching 95 256.90 million EUR in 2021.

In terms of China's exports to the EU, the main broad categories of China's exports to the EU are aquatic products, vegetables, fruits and nuts, and meat, with these three categories accounting for almost 60% of total agricultural exports and aquatic products maintaining a share of around 25% of exports (Figure 7). Regarding China's imports from the EU, baby food, pork, minced meat, and alcohol are the main products (Figure 8).

Status of the bilateral trade of mutual recognition of GI products between China and the EU. It can

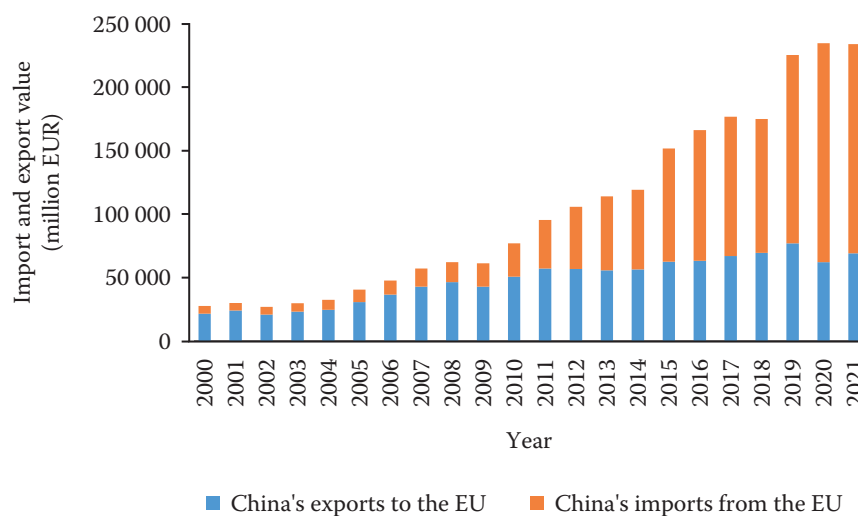


Figure 6. Value of China's exports to the EU and imports from the EU

Source: Authors' own elaboration, based on the Eurostat database

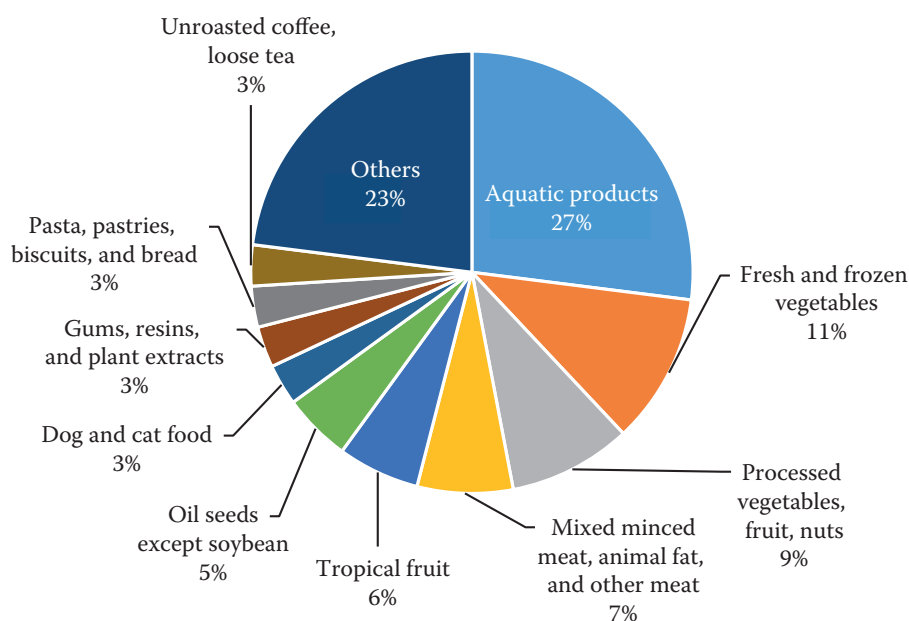


Figure 7. Top 10 categories of China's agricultural exports to the EU in 2021

Source: Authors' own elaboration, based on the Eurostat database

be seen from Figure 9 that the mutual recognition of GI products in China is mainly concentrated in tea, vegetables, and fruits, which are subject to wear and tear in terms of product transportation, storage and product quality assurance, and the added value is not very high. The products of the EU are mainly concentrated in wine,

olive oil, spirits, and cheese, with a higher degree of processing, and have advantages in product transportation, storage, and product quality assurance. Furthermore, regarding product concentration and core products, the scope of products protected by GIs in China is relatively broad. In contrast, the range of products protect-

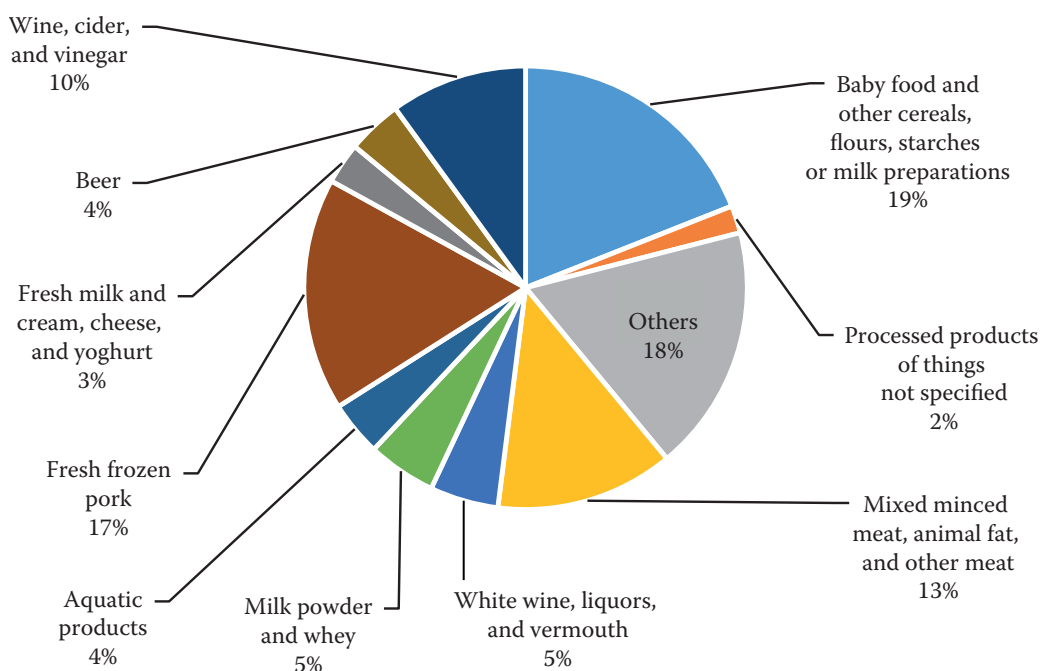


Figure 8. Top 10 categories of China's agricultural imports from the EU in 2021

Source: Authors' own elaboration, based on the Eurostat database

<https://doi.org/10.17221/98/2023-AGRICECON>

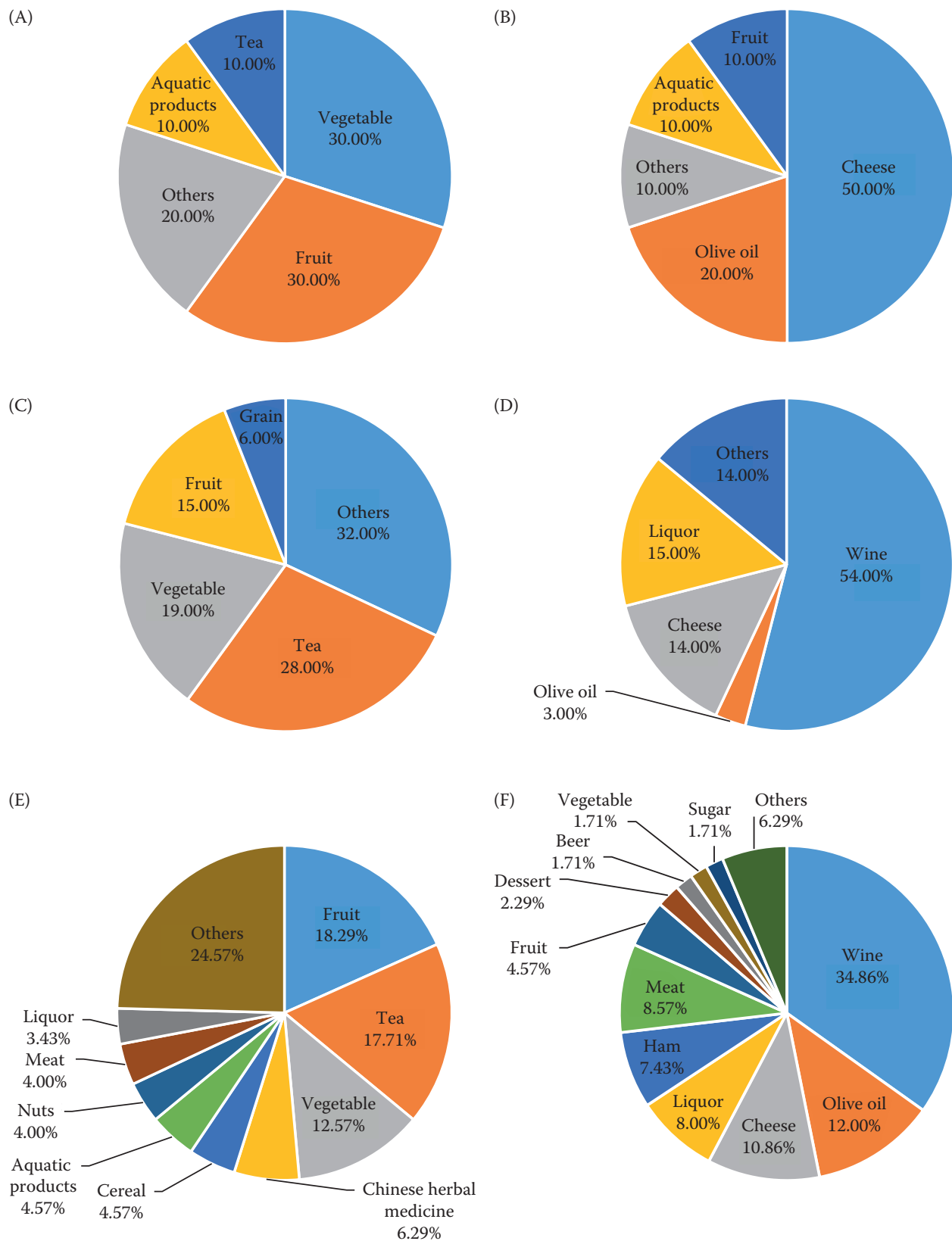


Figure 9. Mutual recognition of GI products: (A) China '10 + 10'; (B) EU '10 + 10'; (C) China '100 + 100'; (D) EU '100 + 100'; (E) China '175 + 175'; (F) EU '175 + 175'

Source: Authors' own elaboration, based on the China-EU Geographical Indications Agreement

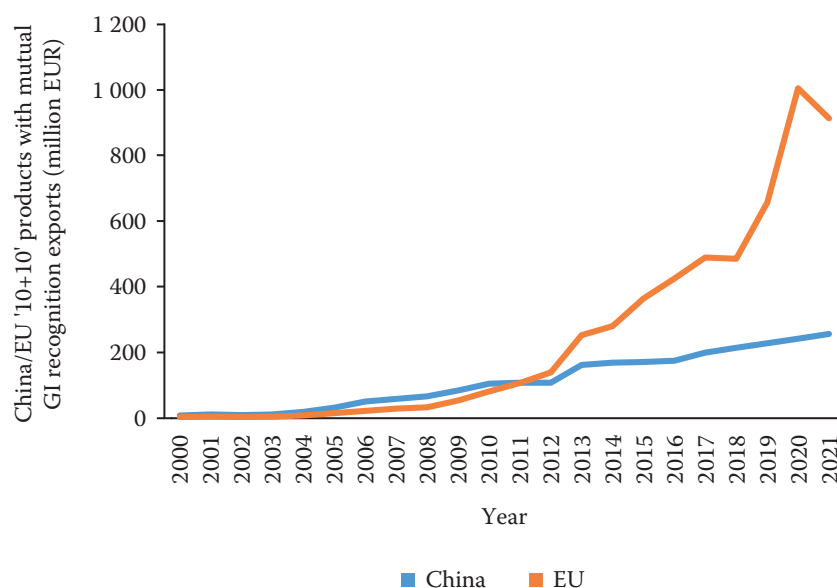


Figure 10. Trend of the Export value of China-EU '10 + 10' products with mutual recognition of GIs

Source: Authors' own elaboration, based on the Eurostat database

ed by GIs in the EU is relatively narrow, with wine and cheese accounting for nearly half of the total.

Figure 10 presents the trend of export value of China-EU '10 + 10' products with mutual recognition of GIs. In 2012, China exported 108.29 million EUR '10 + 10' products with mutual recognition of GIs to the EU, which increased 49.84% to 139.64 million EUR in 2013, the EU exported 162.26 million EUR '10 + 10' products with mutual recognition of GIs to China, which increased 55.83% to 252.85 million EUR in 2013.

The trade competitiveness index is the ratio of a country's import and export balance to its total trade, which reflects whether a particular type of industry in a country has a comparative advantage in competing in international trade. If the trade competitiveness index is greater than 0, it means that the country has a more significant production advantage in a certain product and that the product is mainly exported to the international market. If the trade competitiveness index is less than 0, it means that the country has a smaller production advantage in a particular product, which is mainly imported on the international market and must rely on imports to satisfy domestic demand. The formula is as follows:

$$TC_{i,t} = \frac{EX_{i,t} - IM_{i,t}}{EX_{i,t} + IM_{i,t}} \quad (1)$$

where: $TC_{i,t}$ – trade competitiveness index; $EX_{i,t}$ – total agricultural exports; $IM_{i,t}$ – total agricultural imports.

From Table 1 and Table 2, the trade competitiveness index of China and the EU improved after the mutual recognition of GIs between China and the EU, with the overall trade competitiveness index rising from -0.24 in 2000 to 0.65 and from 0.36 to 0.65 . Specifically, the trade competitiveness index for aquatic products in China rose from -0.36 to -0.13 . However, trade competitiveness was still negative, while trade competitiveness for other products was positive in 2019, making the trade competitiveness index relatively optimistic.

In 2012, nearly 10 million USD worth of Dongshan white asparagus was exported to the EU market after receiving the mutual recognition of GI between China and the EU. The mutual recognition of GIs has not only improved the quality of Dongshan asparagus but also increased the added value of the product, effectively improving the product's competitiveness in the international market. In 2002, Longkou Vermicelli was listed as a protected geographical indication (PGI) product. In 2010, Longkou Vermicelli became the first agricultural product to be mutually recognised by China and the EU. Statistics show that after obtaining mutual recognition of GIs, the export price of Longkou vermicelli continued to rise, with an average export price of 919 USD per tonne in 2004, 1 168 USD per tonne in 2005, and 1 229 USD per tonne in 2016. The export price of Longkou vermicelli has continued to increase in recent years, with an average export price of 2 996 USD per tonne in 2012,

<https://doi.org/10.17221/98/2023-AGRICECON>

Table 1. Trade competitiveness index by agricultural product category in China

Trade competitiveness index	2000	2005	2010	2013	2019
TC	−0.24	0.20	0.05	0.24	0.65
TC_1	−0.36	−0.34	−0.40	−0.23	−0.13
TC_2	0.05	−0.17	0.12	0.32	0.34
TC_3	0.16	−0.29	−0.37	0.43	0.55
TC_4	−0.11	−0.19	−0.02	0.12	0.45
TC_5	−0.04	0.00	0.03	0.15	0.22
TC_6	−0.12	−0.06	−0.08	0.10	0.09

TC_t – total trade competitiveness index; TC_1 , TC_2 , TC_3 , TC_4 , TC_5 , and TC_6 – trade competitiveness indices for HS03 – aquatic products; HS07 – vegetables; HS08 – fruits; HS09 – coffee, tea and spices; HS19 – grain, grain powder; HS22 – beverages, wine and vinegar, respectively, which are the catalogue of China-EU '10 + 10' products with mutual recognition of GIs

Source: Authors' own elaboration, based on the Eurostat database

Table 2. Trade competitiveness index by agricultural product category in the EU

Trade competitiveness index	2000	2005	2010	2013	2019
TC	0.36	0.26	0.35	0.47	0.65
TC_1	0.55	0.58	0.61	0.68	0.72
TC_2	0.23	0.26	0.21	0.32	0.50
TC_3	0.18	0.24	0.17	0.33	0.43
TC_4	0.15	0.25	0.21	0.26	0.31

TC_t – total trade competitiveness index; TC_1 , TC_2 , TC_3 , and TC_4 – trade competitiveness indices for HS02 – meat; HS03 – aquatic products; HS04 – dairy products; HS15 – animal and vegetable oils and fats, respectively, which are the catalogue of China-EU '10 + 10' products with mutual recognition of GIs

Source: Authors' own elaboration, based on the Eurostat database

4 092 USD per tonne in 2013, and 4 264 USD per tonne in 2014.

The EU's experience in the protection of GI. The registration and protection system of GIs of agricultural products in the EU is currently a relatively complete, systematic, and effective model worldwide. On March 31, 2022, the European Commission put forward a legislative proposal on EU GIs for wine, spirit drinks and agricultural products, and quality schemes for agricultural products (hereinafter referred to as the 2022 European Commission proposal), amending Regulations (EU) No. 1308/2013, (EU) No. 2017/1001, and (EU) 2019/787, and repealing Regulation (EU) No. 1151/2012, which also improves the protection provided as well as putting greater emphasis on the sustainability of GI products. Generally, the registration and protection of GI of agricultural products in the EU have the following characteristics (Figure 11).

Perfect legal system and implement a special legislative model. The EU has formulated a series of supporting laws and regulations for agricultural products and food, wine, and spirits to protect GIs. In addition to establishing the legal and regulatory system of GIs

and strengthening their protection through special legislation, EU member countries can further protect the GI of agricultural products through the registration of collective trademarks and certification trademarks prescribed by the trademark law, the anti-unfair competition law and the application of various other laws and other forms. Furthermore, the 2022 European Commission proposal appealed that the new regulation would include a single GI system for wine, spirit drinks and agricultural products in GI scope with the same rules applying to all instead of each of these sectors being governed by a separate piece of legislation.

Sound quality standard system and clear legal responsibility. As the birthplace of the GI protection system, the EU is taking the GI product standard as a carrier to solidify the scope of protection of GI rights. At the EU level, laws have been established related to the quality control of GI agricultural products combining general law and special law, and there is regular supervision and inspection of the geographical scope and use of GI of registered agricultural products (Mérel 2009). In the 2022 European Commission proposal, the EUIPO will be tasked with the

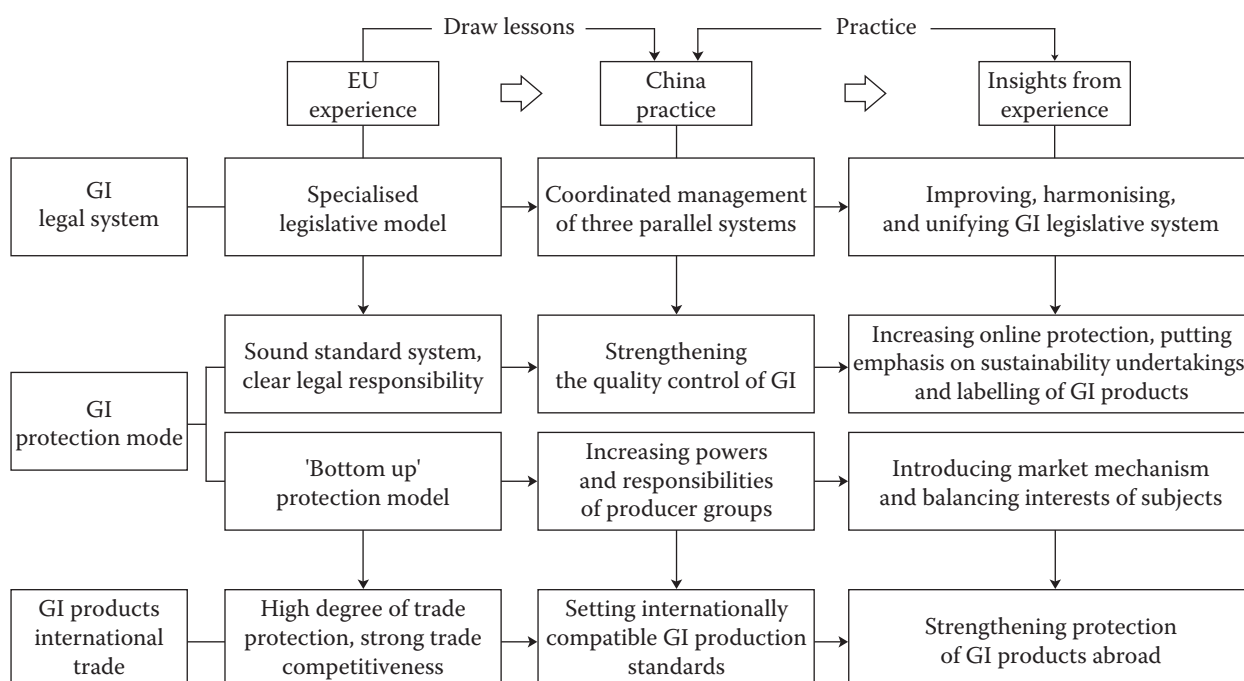


Figure 11. Reference and practice of the geographical identification (GI) protection system

Source: Authors' own elaboration

administration of GIs, while the Commission would be empowered to adopt delegated acts to entrust EUIPO with a series of tasks, including as regards the scrutiny of applications, opposition procedure, operation of the register, etc. to improve the regulation of GIs. By the way, Commission proposed increasing online protection, labelling GI products as ingredients in processed foods, and emphasising sustainability undertakings.

Coordinating all stakeholders and implementing a bottom-up operational mode. The EU implements a bottom-up management model for GI. Enterprises, industry associations, various government agencies and non-profit organisations jointly form the operational system of the GI system and establish a mechanism of consultation and cooperation with shared responsibility and shared benefits. EU law gives the GI industry association a solid legal basis, and the GI industry association has greater autonomy. In the 2022 European Commission proposal, the Commission proposed to increase the powers and responsibilities of producer groups. The government's management model for the GI industry association is mainly to encourage and support the association to participate in the protection of GIs in an orderly manner on the premise of strengthening supervision. Third-party independent quality inspection institutions not only build a barrier

to ensure the quality of GIs but also solve the problem that the government cannot consider quality control after the approval of GIs.

High degree of GI protection and strong trade competitiveness of GI products. On the one hand, the primary purpose of the EU's implementation of the registration and protection of GIs is to promote the development of specialised industries, maintain and enhance the unique quality of agricultural products, and meet the layout of regional advantages and the diversified needs of the market (Zago 2004). The EU has focused on supporting products with comparative advantages, such as wine and cheese, and due to the current reduction of export subsidies to EU farmers within the World Trade Organization (WTO) framework, the advanced protection of GIs has become an alternative strategy for the EU to maintain its global market share, and this strategy is now best achieved through bilateral and regional agreements. On the other hand, the EU has accelerated the pace of international recognition and protection of GIs, and the EU has actively pursued negotiations with other countries on GIs in FTA, extending the protection granted under Article 23 of the TRIPS Agreement to products other than wines and spirits. The signing of bilateral FTAs has enabled many countries around the world to successfully accept the high level of protection proposed by the EU,

<https://doi.org/10.17221/98/2023-AGRICECON>

which ensures that the EU's extensive list of GIs is automatically protected in a wide range of trading partners, without the need for EU producers to apply for GI protection individually in the country concerned. This saves time and money in obtaining protection for GIs of the EU in third countries and significantly improves GI protection's effectiveness.

Strategies for improving the protection of GI in China

Based on the comparison of the protection of GIs between China and the EU and the current situation of GIs in China, the following suggestions are put forward in this paper to improve the protection of GI in China (Figure 11).

Simplifying the management system and establishing a special law on GI. Simplifying the management system and establishing special legislation is not only conducive to improving the efficiency of the operational system and saving national administrative resources but also conducive to establishing the independence of GIs in the intellectual property system and clarifying their content and form of protection. China can draw on the successful protection system of GIs of the EU, formulate a special law with a higher level of positioning and include agricultural products and food in their protection scope.

Strengthening the quality control and establishing a digital management platform of GI. At the legislative level, it is necessary to redefine the rights and obligations of the holders of GIs and clarify the responsibilities of the obliges in the use and management of GIs. It is also important to emphasise sustainability undertakings and establish a sound labelling labelling system for GI products. What is more, in terms of technical support, there is a need for the implementation of the management of 'Internet plus big data', creation of a digital traceability platform for GI agricultural products, and the assurance of the high quality of GI agricultural products by strengthening the traceability system of digital agricultural products (Zhao and Zhang 2021).

Exploring the interest linkage mechanism and strengthening the multi-agent linkage cooperation. Establishing a cooperative protection mechanism that combines government management with the self-discipline of the industry association (Gangjee 2017). Moreover, a third-party quality inspection agency or intermediary organisation is introduced to supervise and record transactions in the market by collecting, processing, and transmitting information, carrying out social supervision, media supervision and pub-

lic supervision and providing various services such as management consulting, technical services, product testing and standardisation guidance for enterprise production and business activities.

Setting internationally compatible production standards and strengthening the protection of GI products abroad. On the one hand, it is important to make good use of this opportunity to dovetail with the high standards of the EU to strengthen the quality of China's agricultural products with foreign countries, enhance the added value of GI agricultural products based on improving the industrial chain of agricultural products, form an industry and brand agglomeration effect, and raise the level of international competitiveness. For example, in the establishment of WTO/TBT (Technical Barriers to Trade) consultation workstations, the main work is the specific content of SPS measures and TBT measures in countries and regions where Chinese agricultural products are exported, and timely feedback of such helpful information to producers, thus urging producers to improve production standards and ensure that the quality of exported products meets the standards. On the other hand, to adhere to the principle of fairness, mutual benefit, and win-win cooperation, both China and the EU should respect their respective development characteristics and model choices, make use of their complementary advantages, and carry out the process step by step. Through communications and mutual recognition, the international market will be further developed for the mutual benefit of producers and consumers of agricultural products from both sides, to ensure the sustainable, healthy, and harmonious development of cooperation and communication.

CONCLUSION

In the process of expanding China's new round of opening to the outside world, promoting the development of trade in agricultural products is an important component, especially trade in high-value-added agricultural products with special characteristics. The year 2020 marks the 45th anniversary of the establishment of diplomatic relations between China and the EU, and the formal signing of China-EU Geographical Indications Agreement is one of the landmark events which is the first major, comprehensive, and high-level bilateral GI agreement to protect the fundamental interests of regional brands and to balance bilateral trade. Based on the China-EU Geographical Indications Agreement, this paper discusses the differences between

<https://doi.org/10.17221/98/2023-AGRICECON>

China and the EU in terms of GI protection from three aspects: the institutional framework, the operational system, and the operational status. The findings are as follows: *i)* In terms of the institutional framework, the EU implements the special legislation mode, while China implements the mixed protection mode of 'GI + trademark'; *ii)* In terms of the operational system, the EU adopts a bottom-up operation mode, while China prefers to adopt a top-down approach; *iii)* Regarding operational status, the scope of products under GI protection in China is relatively broad, while the concentration of products under GI protection in the EU is rather high; moreover, the trade competitiveness of core products is also relatively strong. By summarising the experience of the EU in GI protection, this paper tries to propose some policy recommendations for China to protect GI products better, exploit the economic impact of GIs and enhance the competitiveness of China's exports.

To further enhance the role of the mutual recognition of GI in promoting the protection of GI products in China, firstly, the mutual recognition of GI products should be actively promoted with other countries. China completed the China-EU '100 + 100' mutual recognition of GI products in 2020. In addition to further expanding the mutual recognition of the EU's following product list, China should also actively promote the mutual recognition of GI products with Regional Comprehensive Economic Partnership (RCEP) members and countries along the Belt and Road Initiative to promote the international brand image of Chinese characteristic agricultural products and the sustainable development of China's foreign trade in agricultural products. Secondly, based on the China-Europe Railway Express, the construction of the transport capacity of the road network along the route from China to the EU region should be further improved to meet the growing trade demand between China and the EU. It is necessary to enrich the transport routes, such as opening routes to Hungary, Slovakia, Romania, and other countries, and combine various transport modes, such as intermodal sea-road transport.

Acknowledgement: The authors would like to thank the anonymous reviewers who commented on the earlier version of this manuscript.

REFERENCES

Addor F., Grazioli A. (2002): Geographical indications beyond wines and spirits: A roadmap for better protection

of geographical indications in the WTO TRIPS Agreement. *Journal of World Intellectual Property*, 5: 865–897.

Agostino M., Trivieri F. (2014): Geographical indication and wine exports. An empirical investigation considering the major European producers. *Food Policy*, 46: 22–36.

Curzi D., Huysman M. (2022): On Feta and FTAs: The impact of protecting EU geographical indications in free trade agreements. *American Journal of Agricultural Economics*, 104: 364–384.

Deng Q.M., Zhu D.P., Dong X.Y., Xiong D.P. (2011): Research on geographical indication protection, development of special advantageous industries and international competitiveness of agricultural products – Analysis based on investigation of Zhejiang and Fujian provinces. *Issues in Agricultural Economy*, 32: 47–52.

Duvaleix S., Emlinger C., Gaigne C., Latouche K. (2021): Geographical indications and trade: Firm-level evidence from the French cheese industry. *Food Policy*, 102: 102118.

Engelhardt T. (2015): Geographical indications under recent EU trade agreements. *International Review of Intellectual Property and Competition Law*, 46: 781–818.

Feng S. (2020): Geographical Indications: Can China reconcile the irreconcilable intellectual property issue between EU and US? *World Trade Review*, 19: 424–445.

Feng X. (2018): Geographical indications and agricultural export trade growth – An empirical analysis based on inter-provincial panel data. *Journal of Commercial Economics*, 747: 128–130.

Ferrante M. (2021): Food for thought: The EU-China agreement on GIs get access arrow. *Journal of Intellectual Property Law & Practice*, 16: 295–297.

Filippis F.D., Giua M., Salvatici L., Vaquero-Piñeiro C. (2022): The international trade impacts of geographical indications: Hype or hope? *Food Policy*, 12: 102371.

Gangjee D.S. (2017): Proving provenance? Geographical indications certification and its ambiguities. *World Development*, 98: 12–24.

Hu M. (2008): Protection and development of geographical indications of agricultural products based on industrial cluster theory. *Issues in Agricultural Economy*, 5: 26–31.

Huysmans M., Swinnen J. (2019): No terroir in the cold? A note on the geography of geographical indications. *Journal Agricultural Economics*, 70: 550–559.

Huysmans M. (2022): On feta and fetta: Protecting EU geographical indications in Australia. *Journal of Agricultural Economics*, 73: 598–613.

Josling T. (2006): The war on terroir: Geographical indications as a transatlantic trade conflict. *Journal of Agricultural Economics*, 57: 337–363.

Kirevai O., Connor B. (2010): Geographical indications and the TRIPS Agreement: What protections provided to geo-

<https://doi.org/10.17221/98/2023-AGRICECON>

- graphical indications in WTO members? *Journal of World Intellectual Property*, 13: 275–303.
- Kneller E. (2020): EU-Australia FTA: Challenges and potential points of convergence for negotiations in geographical indications. *Journal of World Intellectual Property*, 23: 546–578.
- Le Goffic C., Zappalaglio A. (2017): The role played by the US government in protecting geographical indications. *World Development*, 98: 35–44.
- Leufkens D. (2017): EU's regulation of geographical indications and their effects on trade flows. *German Journal of Agricultural Economics*, 66: 223–233.
- Liam S. (2021): How the European Union is expanding the protection levels afforded to geographical indications as part of its global trade policy. *Journal of Intellectual Property Law & Practice*, 16: 341–347.
- Lu Z.Y. (2019): Is the wine really afraid of the alley? The empirical research from the geographical indication of agricultural products to the development of the cross-border e-retailer of agricultural products. *China Soft Science*, 34: 67–84.
- Marie-Vivien D., Bienabe E. (2017): The multifaceted role of the state in the protection of geographical indications: A worldwide review. *World Development*, 98: 1–17.
- Meloni G., Swinnen J. (2018): Trade and terrior: The political economy of the world's first geographical indications. *Food Policy*, 81: 1–20.
- Mérel P. (2009): On the deadweight cost of production requirements for geographically differentiated agricultural products. *American Journal of Agricultural Economics*, 91: 642–655.
- Mérel P., Sexton R.J. (2012): Will geographical indications supply excessive quality? *European Review of Agricultural Economics*, 39: 567–587.
- Raimondi V., Falco C., Curzi D., Olper A. (2019): Trade effects of geographical indication policy: The EU case. *Journal of Agricultural Economics*, 71: 330–356.
- Sorgho Z., Larue B. (2018): Do geographical indications really increase trade? A conceptual framework and empirics. *Journal of Agricultural & Food Industrial Organization*, 16: 1–18.
- Su Y.J. (2013): Analysis and research on the core competitiveness of geographical indication industry cluster. *Social Sciences in Guangxi*, 3: 60–65.
- Sun L., Zhou K.X., Jiang X.L., Fang Q.Y. (2019): The impact of regional quality reputation of geographical indications on food exports of Chinese companies. *Study and Practice*, 12: 55–65.
- Sun Z. (2019): Differences on new development paths in international protection of geographical indication and choices in our country. *Intellectual Property*, 1: 88–96.
- Wang X.B., Kireeva I. (2010): GI protection in China: New measures for administration of geographical indications of agricultural products. *Journal of Intellectual Property Law & Practice*, 5: 778–790.
- Zago A.M., Pick D. (2004): Labeling policies in food markets: Private Incentives, public intervention and welfare effects. *Journal of Agricultural and Resource Economics*, 29: 150–165.
- Zhang Y.F., Xu K., Liu H.B., Jin Z.Z. (2019): Experience and enlightenment of Italian geographical indications in promoting rural revitalization. *China Soft Science*, 12: 53–61.
- Zhang Y.F., He L.M., Yan W.J. (2021): A comparison of the geographical indication (GI) regime between China and Italy. *Reform of the Economic System*, 4: 173–179.
- Zhang M.E., Bao C.L., Ren T.F. (2022): Research on the impact of geographical indication on the export of characteristic agricultural product-based on the country panel data of export market. *China Soft Science*, 2: 56–64.
- Zhao B.Q., Zhang H.J. (2021): Research on the operation mechanism and implementation modes of digital agricultural products traceability system. *Issues in Agricultural Economy*, 8: 52–62.
- Zhao X., Finlay D., Kneafsey M. (2014): The effectiveness of contemporary Geographical Indications (GIs) schemes in enhancing the quality of Chinese agrifoods – Experiences from the field. *Journal of Rural Studies*, 36: 77–86.

Received: March 18, 2023

Accepted: May 8, 2023