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Construction of China Osmanthus City and Intellectual Property Right Protection in Xianning City in the Context of Three New Developments

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Abstract Xianning City of Hubei Province is one of the five major traditional osmanthus producing areas in the world and the hometown of osmanthus in China. Xianning is constructing China Osmanthus City in the whole city. This paper first introduces the main characteristics of the osmanthus industry in Xianning City, and analyzes the characteristics of traditional knowledge, biological genetic resources, new plant varieties, patents, geographical indications, and trademarks. Then, it studies the intellectual property resources of the osmanthus industry, and analyzes the main problems existing in the construction of China Osmanthus City and intellectual property right protection. Finally, it comes up with constructive recommendations including applying for China and Globally Important Agricultural Heritage Systems, developing colored-leaf osmanthus varieties, creating a regional public brand of osmanthus specialty products, and building a new development pattern of osmanthus industry.

Key words China Osmanthus City, Three new developments (new development stage, philosophy and paradigm), Osmanthus, Intellectual property right, High-quality development

1 Introduction

Osmanthus, mainly distributed in China, is one of the top ten traditional Chinese flowers. It is an excellent garden tree species that integrates afforestation, beautification and fragrance, and has ornamental and practical functions, and it is an evergreen shrub or small arbor of family Oleaceae (*Osmanthus* Lour.)^[1–3].

In 2020, Xianning Municipal Party committee and Municipal Government made a major decision to "build a characteristic industry of osmanthus and build China Osmanthus City" and took the osmanthus industry as an important starting point for the construction of "characteristic industry growth pole, transformation and development demonstration area, and natural ecological park city". It adheres to promoting prosperous development of Xianning with osmanthus, revitalizing Xianning with osmanthus, and integrating Xianning with osmanthus. It is making efforts to formulate osmanthus "fragrance plan", build "fragrance platform", boost "fragrance industry", explore "fragrance culture", and create "fragrance brand", and striving to build Xianning city into the national osmanthus industry gathering place, the leading place of osmanthus technology, the heritage site of osmanthus culture, the first choice for osmanthus tourism, and the destination of osmanthus health care as soon as possible, and build a world-renowned

China Osmanthus City.

On April 23, 2021, the first plenary meeting of the leading group for the construction of China Osmanthus City in Xianning City emphasized that it is necessary to actively implement the decision-making and deployment of the Municipal Party Committee, put the construction task of China Osmanthus City on the important agenda, select excellent personnel, and advance with high standards; implement the cultivation of osmanthus in Xianning City, the processing and utilization of the whole plant, the all-round cultural exploration, and the technological innovation of the whole industry chain, and strive to build Xianning City into a national osmanthus industry gathering place, leading place of osmanthus technology, osmanthus cultural heritage place, first choice for osmanthus tourism, osmanthus health destination, and a world-renowned China Osmanthus City in ten years.

The *Implementation Plan for Building Osmanthus Characteristic Industries in Xian'an District to Build China Osmanthus City* issued on June 10, 2021 proposed the development goals of Xian'an District of Xianning City: build China Osmanthus City pioneer area and core area by 2030; increase the area of osmanthus base from the current about 4 000 ha to over 5 333 ha; increase the number of osmanthus processing enterprises to 20, and realize the output value of the whole industry chain over 5 billion yuan. In addition, this plan requires: expanding the osmanthus planting area, expanding the scale of osmanthus processing enterprises, developing the osmanthus cultural tourism industry, and establishing a scientific research support system for osmanthus.

Three new developments refer to the new development stage, new development philosophy, and new development paradigm^[4–6]. In line with the spirit and core gist of the fifth plenary

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session of the 19th Central Committee of the Communist Party of China (CPC) and strategic orientation of *Outline of the 14th Five-Year Plan (2021 – 2025) for National Economic and Social Development and Vision 2035 of the People's Republic of China*, we should have an accurate understanding of this new stage of development, fully apply the new development philosophy, and accelerate our efforts to create a new development pattern to promote high-quality development.

In view of the above situations, we surveyed the osmanthus industry and its intellectual property resources in Xianning City, and explored strategies for the construction of China Osmanthus City to inherit and develop innovatively in the context of the strategy of strengthening the country with intellectual property and the three new developments.

2 Characteristics of osmanthus industry

2.1 Rich resources of ancient osmanthus resources Xianning City has a history of more than 2 300 years of osmanthus planting. There are more than 2 000 ancient osmanthus trees with age over 100 years old in the city, accounting for 92% of the ancient osmanthus trees in the country. Among them, 1 250 trees are 200 – 500 years old, 150 trees are over 500 years old, and 3 trees are over 600 years old. There are mainly Guanguiyuan ancient osmanthus, Muziao ancient osmanthus, Huayuan Village ancient osmanthus, Getengping ancient osmanthus, Xiajialong ancient osmanthus, Taiyuanhan ancient osmanthus, and Tingsiqiao Osmanthus King.

2.2 Wide distribution and many varieties of osmanthus Xianning City has wide distribution of osmanthus, all 45 towns and villages in 6 counties have distribution. There are as many as 102 varieties of osmanthus, including 45 local varieties and 57 introduced varieties. Xianning City sells 20 000 osmanthus trees, more than 50 million osmanthus seedlings, and 900 000 kg of osmanthus flowers every year. The industry of osmanthus seedlings and the output of fresh osmanthus rank among the top in the whole country.

2.3 Five traditional main producing areas of osmanthus Xianning City in Hubei, Guilin City in Guangxi, Hangzhou City in Zhejiang, Suzhou City in Jiangsu and Chengdu City in Sichuan are the five major traditional producing areas of osmanthus in the world, and have the reputation of "Hometown of Osmanthus in China".

2.4 Many kinds of osmanthus products In Xianning City, there are many kinds of osmanthus products, including osmanthus food, wine, beverages, daily chemical products, tourism products and so on. Specifically, there are osmanthus honey, sugar osmanthus, osmanthus sauce, osmanthus pastry, osmanthus cake, osmanthus extract, osmanthus essential oil, osmanthus sake, osmanthus honey wine, osmanthus rice wine, osmanthus tea, osmanthus milk, osmanthus fragrant, osmanthus skin care products and cosmetics, osmanthus tourism products, etc.

2.5 High attention of local governments to the construction of China Osmanthus City The *Outline of the 14th Five-Year*

Plan (2021 – 2025) for Economic and Social Development and Vision 2035 of Xianning City proposes supporting Xian'an District to build a pilot area for the integrated development of primary, secondary and tertiary industries, and building the core area of China Osmanthus City; working together to build a ten-billion-yuan osmanthus industry, and revitalizing and developing traditional advantageous industries such as osmanthus; comprehensively promoting the development of the whole industry chain of osmanthus, and building China Osmanthus City; strengthening the brand of "Hometown of Osmanthus in China", building the main production area of famous osmanthus in China, the research and development center of famous osmanthus varieties, and the exhibition and trading center of osmanthus products; establishing osmanthus germplasm resources conservation and breeding bases and standard planting bases; creating a number of green and high-quality public brands such as "Xian'an Osmanthus"; focusing on the construction of tourism projects such as the core area of China Osmanthus City, to create high-quality tourism development projects and core attractions; developing and producing special beverage products such as osmanthus characteristic beverage in reliance on characteristic agricultural and forestry resources of osmanthus; extending the advantageous and characteristic agricultural industrial chain such as osmanthus; promoting the construction of "one county, one product" and "one industry, one product", and stressing the development of osmanthus and other characteristic industries.

3 Intellectual property resources in osmanthus industry

The intellectual property resources related to the osmanthus industry mainly include: traditional knowledge, biological genetic resources, new varieties of forest and grass plants, patents, geographical indications, and trademarks^[7–9].

3.1 Traditional knowledge Xianning City has a long history of osmanthus planting and rich related traditional knowledge, mainly including traditional agricultural planting knowledge, traditional osmanthus products (osmanthus tea, osmanthus wine, osmanthus vintage wine, osmanthus pastry, osmanthus cake, osmanthus crystal, osmanthus extract, osmanthus sauce, etc.), traditional production techniques, traditional medicinal knowledge of osmanthus, legends about osmanthus, traditional music, folk customs, etc.

3.2 Biological genetic resources Xianning City is rich in osmanthus biological genetic resources. There are 102 osmanthus varieties (45 local varieties and 57 introduced varieties), of which 88 osmanthus varieties are in the Osmanthus Garden in Qianshan National Forest Park.

In Xianning City, there are 12 varieties of four-season osmanthus varieties, including 5 local varieties: *Osmanthus fragrans* 'Daye Sijigui', *Osmanthus fragrans* 'Xiaoye Sijigui', *Osmanthus fragrans* var. *semperflorens*, *Osmanthus fragrans* 'Daye Fodingzhu', and *Osmanthus fragrans* 'Changgeng Chuihua'; 7 introduced varieties: *Osmanthus fragrans* cv. 'rixianggui', *Osmanthus fragrans* 'Dan Zhuang', *Osmanthus fragrans* 'Tiannusan-

hua', *Osmanthus fragrans* 'Tianxiangtaige', *Osmanthus fragrans* 'Chenghuang', *Osmanthus fragrans* 'Xiaoye Fodingzhu', and *Osmanthus fragrans* 'Zhouye Sijigui'.

Xianning City has 36 varieties of *Osmanthus fragrans* 'Latifolius', including 17 local varieties and 19 introduced varieties. The local varieties are *Osmanthus fragrans* 'Changban Yingui', *Osmanthus fragrans* 'Liuye Yingui', *Osmanthus fragrans* 'Yinzhan Bizhu', *Osmanthus fragrans* 'Jiangnan Liren', *Osmanthus fragrans* 'Changgengbai', *Osmanthus fragrans* 'Qiuyun (Wanxiangyu)', *Osmanthus fragrans* 'Baijie (Baiji)', *Osmanthus fragrans* 'Ehuang', *Osmanthus fragrans* 'Zigengzi Yingui', *Osmanthus fragrans* 'Boye Yingui', *Osmanthus fragrans* 'Yuanye Yingui', *Osmanthus fragrans* 'Chibaohuang', *Osmanthus fragrans* 'Yinxing (Liuyegui)', *Osmanthus fragrans* 'Yinling', *Osmanthus fragrans* 'Yinli', *Osmanthus fragrans* 'Juye Yingui', and *Osmanthus fragrans* 'Xiaohua Yingui'. The introduced varieties are *Osmanthus fragrans* 'Jiulonggui (Longgui or Zhonghua Longgui)', *Osmanthus fragrans* 'Zaoyingui', *Osmanthus fragrans* 'Yulinglong', *Osmanthus fragrans* 'Changye Bizhu', *Osmanthus fragrans* 'Jiuqu', *Osmanthus fragrans* 'Wanyingui (Wanhuang, Xiaoye Yingui)', *Osmanthus fragrans* 'Xiangyun', *Osmanthus fragrans* 'Ziyingui (Zigui)', *Osmanthus fragrans* 'Qingjian', *Osmanthus fragrans* 'Liyu', *Osmanthus fragrans* 'Liyu', *Osmanthus fragrans* 'Chuanyingui', *Osmanthus fragrans* 'Dahua Zao Yingui', *Osmanthus fragrans* 'Houban Yingui', *Osmanthus fragrans* 'Kuanyezi Yingui', *Osmanthus fragrans* 'Kuoye Zao Yingui', *Osmanthus fragrans* 'Qingshan Yingui', *Osmanthus fragrans* 'Yingye Yingui', *Osmanthus fragrans* 'Yuhe', and *Osmanthus fragrans* 'Yulian Yinsi'.

Xianning City has 29 varieties of *Osmanthus fragrans* var. *thunbergii* Makino, including 14 local varieties and 15 introduced varieties. The local varieties are *Osmanthus fragrans* 'Dahua Jingui', *Osmanthus fragrans* 'Dayehuang', *Osmanthus fragrans* 'Huangchuan Jingui', *Osmanthus fragrans* 'Zuiyun', *Osmanthus fragrans* 'Jinshan Bizhu', *Osmanthus fragrans* 'Chiye Jingui', *Osmanthus fragrans* 'Xianning Wangui', *Osmanthus fragrans* 'Qiugui (Qiu Jingui, Huaqiu Jingui)', *Osmanthus fragrans* 'Jinguang', *Osmanthus fragrans* 'Yuanban Jingui', *Osmanthus fragrans* 'Liuye Sugui (Liuye Jingui)', *Osmanthus fragrans* 'Yangguang', *Osmanthus fragrans* 'Boye Jingui', and *Osmanthus fragrans* 'Yuegong Jingui'; the introduced varieties are *Osmanthus fragrans* 'Susheng Jingui', *Osmanthus fragrans* 'Chuizhihuang', *Osmanthus fragrans* 'Congzhongxiao', *Osmanthus fragrans* 'Qinqiugui', *Osmanthus fragrans* 'Wandianjin', *Osmanthus fragrans* 'Hangzhouhuang', *Osmanthus fragrans* 'Aihuangui', *Osmanthus fragrans* 'Juanye Jingui', *Osmanthus fragrans* 'Moye Jingui', *Osmanthus fragrans* 'Xiaohua Jingui', *Osmanthus fragrans* 'Zaozihuang', *Osmanthus fragrans* 'Jinguan', *Osmanthus fragrans* 'Jinhua Taige', *Osmanthus fragrans* 'Zaojingui', and *Osmanthus fragrans* 'Sujingui'.

Xianning City has 23 varieties of *Osmanthus fragrans* (Thunb.) Lour, including 9 local varieties and 14 introduced va-

rieties. The local varieties are *Osmanthus fragrans* 'Zhusha Dangui (Ruanye Dangui, Zishagui)', *Osmanthus fragrans* 'Mantiaohong (Honghua)', *Osmanthus fragrans* 'Xiaoye Dangui', *Osmanthus fragrans* 'Chidangui (Chiye Dangui)', *Osmanthus fragrans* 'Zidangui', *Osmanthus fragrans* 'Dahua Dangui', *Osmanthus fragrans* 'Liuye Dangui', *Osmanthus fragrans* 'Chenghong Dangui (Xianning Dangui, Hongyan)', *Osmanthus fragrans* 'Liuyehong'; the introduced varieties are *Osmanthus fragrans* 'Zaohua Dangui', *Osmanthus fragrans* 'Hongyan Ningxiang', *Osmanthus fragrans* 'Xionghuangui', *Osmanthus fragrans* 'Yingye Dangui', *Osmanthus fragrans* 'Zhuangyuanhong', *Osmanthus fragrans* 'Pucheng Dangui', *Osmanthus fragrans* 'Pingmaihong', *Osmanthus fragrans* 'Susheng Dangui', *Osmanthus fragrans* 'Zuijihong', *Osmanthus fragrans* 'Hangzhou Dangui', *Osmanthus fragrans* 'Jiaorong', *Osmanthus fragrans* 'Fugui', *Osmanthus fragrans* 'Daye Dangui', and *Osmanthus fragrans* 'Kuanyehong'.

Colored-leaf *Osmanthus fragrans* group has two varieties *Osmanthus fragrans* 'Jintian Caigui' and *Osmanthus fragrans* 'Jinye Caigui', both are introduced varieties.

In addition, there are 4 kinds of other *Osmanthus* Lour. Plants, including local variety *Osmanthus fragrans* 'Xianning Shangui', and three introduced varieties, namely *Osmanthus heterophyllus* (G. Don) P. S. Green, *Osmanthus matsumuranus* Hayata, and *Osmanthus cooperi* Hemsl.

3.3 New varieties of forest and grass plants On February 2, 2000, National Forestry and Grassland Administration issued the *List of Protection of New Plant Varieties of the People's Republic of China (Forestry Section)* (the second batch), which incorporated *Osmanthus fragrans* into the protection list.

By now, the whole country has applied 82 new varieties of *Osmanthus fragrans* (former new varieties of forestry plants), and 65 new varieties have been granted. However, the origin and applicants (variety right holders) of these new varieties have nothing to do with Xianning City.

3.4 Patents So far, Xianning City has obtained only 85 national patents involving osmanthus (Table 1). Among them, there are 54 invention patents, accounting for 63.53%; 28 utility model patents, accounting for 32.91%; 3 industrial design patents, accounting for 3.53%.

Table 1 Number of national patents involving osmanthus in Xianning City

County and district	Invention	Utility model	Industrial design	Total
Chibi City	2	0	0	2
Xian'an District	44	28	2	74
Chongyang County	0	0	0	0
Tongcheng County	5	0	0	5
Tongshan County	1	0	0	1
Jiayu County	2	0	1	3
Xianning City (Total)	54	28	3	85

3.5 Geographical indications China's geographical indication

protection system is still not perfect, and there are currently three main systems^[10–12]. The osmanthus industry in Xianning City has not yet implemented the protection of geographical indication products by China National Intellectual Property Administration. The osmanthus industry in Xianning City has only registered three geographical indication certification marks, involving two brands: "Xianning Osmanthus" and "Chongyang Wild Osmanthus Honey" (Table 2). At present, there are only 5 market entities that can legally use the special sign of the geographical indication certifica-

tion mark "Xianning Osmanthus": Hubei Guijiacun Wine Industry Co., Ltd., Hubei Bayuehua Food Co., Ltd., Xianning Qixianhua Professional Cooperative, Xianning Zhongxin Planting Professional Cooperative, and Xianning Wulongshan Medicinal Planting Professional Cooperative. Only one market entity can legally use the special mark of the geographical indication certification mark "Chongyang Wild Osmanthus Honey": Hubei Sanpu Bee Industry Co., Ltd.

Table 2 Osmanthus industry geographical indication certification marks in Xianning City

Trademark name	Registration No.	Registration time//YMD	Registration party
Xianning Osmanthus	11294029	2013–02–06	Xianning Osmanthus Association
Xianning Osmanthus	11294030		
Chongyang Wild Osmanthus Honey	14557689	2015–05–06	Chongyang County Beekeeping Association

Xianning City has only registered the agricultural product geographical indication "Chongyang Wild Osmanthus Honey" in the Ministry of Agriculture and Rural Affairs. The registration party is the Chongyang County Beekeeping Association, and the protection scope of geographical indications covers 6 towns in Chongyang County, including Gaojian Township, Jintang Town, Qingshan Town, Ganggang Township, Tongzhong Township, and Lukou Town.

3.6 Trademarks Xianning City has registered many common trademarks in osmanthus industry, but has not yet registered collective trademarks, only 3 certification trademarks (Table 2). Osmanthus industry in Xianning City has two advantageous trademarks in Hubei Province: "Xianning Osmanthus" (osmanthus seedlings, fresh osmanthus) by Xianning Osmanthus Association, and "Shengshenchuan and graphics" (processed osmanthus products) by Xianning Baizhuang Tea Industry Co., Ltd., but there is no relevant Chinese well-known trademark.

4 Major problems in the construction of China Osmanthus City and intellectual property protection

4.1 No due attention to the protection of important agricultural cultural heritage Important Agricultural Heritage Systems (IAHS) are traditional agricultural systems (especially unique land use systems and agricultural landscapes). At present, China had 138 important agricultural cultural heritages, including the jasmine planting and tea culture system in Fuzhou City of Fujian Province, Gudong Jujube Orchard in Binhai Cuizhuang of Tianjin, and Sizuolouma walnut production systems in Pinggu of Beijing, and 18 Globally Important Agricultural Cultural Heritage Systems (GIAHS), including the ancient mulberry group on the ancient route of the Yellow River in Xiajin, Shandong Province, the mulberry fish pond system in Huzhou, Zhejiang Province, and the ancient jujube orchard in Jiaxian County, Shaanxi Province. However, there are no China's or Globally Important Agricultural Heritage Systems related to osmanthus.

China is the origin and distribution center of *Osmanthus* Lour. plant in the world and the origin of osmanthus. Xianning City has a long history of osmanthus planting. The ancient osman-

thus trees account for more than 90% of the country, and the ancient osmanthus tree community is widely distributed. The ancient osmanthus tree group and osmanthus cultural system in Xianning City conform to the characteristics and standards of China's Important Agricultural Heritage Systems and Globally Important Agricultural Cultural Heritage Systems. However, the protection of the important agricultural cultural heritage of osmanthus in Xianning has not received due attention.

4.2 Protection of intangible cultural heritage lagging behind

Xianning City is rich in intangible cultural heritage related to osmanthus, including the Legend of Chang'e (Goddess of the Moon) Flying in the Sky, the Legend of Wu Gang Cutting Osmanthus, traditional osmanthus music, osmanthus tree carvings, traditional osmanthus production techniques, osmanthus traditional herbs, osmanthus folk customs and so on. However, there are no provincial or national intangible cultural heritage projects related to osmanthus in Xianning City. The protection of its intangible cultural heritage is lagging behind, which hinders the inheritance of osmanthus-related farming culture and the identification and recognition of the cultural connotation of osmanthus traditional specialties.

4.3 Few number of osmanthus varieties The number of osmanthus varieties in Xianning City is not particularly large, only 102 (45 local varieties and 57 introduced varieties), which is less than Wuhan and Suzhou. More than 666.66 ha of osmanthus is fragrant in Xinzhou District, Wuhan, and 131 varieties of osmanthus have been planted in Cangbu Huaguoshan Ecological Agriculture Park. In Suzhou City, the Osmanthus Park built in 1998 has planted more than 260 varieties of osmanthus, which is a specialized garden with the largest collection of osmanthus varieties in China.

4.4 Colored-leaf *Osmanthus fragrans* group not showing its charm As early as in 2014, *Osmanthus* Lour. plant international registration has established colored-leaf *Osmanthus fragrans* group. At present, there are 5 species of osmanthus; *Osmanthus fragrans* var. *semperflorens* group, *Osmanthus fragrans* 'Latifolius' group, *Osmanthus fragrans* var. *thunbergii* Makino group, *Osmanthus fragrans* *Aurantiacus* group, and *Osmanthus fragrans*

colored-leaf group. Since the "Yuntian Colored-leaf Osmanthus" was granted the variety rights in 2009, China (especially in Fujian, Guangxi, Jiangsu, and Zhejiang provinces) has developed more than 50 new varieties of colored-leaf *Osmanthus fragrans*. The colored-leaf *Osmanthus fragrans* makes the osmanthus forest show colorful colors and enhances the ornamental value of osmanthus. However, Xianning only introduced two varieties of colored-leaf *Osmanthus fragrans*, which are deeply hidden in the osmanthus garden in Qianshan National Forest Park. Nowadays, when many cities are brilliant in colored-leaf osmanthus, Xianning City does not show the charm of colored-leaf osmanthus.

4.5 Blank cultivation of new osmanthus varieties for many years In this new century, the whole country of China has accepted 82 applications for new varieties of *Osmanthus fragrans* plants (former new varieties of forestry plants), and granted 65 new osmanthus varieties. However, the origin and applicants (variety right holders) of these new varieties have nothing to do with Xianning City. Xianning City has not cultivated new osmanthus varieties for decades, although the original intention of establishing Qianshan Osmanthus Garden was the dream of cultivating new osmanthus varieties, and biological breeding is currently the key field of national scientific and technological innovation.

4.6 Very few national patents National patents, especially national invention patents, are an important indicator of scientific and technological innovation. However, so far, Xianning City has obtained too few national patents involving osmanthus, only 85, and it is even rarer to see high-value national patents. The technological innovation capability of Xianning City in the osmanthus industry is quite weak.

4.7 Weak protection of geographical indications for osmanthus specialties Xianning City has only registered 3 geographical indication certification trademarks and 1 agricultural product geographical indication in osmanthus industry, and has not implemented the protection of geographical indication products by the China National Intellectual Property Administration and the protection of Chinese geographical indication products within the EU. Only Xianning osmanthus and Chongyang Wild Osmanthus Honey are the osmanthus specialties protected by geographical indications, and only 6 market entities are involved.

4.8 Weak osmanthus product innovation capability Osmanthus products in Xianning City are mainly primary products. Traditional specialty industries such as osmanthus tea, osmanthus pastry, osmanthus cake, and osmanthus wine declined, and the corresponding production skills were lost. Osmanthus seedlings are limited to *Osmanthus fragrans* var. *semperflorens* group, *Osmanthus fragrans* 'Latifolius' group, *Osmanthus fragrans* var. *thunbergii* Makino group, *Osmanthus fragrans* *Aurantiacus* group. The colored-leaf *Osmanthus fragrans* group from other places is frantically eroding the former outer market of Xianning osmanthus, and osmanthus products in Xianning City are mainly depending on the local market. The traditional advantages are losing and innovation capability is weak. The brilliance of the "Hometown of Osmanthus in China" has long since faded, and only many osmanthus trees and ancient osmanthus tree communities are still fragrant.

5 Strategies for construction of China Osmanthus City and protection of intellectual property rights

5.1 Applying for China's Important Agricultural Heritage Systems (CIAHS) and Globally Important Agricultural Heritage Systems (GIAHS) Xianning City should implement a detailed survey of ancient osmanthus trees and ancient osmanthus tree communities in the city (especially Guihua Town, Xian'an District), collect and sort out the traditional agricultural system of osmanthus (especially the unique land use system and agricultural landscape), and apply for CIAHS and GIAHS to protect and inherit farming culture with Baidun Village, Guihua Town as the center, the osmanthus traditional agricultural system consisting of Wulao Mountain, Jiulong Mountain, Hangbang Mountain, Hejia Garden, Mingshuiquan, and Gulangqiao, *etc.*

5.2 Applying for intangible cultural heritage project and "Hubei Time-honored Brand" Xianning City should collect and sort out the intangible cultural heritage related to osmanthus from folk literature, traditional music, traditional dance, traditional drama, folk art, traditional sports, entertainment and acrobatics, traditional art, traditional skills, traditional medicine, and folk customs, especially the intangible cultural heritage of traditional skills of osmanthus specialties, and actively apply for provincial and national intangible cultural heritage projects.

In addition, Xianning City should fully investigate the long-established enterprises, workshops, and brands of traditional osmanthus specialty products in Xianning City, and actively apply for "Hubei Time-honored Brands" and Chinese Time-honored Brands to enrich the cultural connotation of traditional osmanthus specialty products.

5.3 Increasing the diversity of osmanthus germplasm Xianning City can introduce various excellent osmanthus varieties from Hangzhou and Jinhua in Zhejiang Province, Nanjing and Suzhou in Jiangsu Province, Guilin and Liuzhou in Guangxi Zhuang Autonomous Region, Chengdu and Ya'an in Sichuan Province, Zhangzhou in Fujian Province, Zhuzhou in Hunan Province, as well as Xinzhou District, Enshi City, Yichang City in Hubei Province, to expand the osmanthus germplasm garden, enrich the biological genetic resources of osmanthus, and increase the diversity of osmanthus varieties.

5.4 Developing colored-leaf *Osmanthus fragrans* group Xianning City should energetically introduce colored-leaf *Osmanthus fragrans* varieties from Zhangzhou in Fujian Province, Guilin in Guangxi Zhuang Autonomous Region, Nanjing in Jiangsu Province, Hangzhou and Jinhua in Zhejiang Province, Zibo and Taian in Shandong Province, and Zhuzhou in Hunan Province, decorate the streets and villages of the "Hometown of Osmanthus in China" with colored-leaf *Osmanthus fragrans*, and add charm to China Osmanthus City.

5.5 Developing seed industry with independent intellectual property rights It is recommended to establish an innovation

platform for osmanthus biological breeding, support leading enterprises in the seed industry and farmers' professional cooperatives, purify and strengthen existing osmanthus varieties, cultivate new varieties (especially colored-leaf *Osmanthus fragrans*), use new varieties of forest and grass plants and national invention patents to protect the rights of new osmanthus varieties, break through the key core technology of "stuck neck", develop seed industry with independent intellectual property rights, and protect the "chip" of modern osmanthus industry.

5.6 Creating regional public brands of osmanthus specialty products Xianning City should collect and sort out the human factors and natural factors of the geographical indications of osmanthus specialties such as osmanthus tea, osmanthus pastry, osmanthus cake, osmanthus wine, etc., analyze its geographical indication features, apply to China National Intellectual Property Administration for protection of geographical indication products, register a geographical indication certification trademark or a geographical indication collective trademark with the Trademark Office of China National Intellectual Property Administration, and register the geographical indication of agricultural products with the Ministry of Agriculture and Rural Affairs.

Besides, it is recommended to formulate and improve the national standard, or industry standard, or local standard for geographical indications corresponding to special products of geographical indications, and lead the standardization process of the city's osmanthus industry with geographical indications, encourage large professional households, family farms, farmer cooperatives, and enterprises in the scope of geographical indication protection to use geographical indication products, or geographical indication trademarks, or special marks corresponding to geographical indications of agricultural products, and integrate regional brands with geographical indications, and comprehensively build a regional public brand of osmanthus specialty products.

5.7 Establishing osmanthus whole industry chain system Xianning City needs to establish an osmanthus germplasm resource nursery, cultivate new varieties, plant osmanthus, primary product processing, deep processing of osmanthus derivatives, develop osmanthus culture, develop eco-tourism, build brands, and develop domestic and foreign markets, to form an efficient whole industry chain of osmanthus that integrates eco-tourism and sightseeing, so as to promote the integrated development of the osmanthus industry

5.8 Inheriting, innovating and developing the traditional industry of osmanthus At present, it is in a new stage of intellectual property promoting the development. The new stage of development signifies that the Chinese people have the historical responsibility to inherit and develop the excellent traditional Chinese culture and innovate to drive China's socialist modernization. Traditional intellectual property rights such as traditional knowledge and agricultural biological genetic resources inherit traditional culture. New varieties of forest and grass plants, invention patents,

utility model patents and other creative intellectual property rights support agricultural scientific and technological innovation. Industrial design patents, geographical indications, trademarks and other designation intellectual property rights promote the cultivation of regional public brands. Therefore, it is necessary to improve the level of intellectual property creation, application, protection, management and service of the osmanthus industry, grasp the new development stage, and inherit, innovate and develop the traditional osmanthus industry.

5.9 Promoting the high-quality development of the osmanthus industry Xianning City should implement innovative development, coordinated development, green development, open development, and shared development, attach importance to the driving force of technological innovation, deploy the innovation chain with the whole industrial chain of osmanthus, and develop the osmanthus industry in a coordinated manner, strengthen the certification of pollution-free agricultural products, green food certification, and organic food certification, introduce foreign capital, develop osmanthus export-oriented economy, and jointly build and share China Osmanthus City, to promote the high-quality development of the osmanthus industry.

5.10 Building a new development pattern of osmanthus industry Xianning City should create a demonstration zone for the protection of national geographical indication products of the osmanthus industry to promote the construction of a large domestic cycle of the osmanthus industry. Besides, it should adhere to the concept of open development, and use the *Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)* and *EU-China Agreement on Cooperation on and Protection of Geographical Indications* to strive for the traditional osmanthus specialty to become a protected Chinese geographical indication product in the EU. Furthermore, Xianning City should open up domestic and foreign markets, and build a new development pattern for the osmanthus industry, namely, a new development pattern with the domestic cycle as the main body and the domestic and international dual cycles promoting each other.

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