



Research on the Development Status and Competitive Advantages of Pomegranate Industry in Panxi Region, Sichuan Province

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Abstract. The Panxi region of Sichuan has a superior geographical environment and suitable climate conditions, gradually becoming one of the important production areas for China's pomegranate industry. This article investigates and studies the current development status and competitive advantages of the pomegranate industry in Panxi, Sichuan Province, under the background of rural revitalization. It includes investigating the basic situation of pomegranate planting, production, processing, transportation, and sales in Panxi, and understanding the development status of the entire supply chain of the pomegranate industry in Panxi. By conducting on-site investigations and consulting relevant statistical data, comprehensively grasp the planting scale, output value, and market share of the pomegranate industry in major pomegranate producing areas in China; Objectively analyze the basic situation of China's pomegranate production and research capabilities, as well as the natural conditions and regional advantages of the Panxi region. Further use SWOT analysis to analyze the development advantages, problems, and challenges of the pomegranate industry in the Panxi region, and provide policy recommendations for the innovative development of the pomegranate industry in the region.

Keywords: Pomegranate industry; Panxi region; SWOT analysis; Development suggestions

1 Research Background

China has the world's largest pomegranate planting area (1.75 million mu) and yield (2 million tons), and has formed eight major pomegranate producing areas including Sichuan, Xinjiang, Yunnan, Henan, Anhui, Shandong, Shaanxi, and Hebei. The Panxi region of Sichuan Province has unique conditions for planting soft seed pomegranates. As of 2023, the pomegranate planting area is 488900 mu, accounting for 28% of the country's total, ranking first among the eight major production areas. The pomegranate industry has become the largest agricultural pillar industry in some counties (Huili City) and townships (Datian Town, Renhe District, Panzhuhua City), but prob-

lems such as weak infrastructure, low industrial level, and weak commodity competitiveness still exist. It is necessary to further enhance the competitiveness of the pomegranate market in Panxi region, expand market share, strengthen the research on the current development status and comparative advantages of the pomegranate industry in Panxi region, Sichuan, achieve industrial quality and efficiency improvement, and promote high-quality and innovative development of the pomegranate industry.

2 Research Status and Literature Review

Jiang Guo-wen (2018) proposed the construction of a pomegranate industrial park [1]. Mao Xu-qiang and Lao Ji-qing (2020) highlighted the importance of brand promotion and regional identity in enhancing market influence [7]. Li Chengcheng et al. (2019) analyzed the current status and countermeasures for pomegranate industry development [17]. Chu Qiao, Yan Yanhua et al. (2021), and Liu Ting, Xie Yan-ming et al. (2022) explored the industry model, bottlenecks, and countermeasures for the pomegranate sector [2, 10, 15]. Zheng Chong-lan et al. (2018) utilized SWOT analysis to study the pomegranate industry in the Panxi region [3]. Tie Wanzhu et al. (2019) researched high-yield cultivation techniques for pomegranates [14]. Wu Qun (2018) and Yu Shuang, Jin Yi-tang (2020) proposed methods to enhance innovation in production and processing capabilities for pomegranates [4, 5]. Wang You-fu et al. (2021) conducted an in-depth study on the mechanisms of fruit cracking in pomegranates [11]. Du Guoqiang (2017) analyzed the current state of the deep-processing pomegranate industry in Lintong [16]. Zhu Haiyang (2021), Sheng Xiang-wen (2022), and Zeng Qing-lu et al. (2023) researched expansion paths for regional pomegranate brands [8, 9, 13]. Li Geng-lan, Gao Zheng-qing et al. (2019), and Su Yue (2021) proposed development ideas for the pomegranate industry through case studies [6, 12].

The research results of the agricultural industry chain are very rich, but there is very little research on the innovative development of the pomegranate industry. This article takes the current development status and competitive advantages of the pomegranate industry in Panxi region of Sichuan Province as the object, and conducts a strategic analysis of the development of the pomegranate industry in Panxi region, which has certain practical significance.

3 Characteristics of Pomegranate Industry Development in Major Production Regions of China

Except for a few high-altitude regions such as the three northeastern provinces, Inner Mongolia, and northern Xinjiang, pomegranate cultivation has spread throughout most of China, forming eight major production areas including Sichuan, Xinjiang, Yunnan, Henan, Anhui, Shandong, Shaanxi, and Hebei. Due to the different geographical environments in each production area, there are variations in the timing of pomegranate planting, resulting in different varieties and maturity periods of pomegranate planted in each production area. As of December 2022, the planting area of

pomegranate in China exceeds 1.3 million mu, with an annual output of over 1.9 million tons and an annual output value of 14.6 billion yuan. The pomegranate planting area and output in the Panxi region of Sichuan Province rank first in China. The pomegranate planting area of Huili accounts for 92% of the pomegranate planting area in Panxi region, making it the largest pomegranate planting area in China. The pomegranate planting area exceeds 480000 mu, with an annual output of up to 748700 tons and an annual output value of 6 billion yuan; The yield ratio of pomegranates in Yunnan is high, but the yield is not high. The planting area of pomegranates in Yunnan is 140000 mu, but the annual yield is as high as 360000 tons, making it the region with the highest yield ratio of pomegranates per unit area in China. Although Yunnan has a high yield ratio of pomegranates, the yield is not high; The yield of pomegranate industry in Shandong ranks first in the country. The annual output of pomegranate in Shandong is 75000 tons, but the annual output value is as high as 2.93 billion yuan, and the yield ranks first in the country. This indicates that the pomegranate industry chain in Shandong is wider and drives more economic benefits.

In recent years, the industrialization process of pomegranate has accelerated, and a complete industrial chain has been formed. Various regions have introduced supporting policies to support the development of pomegranate processing industry. In addition to developing pomegranate bonsai and pomegranate cosmetics, using pomegranate as industrial dye, seasoning and medicine, pomegranate wine, pomegranate tea, pomegranate health products, pomegranate seed oil and other products have been successively developed. The development path of pomegranate processing industry is shown in Figure 1.

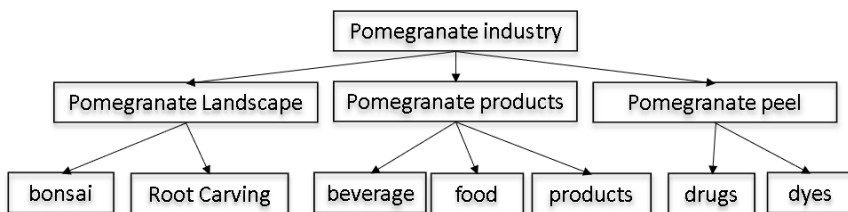


Fig. 1. Development Path of Pomegranate Processing Industry

4 The Development Foundation of Pomegranate Industry in Panxi Region, Sichuan Province

4.1 Accelerating the Consolidation of the Foundation for High-Quality Industrial Development

The planting area, annual yield, and annual output value all rank first among the eight major production areas. In 2023, the cultivation area of Huili City, the core pomegranate production area in Panxi region, will exceed 480000 mu, accounting for more than 96% of the planting area in Sichuan Province and 27% of the national total, with

an annual total output of over 700000 tons; Winning multiple product certifications and honors, Huili Pomegranate has been awarded honors such as "China Famous Trademark" and "Sichuan Famous Trademark", cultivating 20 individual product brands and gradually forming a cluster effect of regional public brands, enterprise brands, and product brands.

4.2 The Deep Processing Industry Chain Continues to Expand

In recent years, Huili City in Liangshan Prefecture and Renhe District in Panzhihua City have utilized their ecological advantages to develop pomegranate production and deep processing industries, vigorously cultivating local pomegranate processing enterprises. The city has a total of 14 leading agricultural product sales and processing enterprises at the provincial, state, and county levels, forming a shared industry pattern of "leading enterprises+bases+collective economy+cooperatives+farmers"; The regional characteristics of pomegranate industry development are gradually becoming apparent. Huili City has cultivated 7 pomegranate industry development consortia, built 58 modern controlled atmosphere warehouses with 250 units, and has a cold chain storage capacity of over 60000 tons, comprehensively improving the pre cooling capacity of the production area and providing basic support for opening up the first kilometer of cold chain logistics.

4.3 Accelerating the Development Trend of Industrial Integration

The integrated development of pomegranate industry in Panzhihua and Xichang has been accelerated, and a variety of industrial integration development models have been formed, such as planting and breeding cycle, agricultural and industrial extension, agricultural tourism intersection, "Internet plus", and agriculture "one after another". Many farmers apply traditional natural farming methods to modern pomegranate planting, interplanting vegetables and ryegrass under pomegranate trees to feed livestock and poultry. After harmless treatment, the manure of livestock and poultry, in turn, is used as fertilizer for pomegranate planting, forming a "pomegranate + agriculture and animal husbandry" industrial integration development model.

4.4 The Modern Market Circulation System is Gradually Being Established

Improve the grading and labeling system. In recent years, the main pomegranate producing areas in Panxi, Sichuan Province have continuously increased the construction of pomegranate marketing markets, formulated qualitative and quantitative standards for different grades of pomegranates, and divided them according to grades; Establishing and improving batch picking management, the Panxi Pomegranate Core Production Area has formulated county level pomegranate picking standards, insisting on batch harvesting and prohibiting immature pomegranate fruits from entering the market, as shown in Figure 2. Standardize market behavior, leverage the exemplary and driving role of organizations such as pomegranate industry associations, farmer pro-

professional cooperatives, and family farms, strengthen industry self-discipline management, and ensure the quality and brand image of Panxi pomegranate.

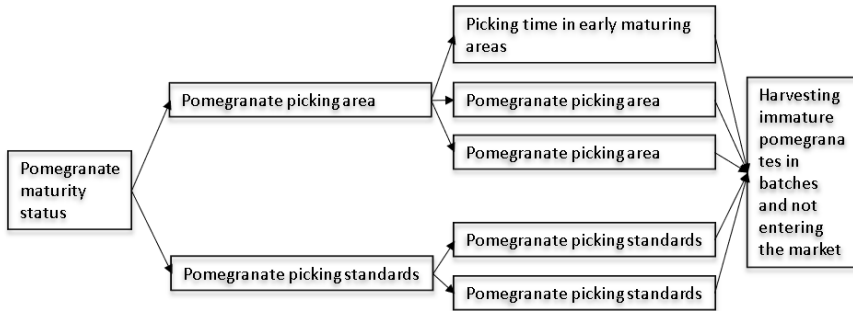


Fig. 2. Batch Picking Management of Pomegranates in Panxi

5 SWOT Analysis of Pomegranate Industry in Panxi Region of Sichuan Province

5.1 Competitive Advantages of Pomegranate Industry in Panxi Region

Scale Advantage. Compared with other major pomegranate producing areas in China, the Panxi region has a significant advantage in the scale of pomegranate industry.

(1) First in terms of planting scale. As of 2023, the pomegranate planting area in Panxi region exceeds 480000 mu, accounting for 36% of the eight major pomegranate producing areas in China; Nearly 180000 acres more than Xinjiang, which has the second largest planting area among the eight major production areas.

(2) First in annual output. The annual output of pomegranate in Panxi region is over 740000 tons, accounting for 39% of the eight major production areas; More than 340000 tons of pomegranate are produced in Xinjiang. It is 2.17 times higher than Xinjiang, which has the second highest production in the eight major production areas.

(3) First in annual output value. Pomegranate in the Panxi region has reached 6 billion yuan, accounting for 41% of the eight major production areas; More than 3 billion yuan higher than Shandong, which has the second highest output value among the eight major production areas.

Brand Advantages. The core pomegranate production area of Panxi, Huili, has a long history of pomegranate cultivation and high-quality internal quality, which has solidified the industrial foundation of pomegranate and made Huili the "Hometown of Pomegranate in China" and the "Number One Pomegranate Production County in China", giving birth to the well-known Huili pomegranate culture. Huili Pomegranate has obtained the "Three Products and One Label" certification (pollution-free agricultural products, green food, organic products, and geographical protection marks), is a

well-known trademark in China, a famous trademark in Sichuan Province, an excellent regional public brand of agricultural products in Sichuan Province, and has won the gold medal of China Agricultural Expo multiple times. The regional public brand value of "Huili Pomegranate" in 2022 is 4.084 billion yuan, ranking first in the national pomegranate brand value.

Resource Advantages. Huili has relatively complete technological resources. Firstly, it has abundant resources of high-quality pomegranate varieties, introducing over 100 excellent pomegranate varieties from both domestic and foreign sources. The pomegranate industry park has achieved 100% coverage of high-quality variety promotion. The second is to carry out a rescue and protection action for the century old pomegranate tree. Represented by the Qingpi Soft Seed Pomegranate variety in Guanhe Town, Huili City, the rescue protection and development of the "Local Centenary Pomegranate Ancient Tree" have been promoted, effectively strengthening the protection of the germplasm resources of the "Huili Qingpi Soft Seed Pomegranate" variety. The third is to accelerate the research work on Hui Li soft seed pomegranate.

5.2 Competitive Disadvantages of Pomegranate Industry in Panxi Region

The Diversity of Varieties Needs to be Further Strengthened. As of 2023, the planting area of soft seed pomegranate in Tunisia accounts for about 92% of the total planting area, and it cannot be staggered for listing. The concentrated listing of pomegranates has caused tremendous pressure on the market, resulting in a situation where pomegranate production increases but farmers' income decreases. Therefore, in the selection of pomegranate varieties, both soft and hard should be applied, and maintaining the diversity of pomegranate varieties may lead to a better future.

The Industrial Processing Chain Needs Further Extension. The vast majority of pomegranates in the Panxi region are sold as fresh fruits every year, with only a small portion of the total production being processed; In 2022, the output of pomegranate fruit in Shandong Province was less than 80000 tons, but the total output value of the pomegranate industry in the region was 2.93 billion yuan. Currently, there are more than 30 pomegranate deep processing enterprises in the region, and more than 20 series of pomegranate products have been developed. The annual output of pomegranate bonsai potted plants exceeds 200000 pots, with an annual output value of over 500 million yuan. As the production area with the largest planting area and output of pomegranate in China, the Panxi region needs to further explore the multifunctional uses of pomegranate and improve its industrial chain.

Production Management Level Needs Further Improvement. In the Panxi region, the phenomenon of heavy planting and light management in pomegranate cultivation, and even planting without care, has occurred from time to time. After making money from pomegranate cultivation became a consensus among the people, many farmers

who have already planted pomegranates blindly expanded their planting without considering their own management abilities. Farmers who have not participated in pomegranate cultivation have also joined in blindly planting without training, often resulting in excessive planting density or insufficient self-management abilities after planting. The yield and quality benefits of pomegranate cultivation cannot meet the basic requirements.

5.3 Opportunities for the Development of Pomegranate Industry in Panxi Region

Strong Support from Government Policies. The country provides strong support for the development of agriculture and rural areas. Since 2004, 20 consecutive No. 1 central documents have focused on "agriculture, countryside and farmers" (agriculture, rural areas and farmers). In 2023, No. 1 central document emphasizes that "a strong country must first strengthen agriculture, and strong agriculture can make the country strong". The local government attaches great importance to the development of the pomegranate industry. Huili City in Liangshan Prefecture has established the Huili Modern Pomegranate Industry Leading Group Office to coordinate and promote the development of the pomegranate industry, and has equipped 14 major pomegranate producing towns in the city with technicians to guide pomegranate planting. The "China Hui Li Pomegranate Research Institute" has been established to provide comprehensive technical support for pomegranate cultivation in the city.

The Gradual Rise of Leading Enterprises. According to the information released by Sichuan Rural Information Network in 2021, as of 2021, Huili has cultivated 6 agricultural leading enterprises and 623 family farms related to pomegranates, and 165 farmer professional cooperatives in the field of pomegranates. Six associations have been established, including Huili Fruit Industry Production, Pomegranate Packaging, Agricultural Supplies Supply, Logistics, Storage Cold Chain, and Fruit Marketing. Build two trading markets, "Wanqing" and "Jiubang", with a series of functions including origin collection, classification and grading, processing and packaging, cold chain logistics, information release, and transaction settlement. It can achieve a daily processing capacity of over 5000 tons of pomegranate and an annual trading volume of over 300000 tons.

The Huge Market Space of Pomegranate. Although pomegranate cultivation is widespread in regions such as Asia and the Americas, there are relatively few countries that solely cultivate it. In domestic and international markets, the supply of pomegranate is relatively limited, which cannot meet the demand and deep processing requirements of domestic and international markets, making pomegranate a truly high-end fruit and one of the most precious and scarce fruits. The domestic fresh fruit production is only over one million tons. With the improvement of people's living standards, the demand for pomegranate fruit market and production processing will

continue to grow, leading to further intensification of the supply-demand contradiction and huge market development potential.

5.4 Threats to the Development of Pomegranate Industry in Panxi Region

Intense Competition in the Eight Major Production Areas. The pomegranate industry in the other seven production areas is developing very well, with each production area having its own high-quality pomegranate varieties and its own pomegranate brand. There are early, medium, and late maturing varieties of pomegranate in some production areas, which can effectively avoid the situation of high market pressure and low prices caused by a large number of listings.

Potential Threats of Alternative Products. There are many fruits that mature and go on sale in August and September, such as watermelon, mango, longan, peach, pear, grape, apple, persimmon, and so on; August and September are usually quite hot every year, such as watermelon, which is a popular summer resort among consumers. Therefore, the sales volume and even the pomegranate industry in the Panxi region will be affected by other alternative fruits.

Impact of Capital Investment. Agricultural projects have slow results and long investment payback periods, which are not conducive to attracting social capital investment. Huili City, the core pomegranate production area in Panxi, is an agricultural county with the task of consolidating and expanding poverty alleviation. The local financial resources are limited, and the investment in the pomegranate industry is significantly insufficient compared to the existing planting scale. Corresponding supporting policies must be introduced to guide social capital investment.

5.5 Development Strategy Selection of Pomegranate Industry in Panxi Region

From the SWOT analysis, it can be concluded that the pomegranate industry in the Panxi region should be mainly based on SO and WO strategies, supplemented by ST and WT strategies, as shown in Table 1; Grasp firmly the opportunities of the times and policies, make Panxi Huili soft seed pomegranate the main product in the local area, strengthen the construction of pomegranate deep processing enterprises, increase research on pomegranate fresh fruit refrigeration technology, strengthen Huili soft seed pomegranate brand construction, expand the pomegranate industry chain, expand pomegranate sales channels, accelerate pomegranate transportation, further develop the tourism ring road in Panxi region, introduce funds into Daliangshan, bring modern scientific management technology into Daliangshan, and ensure the orderly integration and development of pomegranate industry and other industries.

Table 1. SWOT Analysis of Pomegranate Industry in Panxi Region

External factors Internal factors	Strength (1) Scale strength (2) Resource strength (3) Brand strength	Weakness (1) Single brand (2) Low technical level (3) Incomplete industrial chain
<p>Opportunity</p> <p>(1) Policy support</p> <p>(2) Leading enterprise</p> <p>(3) Large market space</p>	<p>(SO)</p> <p>(1) Seize policy opportunities, do a good job in regional planning and industrial layout, and incorporate the pomegranate industry into local top-level planning. Establish a standardized system to optimize the value chain of pomegranate origin brands and provide support for industrial development;</p> <p>(2) Establish a pomegranate industry supply chain with leading enterprises as the core, stabilize the planting scale of the pomegranate industry, extend the industrial chain, and continuously enhance the added value of the pomegranate industry;</p> <p>(3) In line with the new development pattern of mutual promotion of domestic and international dual circulation, actively explore regional and international markets, and further expand the market influence of Panxi pomegranate;</p> <p>(4) Integrate pomegranate resources in the Panxi region, give full play to the leading role of leading enterprises, strengthen the research and development of fresh fruit refrigeration technology, construct refrigeration and warehousing projects, and extend the sales time of pomegranate fresh fruits and processed products.</p>	<p>(WO)</p> <p>(1) By leveraging policy advantages, we strive to cultivate high-quality pomegranate varieties, increase the diversity of pomegranate product varieties in the Panxi region, and enhance its market competitiveness;</p> <p>(2) Under the policy advantage, further expand the pomegranate industry chain in the Panxi region, increase the deep processing of pomegranate products, and deeply explore the effective value of pomegranate;</p> <p>(3) Fully utilize the driving role of leading enterprises, strengthen the management level of pomegranate planting and harvesting, increase total output and annual income, and enhance the attractiveness of pomegranate industry development to farmers;</p> <p>(4) Integrate resources, develop pomegranate cultural tourism projects, and explore the cultural tourism connotations of pomegranate industry development; Promote the integration of agriculture, culture, and tourism, vigorously develop the tourism industry, and thus drive economic growth in the Panxi region.</p>
<p>Threat</p> <p>(1) Strong regional competition</p> <p>(2) Threat of substitutes</p> <p>(3) Technology barrier</p>	<p>(ST)</p> <p>(1) Utilize geographical advantages, strengthen regional public brand construction, strictly control the quality of pomegranates in the Panxi region, and continuously enhance market competitiveness;</p> <p>(2) Utilizing the advantages of large-scale industries, developing deep processing of pomegranate industry, promoting the integration of primary, secondary and tertiary industries, and thereby enhancing the competitiveness of pomegranate in the Panxi region;</p> <p>(3) Utilize technological advantages to cultivate and introduce higher quality varieties, and enhance the market influence of pomegranate products;</p> <p>(4) Fully leverage brand advantages and vigorously promote the nutritional value of pomegranate, thereby enhancing its competitiveness among seasonal fruits.</p>	<p>(WT)</p> <p>(1) Introduce or cultivate more high-quality varieties, reduce the problem of a single variety of pomegranate in the Panxi region, lower the development risks of the pomegranate industry, and improve market competitiveness;</p> <p>(2) Learn from the advanced experience of pomegranate industry development at home and abroad, extend the pomegranate industry chain, strengthen the pomegranate processing industry, and achieve sustainable and healthy development;</p> <p>(3) Improve supporting policies for the development of the pomegranate industry, guide social capital to participate in the construction of pomegranate industrial parks, and form long-term and stable funding guarantees.</p>

6 Countermeasures to Promote the Formation of Competitive Advantage of Pomegranate in Panxi Region of Sichuan Province

6.1 Adhere to Brand Leadership and Reshape the New Foundation for the Development of Pomegranate Industry in Panxi Region

Based on the conditions and advantages of agricultural and rural resources and regional development, we have clarified the development direction of regional agricultural industry, closely focused on the main line of agricultural supply side structural reform, actively explored planning guidance, brand building, and market development, and opened up a high-quality, efficient, ecological, safe, and sustainable path for the development of pomegranate industry. We have reshaped the new advantages of pomegranate industry in Panxi region, making "the world's pomegranate looks at China, and China's pomegranate looks at reason" no longer just a slogan.

6.2 Implement Innovation Driven and Strengthen the Construction of the Technological Innovation System in the Pomegranate Industry

Strengthen the research and development of key technologies, implement technology driven approaches, actively introduce new technologies, varieties, and processes, promote standardized pomegranate planting techniques, and improve the quality of Panxi pomegranate products; Strengthen the cooperation between government, industry, academia, and research, focus on the development needs of the pomegranate industry, carry out exchanges and docking, focus on technological breakthroughs, seedling upgrades, and the introduction of technical talents in the pomegranate industry, explore new paths for industry university research cooperation, effectively promote the reconfiguration and dynamic optimization of innovative resources such as technology, talent, funding, and information; Based on the actual needs of the pomegranate industry development in the Panxi region, we will scientifically improve the construction effect of pomegranate product testing institutions, formulate a plan for the construction of testing institutions, and continuously strengthen the construction of the quality and safety inspection and testing system for pomegranate products in Panxi.

6.3 Extend the Industrial Chain and Promote the Agglomeration and Development of Pomegranate Industry Through Deep Processing

Cultivate and strengthen business entities, increase investment attraction, and promote industrial development through large-scale investment and projects; Strengthen the cultivation of local enterprises and form a new development pattern of mutual support between small and large enterprises; Creating a more fair and standardized competitive environment, further stimulating the drive for independent innovation of leading enterprises; At the same time, it promotes harmonious coexistence between small and

micro enterprises and large enterprises, forming their respective differentiated advantages. Establish a sound mechanism for linking interests and accelerate the high-quality development of agricultural industrialization; Extending the pomegranate industry processing chain, relying on the scale advantages and resource conditions of the pomegranate industry in the Panxi region, accelerating the construction of pomegranate industry processing parks, promoting deep processing of pomegranate industry, extending the industrial chain, realizing the agglomeration and intensive development of pomegranate industry, and jointly building the Panxi pomegranate deep processing industry base.

6.4 Strengthen Standard Guidance and Establish a Sound Standardization System for the Entire Pomegranate Industry Chain

The development of the pomegranate industry in Panxi should fully draw on the standardized development experience of developed countries, regions, and other major pomegranate producing areas, actively introduce advanced scientific and technological achievements, and promote the standardization of the entire pomegranate industry chain. Based on local conditions, analyze the entire process, all factors, and various subjects of the pomegranate industry, and comprehensively promote the standardization of the entire process of pomegranate industry before, during, and after production. Promote the transformation of the pomegranate industry from a "farmer economy" to a standardized, large-scale and intensive one, connect with relevant field standards and market demand, continuously establish new standards for elevation standards, and continue to explore the "Pomegranate+" project in conjunction with rural revitalization, leisure agriculture, etc.

6.5 Promote Project Construction and Leverage the Demonstration and Driving Effect of Modern Agricultural Parks

Plan a batch of major pomegranate processing projects. Following the principles of overall planning, step-by-step implementation, government guidance, and enterprise entities, we will accelerate the implementation of a number of major deep processing projects that are in line with the actual development of the region and pomegranate industry, and have strategic, driving, and feasible characteristics. We will also build agricultural specialty product deep processing and logistics industrial parks. Give full play to the exemplary and leading role of pomegranate modern agricultural park. The Huili Pomegranate Modern Agricultural Park is a spatial agglomeration area for the Huili Pomegranate industry. Committed to achieving the goal of a national modern agricultural industrial park, promoting the continuous improvement and upgrading of the park, and building a high standard pomegranate modern industrial base.

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References

1. Jiang Guo-wen. Research Report on the Construction of Huili Pomegranate Industrial Park [J] *Botanist*, 2018, 31 (11): 27.
2. Liu Ting, Xie Yan-ming, Tang Dynasty, Yang Zhi Research on the Mode, Bottlenecks, and Countermeasures of Pomegranate Industry Integration [J] *China Forestry Economy*, 2022 (02): 44-48.
3. Zheng Chong-lan, Yu Shuang, Wu Deng-feng, He Ping SWOT analysis and countermeasures for the development of pomegranate industry in Panxi region of Sichuan Province [J] *Chinese Fruit Tree*, 2018 (06): 102-106.
4. Wu Qun. Countermeasures for Innovative Development of Agricultural Industry [J] *Masses*, 2018 (14): 44-45.
5. Yu Shuang, Jin Yi-tang Key Technologies for the Development of Pomegranate Industry in Panxi Region, Sichuan Province [J] *China Tropical Agriculture*, 2020 (02): 69-71.
6. Su Yue. Hui Li: "Durian" shines brightly Food Industry, 2021 (12): 130-132.
7. Mao Xu-qiang, Lao Ji-qing Hui Li: Building the First Pomegranate County in China [J] *Agricultural Products Market*, 2020 (13): 24-25.
8. Zeng Qing-lu, Meng Qi, Zhang Guo-bao Exploration of the Expansion Path of Anhui Huaiyuan Pomegranate Brand [J] *Cooperative Economy and Technology*, 2023 (2): 80-82.
9. Zhu Haiyang Thoughts on the Development of Pomegranate Industry in Huaibei City [J] *Rural Science Experiment*, 2021 (25): 95-96.
10. Chu Qiao, Yan Yanhua, Zhai Ming-pu, Liu Wen, Xi Xing-jun, Zhang Wen-huan, Meng Lingling Research on the Development Path and Countermeasures of the Modern Agricultural Whole Industry Chain Standard System [J] *China Engineering Science* 2021 (3): 8-15.
11. Wang You-fu, Tie Wan-zhu, Wang Feng-ping, Zhou Tingling, Jin Yi-tang, Liao Lili Mechanism and preventive measures of fruit cracking in Tunisian soft seed pomegranate in Panxi region of Sichuan Province [J] *Sichuan Agricultural Science and Technology*, 2021 (12): 32-35.
12. Li Geng-lan, Gao Zheng-qing, Liang Ming-tai, Liu Jia-xun, Zhang Jue Exploration of Development Ideas for Yunnan Soft Seed Pomegranate Industry [J] *Chinese Fruit and Vegetable*, 2020 (5): 88-90+105.
13. Sheng Xiang-wen. Research on the Evaluation and Enhancement Strategies of Public Brand Competitiveness in Yicheng Pomegranate Region [D] *Shandong Agricultural University*, 2022.
14. Tie Wan-zhu, Luo Guan-xing, Wang Jun. High yield cultivation techniques for Tunisian soft seed pomegranate [J] *Sichuan Agricultural Science and Technology*, 2019 (4): 83-84.
15. Liu Ting, Xie Yanming, Tang Jinchao, et al. Research on the Integration Model, Bottlenecks, and Countermeasures of Pomegranate Industry [J]. *China Forestry Economy*, 2022(2):44-48.
16. Du Guoqiang Research on the Current Situation and Countermeasures of Deep Processing Industry of Pomegranate in Lintong [D]. *Hebei University of Engineering*, 2017.
17. Li Chengcheng, Tang Yan, Wu Tingyu, Xiang Yinchun, Zhang Huifen. The current situation and countermeasures of pomegranate industry development in Huili County [J]. *Sichuan Agricultural Science and Technology*, 2019 (05): 61-63.

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