

Existing Problems and Countermeasures of Rural Industry Development in Bijie Experimental Area

Chengdong WANG, Xi CHEN, Qin GE, Li XIAO

Bijie City Cash Crop Workstation, Bijie 551700, China

Abstract The development of rural industries in Bijie City of Guizhou Province leads the comprehensive rural revitalization with industrial revitalization, takes high-quality development as the overall guide, focuses on industrial scale, standardization, branding, and marketization, and strives to extend the industrial chain and enhance the value chain to achieve the prosperity of rural industries. In this study, it investigated the current situation of rural industry development in Bijie City (improving the quality and efficiency of characteristic industries, expanding the quantity and efficiency of agricultural products processing industry, recruiting and cultivating large business entities, expanding and strengthening the brand of agricultural products, and upgrading the rural tourism). Through analysis, it found that there are problems such as small scale of production enterprises, insufficient cultivation of independent brands, short industrial chain, low added value, weak market expansion ability, imperfect interest connection mechanism, and insufficient participation of farmers. Finally, it came up with countermeasures for the development of rural industries in Bijie City, including improving supporting facilities and building an extension base; strengthening leading enterprises and focus on deep processing; highlighting regional characteristics and paying close attention to the docking of production and marketing; enhancing the characteristic brand and strengthening the support of science and technology; promoting collaboration and support, and making innovation in the connection of interests.

Key words Rural industries, Current development situation, Problems, Countermeasures, Bijie Experimental Area

1 Introduction

The development of rural industries in Bijie City of Guizhou Province leads the comprehensive rural revitalization with industrial revitalization. It promotes the consolidation and expansion of the achievements of poverty alleviation and the effective connection of rural revitalization. Taking high-quality development as the guide and basing on the new stage of development, Bijie City implements the new development concept, integrates it into the new development pattern, focuses on the "four new" and "four modernizations", focuses on industrial scale, standardization, branding, and marketization, extends the industrial chain, upgrading the value chain, consolidates and expands the achievements of poverty alleviation, to realize the prosperity of rural industries. Besides, it stimulates farmers' enthusiasm for participation, gives full play to the main role of farmers, improves the interest connection mechanism, promotes the increase of farmers' income, and boosts the rapid and high-quality development of rural industries, so as to lay a solid industrial foundation for the comprehensive revitalization of rural areas.

2 Current development status

2.1 Characteristic industries improve quality and efficiency

2.1.1 Optimizing the regional distribution of industries. According to the requirements of large-scale and standardized develop-

ment, Bijie City rationally distributes superior industries, scientifically delimits planting areas, forms relatively concentrated large-scale planting bases, constructs superior industrial belts, and further improves the degree of industrial scale. Vegetables mainly develop the vegetable industry belt which likes cool in summer and autumn and guarantees supply. Edible fungi focus on the advantages of single products to build industrial demonstration bases. Bijie City has built a demonstration base of pepper and an industrial cluster. For fruit industry, it builds apple, cherry industry cluster, kiwifruit industry multi-functional integration development zone. It is also constructing the core industrial belt of genuine Chinese medicinal materials. By 2025, the output value of the city's characteristic planting industry will reach 72 billion yuan.

2.1.2 Vigorously promoting variety improvement and optimization. Bijie City accelerates the research and development of high-quality varieties, focuses on excavating and cultivating a number of local varieties with Bijie characteristics, and introduces and improves a number of varieties with good production efficiency, high market recognition and suitable for mountain climate. According to the market sales situation and sales efficiency of products in recent years, combined with the factors of resource endowment, infrastructure construction and location conditions, Bijie City focuses on the target market demand, product shortage period and product supply, and selects suitable varieties to rapidly expand the scale of cultivation. Tea industry mainly promotes self-bred excellent tea varieties in Guizhou Province and excellent tea varieties outside the province. For pepper varieties, it mainly promotes line pepper, *Capsicum annuum* var. *conoides*, and table green pepper. For edible fungi, it mainly promotes *Phallus indusiatus*, *Lentinula*

edodes, and *Flammulina velutiper*. Fruit mainly promotes apple, cherry, citrus and other fruit tree species. Chinese herbal medicines mainly promote the cultivation of genuine medicinal materials such as *Pinellia ternata*, *Gastrodia elata* and *Codonopsis pilosula*.

2.2 The processing industry of agricultural products achieves expansion and efficiency increase Bijie City cultivates and builds a number of large-scale and high-quality agricultural products processing industry production bases, focusing on high-quality grain and oil, 12 agricultural characteristic industries and under-forest economy, focusing on two high-growth processing enterprises, rationally laying out raw material bases and agricultural products processing enterprises, accelerating the development of intensive processing of agricultural products, and building an industrial chain system of storage, processing and packaging of agricultural products. Besides, it also accelerates the development of primary agricultural products, promotes the in-depth development of functional foods, and improves the supporting system for deep processing. Bijie City encourages and guides leading enterprises to cooperate closely with scientific research institutes and institutions of higher learning, strengthens independent scientific and technological research and development and technological innovation, speed up the transformation of traditional technologies, and develops new products and processes. Bijie City supports the comprehensive utilization and development of processing by-products and improves the economic benefits of processing. It gives the priority to agricultural products processing enterprises that implement projects such as technological transformation, equipment renewal, intensive processing of agricultural products and comprehensive utilization of by-products.

2.3 Attracting, inviting, strengthening and cultivating large business entities Bijie City optimizes the business environment, builds a platform for investment promotion, aims at the weak links of production, processing and marketing, aims at the top 500 agricultural enterprises in China and the top 100 agricultural products processing enterprises, further strengthens the precise investment promotion, introduces and cultivates a number of leading enterprises, and promotes the landing of projects. It vigorously cultivates local leading enterprises and focuses on supporting the development of leading enterprises at or above the provincial level with strong driving capacity. Bijie City promotes the transformation of state-owned forest-related platform companies into under-forest economic and industrial entities in an orderly manner, and strengthens the cultivation of leading local forestry enterprises. Besides, it strengthens the cultivation of local leading enterprises, establishes large-scale enterprise alliances through strong alliance, industry integration, merger and reorganization, and constantly improves the technical level and management concept of enterprises. In addition, it promotes leading enterprises to become bigger and stronger by means of financial means, and enhances their business capabilities through listing and financing. Specifically, it

vigorously promotes the model of "leading enterprises + professional cooperatives + farmers" and guides the development of large-scale production, quality standardization, product branding and marketing network of cooperatives. It starts the family farm cultivation plan, and cultivates a number of family farms with moderate scale, intensive production, advanced management and obvious benefits according to local conditions. By 2025, more than 500 leading enterprises at or above the municipal level and more than 1 000 farmer cooperative demonstration cooperatives at or above the municipal level will be cultivated.

2.4 Making the brand of agricultural products bigger and stronger Bijie City has carried out the project of brand building of green agricultural products in depth, set up special development funds for agricultural brand cultivation, established and improved the management system, construction system and guarantee system of Bijie agricultural brand, which is linked at the three levels of city, county and township, and accelerated the construction of Bijie agricultural brand cultivation echelon. Bijie City establishes and improves the city's agricultural brand catalogue system, and regularly publishes brand catalogue information and brand building news trends. It concentrates efforts on cultivating a number of influential "Bijie Brand" regional public goods brands throughout the country. Bijie City encourages and guides business entities to speed up the certification of "two kinds of products and one indication" (green food, organic agricultural products and geographical indication products of agricultural products) and GAP, and standardizes the standards for brand building of agricultural products in Guizhou Province. Using online and offline publicity resources, Bijie City will continue to promote the regional public brand of "Bijie Brand" and expand its market influence. It encourages agricultural export enterprises to carry out international certification and expand communication channels in countries along the "Belt and Road". By 2025, the number of organic food, green food, and agricultural products with geographical indications in Bijie City will reach 250.

2.5 Upgrading of rural tourism

2.5.1 Building rural tourism demonstration sites. Bijie relies on rural scenery, folk customs and other special resources to promote the integration and development of rural tourism with traditional villages, villages with ethnic characteristics and villages with intangible cultural heritage skills, enrich the humanistic connotation of rural tourism, cultivate a number of demonstration sites for rural tourism, and create key villages and towns for rural tourism. Bijie City concentrates efforts to cultivate summer vacation tourism products such as vacation and leisure, recreation and sightseeing, and cultural creativity, so as to promote the branding and characteristic development of rural tourism. Guiding opinions have been issued to promote the high-quality development of residential industry, and standardized evaluation of rural tourism villages, folk hotels, inns and farmstays has been carried out continuously. By 2025, one key county of leisure agriculture in China will be built,

and three beautiful leisure villages in China will be added.

2.5.2 Promoting rural tourism in different regions. Around the city, relying on the ecological resources of urban agricultural production and the advantages of suburban location, Bijie City develops agricultural tourism, farming experience tourism, and rural vacation tourism. In the characteristic industrial zones, relying on the pastoral scenery of paddy fields, terraces and tea gardens, Bijie City develops sightseeing and picking tours, agricultural park tours, landscape agricultural tours, farming festival tours, farming culture tours, *etc.* Focusing on the large rape planting counties, it implements the action of "Beautiful Two Highs and Colorful Rape". By 2025, the business income of leisure agriculture and rural tourism in the whole city will reach 2 billion yuan, which will promote the employment of 30 000 people and increase the income by 700 million yuan.

3 Existing problems

Bijie City takes key bases, business entities and processing facilities as its drivers, highlights the advantages of industrial characteristics, builds a number of key demonstration bases, cultivates a number of leading enterprises, creates a number of well-known brands, and further promotes the synchronous promotion and value-added of agricultural planting and intensive processing in the integrated development. Adhering to the problem-oriented principle, there are still some problems in Bijie City, such as "low degree of marketization, weak interest linkage, weak cooperative economic organizations, insufficient focus on key work, and weak support for agricultural science and technology".

3.1 Small scale of production enterprises Although there are 469 leading enterprises in agricultural industry above the municipal level in the whole city, there are only 24 enterprises above the scale, accounting for 5.12%, the number and scale of enterprises are small, and the leading and driving ability is not strong. There are 127 agricultural leading enterprises above the provincial level in the whole city, accounting for only 10.58% of the whole province. The market's ability to resist risks is weak, and the problem of "small, scattered and weak" is prominent.

3.2 Insufficient cultivation of independent brands In recent years, Bijie City has won the reputation of China's Netted Stink-horn Town, China's Gastrodia Town, China's Wrinkled Pepper Town, China's Walnut Town and Natural Medicine Garden. The brand influence of Eco-Alpine Organic Tea, Weining Ham, Gunshan Chicken and *Rosa roxburghii* has been expanding. However, the brand development of processing enterprises in the whole city is still uneven, and the ability to cultivate and build independent brands is insufficient. Except for Jinsha Guanxiangfang, Jinsha Yumo Vinegar and Shexiang Walnut Milk, the market popularity of other brands is relatively low.

3.3 Short industrial chain and low added value Most enterprises are in the primary processing stage of agricultural products, lack of intensive processing technology and equipment, short in-

dustrial chain, weak processing value-added ability, low added value and scientific and technological content of products.

3.4 Weak market expansion ability Although the ecological characteristic food industry in Bijie City has initially formed a rich industrial system, the commodity popularity is not high, the product categories are not complete, the supply of high-end products is insufficient, and the market sales are limited. For example, leading enterprises such as Weining Xuerong Biotechnology Co., Ltd. and Guizhou Jinsha Guanxiangfang Seasoning Food Co., Ltd. have experienced negative growth in output value due to factors such as market and raw material price increases.

3.5 The interest linkage mechanism needs to be further improved, and the participation of farmers is not enough Most of the existing interest linkages between leading enterprises, cooperatives and farmers are loose and semi-close, and there is no operational mechanism of "benefit sharing and risk sharing". In view of the shortcomings, Bijie City should make up for the weaknesses, carefully analyze the reasons, actively explore and innovate, and explore countermeasures and suggestions in the study of problems.

4 Countermeasures

4.1 Improving supporting facilities and building extension bases Bijie City should focus on key industries, make good use of land consolidation, comprehensive agricultural development, high-standard farmland construction, farmland water conservancy construction and other project funds, strengthen infrastructure construction with water, electricity and roads as the main content, and focus on solving outstanding problems such as engineering water shortage. Besides, it is recommended to strengthen the popularization and application of standardized technologies such as seedling transplanting, water and fertilizer integration, green prevention and control, graded packaging and cold chain transportation, establish quality inspection system and quality traceability system for agricultural products, improve the internal quality and appearance quality of agricultural products, and enhance the brand image of agricultural products. It is recommended to aim at Chengdu – Chongqing region, Guangdong – Hong Kong – Macao Greater Bay Area, Yangtze River Delta and coastal areas, introduce and cultivate leading enterprises, and focus on building a number of facility, standardized and commercialized agricultural production bases and comprehensive demonstration zones. Efforts should be made to build a number of large-scale, high-grade, clustered and diversified production bases and agricultural products processing bases to ensure the large-scale, standardized, intensive and green development of industries with distinctive advantages.

4.2 Expanding leading enterprises and focusing on intensive processing Bijie City should improve the interest linkage mechanism of agricultural industrialization management, give full play to the role of leading enterprises in connecting the market and farm-

ers, vigorously promote such business models as "leading enterprises + cooperatives + farmers", "leading enterprises + cooperatives + bases + farmers", "industrial parks + leading enterprises + cooperatives + bases + farmers", "leading enterprises + scientific research institutes + cooperatives + farmers", "leading enterprises + farmers", "leading enterprises + bases + farmers", promote the close connection between leading enterprises and farmers, farmers' cooperatives, family farms and other business entities to form a "benefit-sharing, risk-sharing" to achieve a rational division of labor, mutual benefit and win-win situation. In addition, it is recommended to strengthen the cultivation of local enterprises, in accordance with the principle of supporting the superior and the strong, encourage enterprises to adjust measures to local conditions and time, expand capacity through technological transformation, enrich product categories, extend the processing industry chain, improve the operation rate of equipment, accelerate the contribution increment and expand production scale. Bijie City should encourage and support the merger and reorganization of leading and key enterprises both inside and outside the province, or lease, commission and introduce strategic cooperation to rapidly expand, strengthen, and expand the total industrial scale. With leading enterprises, origin resources and brands as platform links, Bijie City should guide the integration of local homogeneous enterprises, promote industry integration, enhance production concentration and enhance overall competitiveness, and encourage enterprises to become bigger and stronger, to become better and better, and to support leading enterprises with mature conditions to declare leading enterprises at the municipal, provincial and national levels.

4.3 Highlighting regional characteristics and stressing production and marketing docking Bijie City should identify regional characteristic industries, strengthen the directional direct access of agricultural products such as vegetables, edible fungi, fruits, tea and traditional Chinese medicines, promote the "seven entries" of agricultural products into government organs, schools, communities, hospitals, enterprises, supermarkets and military camps, and establish stable direct marketing channels and direct supply relations. Bijie City should make full use of the cooperation mechanism of poverty alleviation between the East and the West, actively open sales windows to Guangzhou, Shanghai, Shenzhen, Chongqing and other counterpart cities, and smooth the sales channels of agricultural products with Bijie characteristics. It is recommended to take base construction as the carrier, improve the conditions of agricultural material equipment, gather land, capital, talent, science and technology, information and other factors of production, improve the efficiency of resource allocation, take under-forest economy as a breakthrough point, optimize the regional layout of industry, and highlight the demonstration effect of key bases. Qixingguan District focuses on the development of tea, *R. roxburghii* and pepper. Dafang County focuses on the development of pepper and edible fungi; Qianxi County focuses on the de-

velopment of *R. roxburghii*, pepper and edible fungi. Jinsha County focuses on the development of tea and vegetables; Zhijin County focuses on the development of edible fungi and Chinese honey locust; Nayong County focuses on the development of tea, fruits and edible fungi; Weining Autonomous County focuses on the development of vegetables and fruits. Hezhang County focuses on the development of traditional Chinese medicines and chives; 50 km Rhododendron Management Area focuses on the development of tea; Jinhai Lake New Area focuses on the development of *R. roxburghii* and vegetables. Bijie City should actively dock with Guizhou Shuanglong and Guiyang Dili Agricultural Products Logistics Park and the national large-scale wholesale market of agricultural products, and guide a number of powerful enterprises to build direct supply bases for agricultural products in Bijie City.

4.4 Promoting characteristic brands and strengthening scientific and technological support Bijie City should make every effort to enhance the influence of "Bijie Genuine Product" public brand, cultivate a number of regional brands, enterprise brands and product brands, form industrial brand clusters, and carry out propaganda and promotion in all media, all-round, multi-level and wide fields, so as to enhance product value and competitiveness by brand. It is recommended to promote brand strategy, shape development advantages with characteristics, rely on ecological advantages and national characteristics, and cultivate a number of local characteristic brands with Bijie imprints and national characteristics. Bijie City should encourage business entities to declare the protection of geographical indications of agricultural products and expand the brand influence of geographical indications. In addition, it is necessary to highlight the advantages of green, ecology, health and safety, speed up the integration of high-quality brands, encourage and support enterprises, cooperatives, universities and research institutes to build technological innovation platforms for industry, university and research institutes, enhance the endogenous power of industrial development, realize industrial chain connection and extension, enhance development efficiency and promote high-quality development. All counties (autonomous counties and districts) should give full play to the service and guidance role of agricultural technicians, and vigorously promote production technologies such as organic fertilizer instead of chemical fertilizer, plastic film recycling, herbicide prohibition and restriction, and green pest control.

4.5 Promoting cooperation and support, and innovating interest linkage Bijie City should attach importance to the coordinated development of all links of the industry, while promoting the upgrading of the base, processing and marketing chain, pay attention to the development of supporting industries such as the production of agricultural products packaging supplies and the manufacturing of cold chain logistics equipment. It is necessary to accelerate the supporting capacity of agricultural machinery leasing services, brand marketing and other supporting services, actively

The cultivation and sales of vegetables in Lhasa City have improved the overall economy of the city, but there are still cases of using restricted and prohibited pesticides in facility vegetable planting bases. Although the content of prohibited and restricted pesticides in vegetables has not exceeded the standard, these high toxic pesticides still pose a certain degree of harm to the health of consumers. Due to its remote location, some vegetable growers in Lhasa have not been aware of some of the national policies on pesticide use and restrictions, resulting in some prohibited and restricted pesticides still being produced and used. The Lhasa Food Supervision Bureau and the Food Quality and Safety Bureau should vigorously strengthen the science popularization and use of prohibited and restricted pesticides in vegetable bases, minimize or preferably abandon the use of such pesticides, ensure the stable improvement of vegetable quality in Lhasa, laying a theoretical foundation for building Lhasa into a national civilized ecological highland.

(From page 30)

expand the comprehensive functions of agriculture, continuously improve the added value of industry, promote the development of industrial integration and agglomeration, and maximize the contribution of industrial development to economic and social development. Bijie City should constantly innovate the mechanism of interest linkage, innovate the mode of "company + cooperative + farmers", and vigorously promote the mode of interest linkage such as "company + cooperative + cooperative". Taking the opportunity of the establishment of cooperatives led by the party branch, it is necessary to actively explore the tripartite interest connection mechanism of business entities, village collectives and farmers, clarify the position of farmers in the interest chain, protect the interests of farmers, promote the synchronous development of agriculture and rural areas, and achieve common prosperity of all people.

References

[1] Editorial Department of Rural Science and Technology. Seventy years of

References

- [1] DE J, FENG XL, CHEN C, *et al.* Study on pesticide residues in vegetable samples from greenhouse around city of Lhasa, Tibet[J]. Journal of Zhejiang University (Science Edition), 2013, 40(5): 559–564.
 - [2] ZHU T, ZHU LP, ZHOU HC, *et al.* Determination of different kinds of pesticides by SPME-GC/MS[J]. Chinese Journal of Analysis Laboratory, 2013(3): 115–120.
 - [3] DAI YN, LIU QH, PAN H, *et al.* Investigation and analysis of pesticides used in facilities vegetables in Tibet[J]. Tibet Journal of Agricultural Sciences, 2020, 42(4): 24–29.
 - [4] CUI ZY, WANG J, CAO YZ, *et al.* Rapid screening of pesticides residues in wine by solid phase microextraction-gas chromatography-tandem mass spectrometry[J]. Journal of Food Safety & Quality, 2017(7): 2705–2717.
 - [5] LIU SC, QU J, JIN CZ, *et al.* Detection and control measures of pesticide residues in local vegetables in Minhang District in 2021[J]. Shanghai Agricultural Science and Technology, 2022(4): 39–41.
- rural industry development in china: From difficult gestation to competition[J]. Rural Science and Technology, 2019(28): 2–3. (in Chinese).
- [2] TIAN CY. Research on the current situation and countermeasures of digital finance promoting the integration and development of rural industries[J]. China Market, 2022(1): 44–45. (in Chinese).
 - [3] XIONG K. A preliminary study on rural image and development of rural tourism[J]. Areal Research and Development, 1999(3): 3–5. (in Chinese).
 - [4] WANG YC. On the policy experience and reference from the development of international rural travel[J]. Tourism Tribune, 2002, 17(4): 45–50. (in Chinese).
 - [5] LI WJ. A new way to develop high-efficiency and characteristic agriculture in modern mountainous area[J]. Guizhou Today, 2015(11): 54–55. (in Chinese).
 - [6] HUANG J, SHI Q, OU GW, *et al.* Dilemmas and strategies of modern mountainous high-efficiency agriculture development in Guizhou[J]. Guizhou Agricultural Sciences, 2015, 43(8): 275–279. (in Chinese).
 - [7] SUN Q. Rural industrial planning strategy under the rural revitalization strategy: An example of the industrial planning of Houcai Village[C]. 2018 China Urban Planning Annual Conference, 2018. (in Chinese).