

Digital Construction of Regional Public Brands for Characteristic Agricultural Products in the Sichuan-Chongqing-Wanda-Kai Region

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Abstract: *This paper, which takes the genuine Chinese medicinal materials industry in the Sichuan-Chongqing-Wanda-Kai Region as the research object, explores the core issues in the construction of regional public brands. By drawing on the experience of local cases such as "Three Gorges Citrus" and integrating the theories of brand value co-creation and narrative communication in the digital age, the paper attempts to construct an integrated analytical perspective. On this basis, it initially proposes a brand construction plan titled "Qinba Medicinal Valley · Three Gorges Medicinal Capital", covering core positioning, the design of a symbol system integrating regional and industrial characteristics, the establishment of a trust system based on digital technology, and the planning of online-offline integrated experiences. The research aims to provide a potential path reference for the branding and digital development of the genuine Chinese medicinal materials industry in this region.*

Keywords: *local characteristic agricultural products; rural revitalization; genuine Chinese medicinal materials; regional public brand; digital construction*

1. Introduction

The Sichuan Chongqing Wanda Development Zone is located at the important intersection of the Chengdu Chongqing economic circle, with a complex ecological location of the Three Gorges Reservoir Area and the Qinba Mountain Area. This unique geographical pattern endows it with significant ecological diversity resources and a long-standing agricultural cultural heritage. The authentic medicinal herbs such as Muxiang, Wumei, and Huanglian produced in this region have clear quality specificity and resource aggregation advantages, which lays the necessary material and cultural foundation for building a recognizable regional public brand.

2. Brand theories in the digital age

As the digital economy profoundly reshapes consumption ecology and industrial logic, the construction of regional public brands must transcend the traditional stages of geographical indication protection and simple visual identity design. Essentially, it is a collective reputation asset jointly nurtured, maintained, and shared by multiple subjects within a specific region, whose vitality is rooted in irreproducible natural endowments and humanistic history[1]. Contemporary brand theories reveal that brand value creation has increasingly become an open and dynamic process. The theory of value co-creation emphasizes that consumers, producers, platforms, and other stakeholders jointly shape brand meaning and value through continuous interaction. Therefore, brand management needs to shift from one-way information output to the meticulous operation and empowerment of complex relational networks[2]. Meanwhile, the evolution of communication technologies has opened up new dimensions for brand expression. Brand narrative is no longer confined to images and texts but can be transformed into immersive, participatory, and socially transmissible three-dimensional experiences through media such as short videos, live streaming, and virtual reality (VR). The time-honored regional culture can precisely be translated digitally into the brand's core differentiated charm and emotional connection points[3]. More importantly, digitalization provides a technical solution for achieving cross-administrative boundary industrial collaboration. By building an interconnected industrial data platform, it is possible to realize full-link data connection and intelligent decision-making covering production standards, process monitoring, supply chain collaboration, and market feedback. Thus, despite the objective reality of physical spatial division, a logically integrated and responsive modern industrial

operation system can be established[4]. A successful modern regional public brand should be an ecosystem characterized by efficient internal collaboration, unified external image, vivid cultural narrative, and continuous evolution based on data intelligence.

3. Industrial status quo and brand construction challenges

The three regions of Wanzhou, Dazhou, and Kaizhou (Wanda-Kai) have a solid foundation for coordinated development and distinct industrial characteristics. In addition to the nationally renowned "rose fragrant orange", Wanzhou has formed a large-scale Chinese medicinal materials planting industry, with more than 30 varieties including bergamot and golden buckwheat. It has also built the Three Gorges International Health Industry Park to promote the upgrading of industrial processing and logistics. Dazhou has identified dark plum, epimedium, and gastrodia elata as key genuine medicinal material varieties for development. "Dachuan Dark Plum" has successfully obtained national agricultural product geographical indication certification, laying a solid foundation for branding. Kaizhou is even hailed as the "Hometown of Chinese Aucklandia Root", with a planting area of over 500,000 mu (approximately 33,333 hectares) for Chinese medicinal materials. The output of "Kaixian Aucklandia Root" accounts for about 40% of the national total, making it a veritable leading product[5]. These abundant resource endowments and industrial practices have accumulated sufficient energy for building a higher-level unified regional brand. The success of the "Three Gorges Citrus" brand within the region provides a highly valuable reference. Its brand logo perfectly integrates the precipitousness of Qutang Gorge with the shape of citrus segments, realizing the intuitive expression of regional characteristics and product attributes. In its operation, it has explored the "1+N" brand management model and the "seven unified" industrial standards, effectively integrating forces from all parties and improving the standardization level and market competitiveness of the entire industry[6]. These experiences are valuable replicable paths for the genuine Chinese medicinal materials brand that is still in its initial stage.

Currently, the primary obstacle to the branding of Three Gorges genuine Chinese medicinal materials is the lack of a unified brand image and narrative system. Although each of the three regions has advantageous products, there is no main thread that can integrate, elevate, and endow them with a common value proposition. In consumers' perception, there are only "Kaixian Aucklandia Root" or "Dachuan Dark Plum", but no overall concept of "Wanda-Kai genuine medicinal materials". Secondly, the digital foundations of the industry are weak and isolated. Despite sporadic attempts at smart agriculture and quality traceability in various regions, a regional digital collaboration platform with mutual recognition and interconnection covering the entire links of planting, processing, and circulation has not yet been established. This leads to the fragmentation of industrial operation data, making it difficult to support precision production scheduling, transparent quality traceability, and efficient market response. There is also a shortage of governance capacity and talent reserves adapted to the development of branding and digitalization. Faced with a potential brand alliance consisting of hundreds of production entities, traditional administrative-oriented methods have limited effectiveness. At the same time, interdisciplinary talents who deeply understand the characteristics of the Chinese medicinal materials industry and are proficient in brand operation and digital technology are extremely scarce, which will become a key bottleneck restricting the long-term healthy development of the brand.

4. Digital design practice of the Three Gorges genuine Chinese medicinal materials brand

4.1 Core brand construction and visual symbol creativity

For the Three Gorges genuine Chinese medicinal materials, the brand must be deeply rooted in the natural spirit and humanistic accumulation of this land. The theme of the 4th Three Gorges Genuine Chinese Medicinal Materials Trade Expo, "Primitive Ecology of Qinba Medicinal Valley · Authentic Aroma of Three Gorges Medicinal Capital", accurately captures this core. Therefore, this study takes "Qinba Medicinal Valley·Three Gorges Medicinal Capital" as the core value proposition of the leading parent brand. This naming not only depicts the unique ecological picture of the intersection of the Qinba Mountains and the Three Gorges Reservoir Area but also proclaims the ambitious goal of building a national-level TCM industry highland and trading center. Under this parent brand, the sub-brand system adopts a clear structure of "geographical indication + core category", such as "Kaizhou Aucklandia Root", "Dachuan Dark Plum", and "Wanzhou Bergamot". This forms a collaborative matrix where the parent brand highlights the overall regional value and the sub-brands emphasize local

characteristic high-quality products, resulting in a hierarchical and complementary brand structure.

The core value of the brand needs to be carried and communicated through unique visual symbols. Logo design is the crystallization of this process, and its creativity must achieve the integration of nature, humanity, and industry. The core logo creativity of this plan is derived from a profound understanding of traditional Chinese TCM culture and the visual refinement of regional characteristics. The overall shape takes a "gourd" as the main body. In Chinese culture, the gourd is not only a symbol of physicians saving the world but also homophonic with "blessing and prosperity", implying health and auspiciousness. Its plump shape and soft curves naturally possess affinity and recognition, making it one of the most classic visual symbols of TCM. Inside the gourd shape, the calligraphic brush strokes of the characters "Three Gorges" (Sanxia) are creatively integrated. These two characters are deliberately designed through the movement and cadence of strokes to simulate the undulations of mountains and the meandering flow of rivers in the Three Gorges region, enabling the regional characteristics to be reflected within a small space. Instead of the traditional vine, the top of the gourd is decorated with a blooming "Aucklandia Root flower". As the most productive and nationally influential genuine medicinal material in the Wanda-Kai region, Kaizhou Aucklandia Root uses its umbel inflorescence as a logo element, which is a direct and proud manifestation of the local core industry. The color system of the logo is derived from the earth and herbs. The main color adopts a calm and primitive brown, symbolizing the fertile Qinba soil and the time-honored medicinal aroma. Surrounding the logo are the characters "genuine Chinese medicinal materials" written in regular Song typeface, forming an interesting contrast with the vivid calligraphy of "Three Gorges" inside, together composing the complete brand name "Three Gorges Genuine Chinese Medicinal Materials". At the bottom is engraved the brand slogan "Primitive Ecology of Qinba Medicinal Valley · Authentic Aroma of Three Gorges Medicinal Capital", clarifying the core proposition. The entire logo—with the gourd carrying mountains and rivers, and the mountains and rivers embodying Aucklandia Root—is a comprehensive visual narrative integrating cultural implications, regional characteristics, and industrial core.

4.2 Digital narrative and immersive experience construction

In the digital age, brand building must construct a sustained narrative and experience system for dialogue with consumers. Trust is the lifeline of the Chinese medicinal materials brand, and transparency is the best way to establish trust. To this end, it is envisaged to build a regional digital base named "Three Gorges Genuine Chinese Medicinal Materials Industry Digital Platform". This platform can comprehensively utilize Internet of Things (IoT), blockchain, and big data technologies. At the source of medicinal materials, intelligent sensors silently record ecological data such as sunshine, rainfall, and soil moisture in the planting bases. In the processing workshops, key processing temperature, duration, and quality inspection results are collected in real-time. During logistics and transportation, location, temperature, and humidity information are continuously uploaded. All these data are encrypted and deposited through blockchain technology to ensure they are tamper-proof. Each listed product is equipped with a unique QR code as a "digital ID". When consumers scan the code, they not only access an inspection report but also embark on an immersive traceability journey to Qinba Medicinal Valley. Through 360-degree panoramic images, they can "stand" in the mist-shrouded Aucklandia Root planting gardens. Through vivid timeline animations, they can understand the complete life cycle of the medicinal material from spring germination to summer growth. They can even view short video records of key farm activities. This transformation of "genuineness" and "ecology" into verifiable and perceptible digital experiences is a solid foundation for building brand trust.

The brand needs to create a digital content ecosystem that continuously attracts user attention and participation. A series of digital content projects titled "Qinba Pharmacopoeia" can be planned. This includes a series of micro-documentaries named *The Herbalist's Journey for Medicinal Herbs* starring a wise and kind virtual IP image of an "herb-gathering farmer". Through his footsteps, the documentary explores *Dendrobium* on cliffs and *Coptis chinensis* under forests, telling the legendary stories of medicinal materials and the craftsmanship of traditional processing methods. The design inspiration for this "herbalist" IP image (Figure 1) comes from the integration of traditional Chinese physician and wise man images. He wears simple traditional Chinese clothing, carries a herb-gathering bamboo basket, has an approachable face, and his shape incorporates the morphology of herbal branches and leaves. The gourd hanging around his waist is exactly the brand logo. The overall image not only conveys the long history and professional credibility of TCM but also appears friendly and lovely through Q-version processing techniques, making it easily acceptable and favored by audiences of

different age groups. Meanwhile, a lightweight WeChat mini-program called "Cloud Tour of Qinba Medicinal Valley" is developed, combining hand-drawn maps, audio guides, and AR interactions, allowing users to conduct a digital herbal study tour anytime and anywhere. At the social communication level, a short video challenge titled "My Health Preserving Diet" can be launched to encourage users to share delicacies created with medicinal materials. Fun AR filters can be developed to make the herbalist image on the product packaging "come alive" and explain medicinal material knowledge. Through the combination of online and offline, virtual and real, the brand world of "Qinba Medicinal Valley · Three Gorges Medicinal Capital" becomes tangible, perceptible, playable, and shareable, as shown in Figure 1.



Figure 1. IP Image Design

4.3 Product system innovation and brand experience extension

The value of a brand must ultimately be realized through specific products and services. The Three Gorges genuine Chinese medicinal materials brand needs to transcend the positioning of a raw material supplier and transform into a provider of standardized health products and services. This requires the design of a systematic and differentiated product and packaging system. For high-quality medicinal raw materials, the packaging design should emphasize their rarity and authenticity, adopting environmentally friendly materials such as natural linen and recycled paper, supplemented by traditional landscape patterns and calligraphic fonts, with a calm and profound style. In response to the growing demand for big health consumption, the "homology of medicine and food" product line can be vigorously developed, such as instant dark plum, compound herbal substitute tea, and portable soup packs. The packaging design of such products should adopt a modern minimalist style, using fresh colors and intuitive graphical language to clearly convey efficacy and application scenarios, so as to attract urban young consumer groups. In addition, the line of cultural and creative derivatives can be expanded, developing jewelry inspired by medicinal plant illustrations and cultural and creative products themed on the herbalist IP image, allowing brand culture to integrate into various aspects of daily life and broaden consumption scenarios and brand influence.

The ultimate brand experience is the experience of space and lifestyle. It is planned to build a "Qinba Medicinal Valley" TCM cultural experience demonstration area in the core producing areas of the Wanda-Kai region. This is not only a standardized planting garden but also a comprehensive space integrating sightseeing, study, experience, and health preservation. Visitors can wander through the medicinal plant maze, personally experience traditional processing techniques, and relax in homestays filled with herbal fragrance. The design of all spaces, from architectural form to wayfinding system, will deeply implement the brand's visual symbols and natural aesthetic concepts. In central cities such as Chongqing and Chengdu, "Qinba Medicinal Valley · Three Gorges Medicinal Capital" brand cultural experience halls can be set up. This space should not only be a retail store but also a lighthouse of brand culture. The hall can be equipped with a digital constitution identification interactive area to provide personalized health preservation suggestions; a herbal tea bar to offer special drinks brewed with genuine medicinal materials; and regular TCM cultural salons, health lectures, or handicraft courses. Through these physical spaces, the brand transforms from an abstract concept into an immersive and enjoyable healthy lifestyle proposal, establishing the deepest emotional connection with consumers.

5. Regional collaborative governance and implementation guarantee

The sustainable vitality of a successful regional public brand must rely on a collaborative governance system with clear powers and responsibilities, efficient operation, and a sustainable operation mechanism that transcends a single administrative division. To this end, it is recommended to promote the establishment of a substantive and permanent "Three Gorges Genuine Chinese Medicinal Materials Brand Alliance" on the basis of the existing inter-governmental cooperation framework and industry associations. This alliance should be composed of relevant government departments, major industry associations, leading production enterprises, scientific research institutions, and market channel representatives from Wanzhou, Dazhou, and Kaizhou. As a decision-making and executive body with shared interests and responsibilities, it will be uniformly responsible for the formulation and revision of brand strategies, the maintenance and upgrading of quality and technical standards, the authorization, supervision, and management of brand use, the planning and implementation of major marketing activities, and the coordination and arbitration of brand disputes.

Efficient governance must be deeply integrated with digital means. The daily operation of the brand alliance should highly rely on the aforementioned "industrial digital platform". The entire process of authorization application, qualification review, agreement signing, filing, and public announcement should be completed online, achieving transparency, efficiency, and traceability. More importantly, the production compliance data, product quality sampling data, market sales data, and consumer evaluation data collected by the platform will form a dynamic monitoring dashboard for brand health. Through data analysis models, the alliance can real-time evaluate the compliance status and market performance of each authorized entity, realizing precision risk early warning and differentiated resource support, and transforming from passive management to active empowerment and precision governance.

Any grand blueprint requires phased advancement. The implementation path can be envisaged in three stages. The short-term stage (1-2 years) is the system construction and pilot demonstration phase. The core tasks are to complete the brand's top-level design, visual system, and phase I development of the digital platform, and select 2-3 core varieties and producing areas with sound foundations to carry out full-chain standardization and digital traceability pilots, setting benchmarks. The medium-term stage (3-5 years) is the comprehensive promotion and brand growth phase. The mature standards and models will be promoted to all authorized entities and major varieties in the three regions, the product innovation line will be continuously enriched, the first flagship cultural-tourism integrated experience area will be built, making the brand a household name in the region and establishing clear awareness and reputation among national professional markets and consumers. In the long-term perspective, the goal is to form a fully market-oriented and sustainable brand ecosystem, making "Qinba Medicinal Valley · Three Gorges Medicinal Capital" a synonym for quality assurance and a cultural symbol of genuine medicinal materials in consumers' minds. Ultimately, it will comprehensively drive the economic development of the producing areas and the common prosperity of farmers, realizing the ultimate return of brand value.

6. Conclusion

By sorting out the development status of the Three Gorges genuine Chinese medicinal materials industry and integrating relevant theories on regional public brand construction, this study tentatively conducts a preliminary conception and practice of the digital construction of the Three Gorges genuine Chinese medicinal materials brand with "Qinba Medicinal Valley · Three Gorges Medicinal Capital" as the core. It is hoped that in the future, it can provide a reference perspective for local decision-makers, industrial practitioners, and relevant researchers on how to systematically think about the branding and digitalization of local characteristic products, or inspire further discussions on the relationship between regional resource integration, cultural value transformation, and industrial ecosystem construction.

References

- [1] Liu, L., & Zhou, J. (2006). *Reflections on the construction of agricultural product regional brands based on industrial clusters*. *Agricultural Economy*, (11), 52-53.
- [2] Prahalad, C. K., & Ramaswamy, V. (2004). *Co-creation experiences: The next practice in value creation*. *Journal of Interactive Marketing*, 18(3), 5-14.
- [3] Ma, Q. X. (2010). *Research on the construction model of agricultural product regional brands*. *Journal of Henan Normal University (Philosophy and Social Sciences Edition)*, 37(1), 142-144.

[4] Yu, J. T., & Li, L. S. (2003). *On regional brand agriculture. Research of Agricultural Modernization*, 24(5), 356-359.

[5] Pan, Z. Y., & Tang, C. Q. (2022). *Research on strategies of packaging design to enhance the competitiveness of regional agricultural products. Design*, (4), 8-10.

[6] Sun, D. L., & Guo, Y. M. (2021). *Exploration of the brand value of rural products based on "Internet +". Packaging Engineering*, 42(8), 234-240.