

Research on Optimization of Lianzhou Macrobrachium Rosenbergii Brand Packaging Design

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ABSTRACT

As a regional characteristic aquatic product, the brand packaging design of Lianzhou Macrobrachium rosenbergii plays a crucial role in strengthening brand recognition and market competitiveness. Against the backdrop of brand construction, this paper explores the design problems and optimization strategies of the current Lianzhou Macrobrachium rosenbergii brand packaging. By analyzing the current brand development status, combining consumer needs and regional cultural characteristics, the core objectives of packaging design optimization are proposed. Additionally, from dimensions such as brand recognition, aesthetics, and cultural connotations, the existing problems in packaging design are systematically evaluated, and optimization directions are clarified based on market research and mainstream design trends. The study shows that enhancing visual appeal, highlighting the regional characteristics of Lianzhou, and integrating ecological and environmental protection concepts are important ways to optimize packaging design. Meanwhile, the rational use of design elements such as colors, materials, and images can significantly enhance the brand image. The optimized packaging design not only helps promote product sales but also drives the brand construction of Lianzhou Macrobrachium rosenbergii and regional economic development, providing a demonstrative reference for the brand packaging design of regional characteristic agricultural and fishery products.

KEYWORDS

Macrobrachium rosenbergii; Brand Packaging; Design Optimization; Regional Culture; Ecological Protection

1. INTRODUCTION

With the accelerated modernization of agriculture and fisheries, the branding of local characteristic products has received widespread attention, and brand packaging plays a significant role in product commercialization. Lianzhou Macrobrachium rosenbergii is a local characteristic agricultural and fishery product, and its brand packaging needs to be improved by highlighting local cultural characteristics, meeting consumer preferences, and complying with environmental protection trends. Currently, the packaging design is not closely integrated with local culture, has insufficient visual appeal [1], and uses materials and processes that are not environmentally friendly enough, limiting the brand's popularity in domestic and international markets. Through market research and design trend analysis, improvement strategies are formulated from three aspects: visual appeal, cultural connotations, and environmental protection concepts, to enhance the brand image, strengthen product market competitiveness, promote industrial development, and provide innovative ideas for the construction of local characteristic brands.

2. CURRENT STATUS AND DEVELOPMENT BACKGROUND OF LIANZHOU MACROBRACHIUM ROSENBERGII BRAND PACKAGING

2.1. Brand Positioning and Market Overview of Lianzhou Macrobrachium Rosenbergii

Lianzhou Macrobrachium rosenbergii is a characteristic aquatic product in Guangdong Province, with a clear brand positioning and broad growth prospects. In terms of brand positioning, due to its high quality and natural breeding conditions, Lianzhou Macrobrachium rosenbergii is positioned as a model of environmental protection and nature in the region. The excellent breeding environment demonstrates the superior natural resource advantages of the Lianzhou area, highlighting the product's health-preserving, reassuring, and worry-free characteristics. The brand positioning aligns with consumers' consumption trends of focusing on health preservation and pursuing high quality. The market situation shows that Lianzhou Macrobrachium rosenbergii has gained popularity in the regional market, but it still needs to enhance brand influence and expand market share. With consumers gradually paying more attention to product packaging and brand image, the improvement of packaging design has become a core factor in promoting sales and expanding the market. The target market of Lianzhou Macrobrachium rosenbergii includes not only local residents but also tourists and ecological consumer groups, who have strong purchasing power and brand loyalty [2]. In market promotion, the brand uses online and offline channels to showcase the product's ecological characteristics and quality advantages to potential consumers. The clear brand positioning and analysis of the market overview provide a basic reference for the optimization of Lianzhou Macrobrachium rosenbergii brand packaging design.

2.2. Design Characteristics and Problem Overview of Current Brand Packaging

The brand packaging design of Lianzhou Macrobrachium rosenbergii has distinct regional characteristics but faces many complex challenges in market competition. The existing packaging design presents a traditional and classic visual style, lacking innovation and a modern sense, making it difficult to attract the attention of young consumers. In terms of color matching and material selection, design elements reflect certain cultural symbols but cannot clearly express unique brand values. The brand recognition of the packaging design is relatively weak, unable to stand out among many similar products, leading to obvious confusion in consumers' brand cognition. The practical design is not perfect, affecting the functional performance of the packaging in protecting product quality and facilitating transportation. The weak awareness of environmental protection makes the packaging difficult to meet modern consumers' expectations for sustainable development. These problems not only interfere with the brand's market performance but also limit its role in promoting regional economy. Therefore [3], the optimization of Lianzhou Macrobrachium rosenbergii brand packaging design is urgent, which will provide solid support for improving its market competitiveness and brand influence.

2.3. Significance of Brand Construction for Regional Economic Development

Brand construction is of great significance in regional economic development. As a characteristic aquatic product, Lianzhou Macrobrachium rosenbergii can not only improve the product's market competitiveness and consumer awareness through improving brand packaging design but also promote the overall development of the local aquatic industry. Strengthening packaging design can significantly increase product added value [4], create local employment opportunities and economic income, thereby promoting the sustainable growth of the regional economy. Through the establishment and promotion of the brand image, the regional culture and ecological concepts of Lianzhou are widely spread, opening up opportunities for the common development of other related

agricultural and fishery products in the region, thus promoting the harmonious development of the regional economy as a whole.

3. ANALYSIS OF CONSUMER NEEDS AND PACKAGING DESIGN PAIN POINTS

3.1. Consumers' Cognitive Preferences and Expectations for Brand Packaging

Consumers' cognitive preferences and expectations for brand packaging significantly influence purchase decisions, which is particularly important for the improvement of Lianzhou Macrobrachium rosenbergii brand packaging design. Consumers expect packaging to reflect product quality and brand characteristics, with outstanding recognition and appeal to make a deep impression, thereby increasing purchase intention. Survey results show that consumers are more likely to accept packaging designs that integrate visual elements, such as vivid colors, unique patterns, and regional cultural symbols to highlight local characteristics, which can enhance brand recognition and strengthen product competitiveness in the market. Consumers tend to choose packaging made of environmentally friendly materials, reflecting their emphasis on ecology and sustainable development and their concern for long-term development. In addition to vision and function, packaging design must also convey the brand's emotional value and cultural connotations, enabling consumers to form an emotional connection [5]. For consumers of Lianzhou Macrobrachium rosenbergii, high-quality packaging should not only reflect the freshness of the product and regional characteristics but also meet their identification with and expectations for regional culture. Grasping these cognitive preferences and expectations provides an important direction for packaging design optimization, helping to effectively enhance brand value and product sales and lay a solid foundation for the brand construction of regional characteristic aquatic products.

3.2. Analysis of Packaging Design Elements Influencing Purchase Decisions

In brand packaging design, the elements influencing consumers' purchase decisions are diverse. Color is a key factor, which can intuitively stimulate consumers' emotional resonance and visual attraction. The appropriate use of color can convey the brand's core values and product characteristics. Material selection is extremely important, directly affecting the perceived quality and ecological image of the product. High-quality and ecological materials are usually more trusted by consumers. The design and use of visual images are also important, which can enhance brand memory points and improve recognition. Image design must be combined with the brand's story and cultural background to arouse consumers' purchasing desire. The packaging structure and functionality have a direct impact on the user experience. A practical and novel packaging design can increase consumers' purchase interest and repurchase intention. The display of brand information on the packaging, including the brand name, logo, and product information, must be clear and legible to ensure the efficient transmission of information. Excellent packaging design should integrate the above factors to maximize meeting consumers' needs and preferences.

3.3. Relationship between Current Design Pain Points and Brand Communication Effects

The current pain points in the brand packaging design of Lianzhou Macrobrachium rosenbergii mainly include insufficient visual appeal, lack of expression of regional characteristics, and absence of environmental protection concepts, which directly affect the brand's communication effects. Insufficient visual appeal leads to the product's lack of competitiveness on the shelf, making it difficult to effectively attract consumers' attention. The lack of expression of regional characteristics results in the unclear transmission of regional cultural connotations by the brand in the market, weakening the brand's uniqueness and awareness. The absence of environmental protection concepts

may have a negative impact on consumers with increasing environmental awareness, reducing their purchasing desire. These pain points restrict the improvement of brand communication effects and limit the maximum realization of brand value.

4. INTEGRATION OF REGIONAL CULTURE AND BRAND PACKAGING DESIGN ELEMENTS

4.1. Excavation of Lianzhou Regional Characteristics and Cultural Symbols

The Lianzhou area, with its unique natural landscape and rich cultural heritage, provides abundant material sources for the brand packaging design of Lianzhou *Macrobrachium rosenbergii*. Lianzhou is located in an area with a dense water network and has always been known as the "land of fish and rice," with water culture forming an important symbol of regional culture. The production and living styles of residents reflect the background of water culture, which has a profound impact on the brand building of local characteristic products. Natural ecology, traditional customs, and art forms together constitute the core content of Lianzhou's regional characteristics. Presenting these contents in packaging design can enhance the brand's cultural story appeal. The brand packaging design integrates cultural symbols unique to Lianzhou, such as lotus flowers, water waves, and fish totems, to enhance brand recognizability and trigger emotional resonance in consumers. These symbols clearly display regional cultural characteristics and present the essence of Lianzhou's ecological environment and life philosophy. Designers need to carefully study Lianzhou's unique cultural materials and use effective methods to achieve the goal of promoting regional cultural characteristics. In visual communication, cultural symbols are integrated with ecological and environmental protection concepts for novel expression, helping the Lianzhou *Macrobrachium rosenbergii* brand create a unique packaging design image and thus effectively improving market competitiveness. The packaging design integrating local cultural characteristics adds rich connotations to the brand and lays a foundation for Lianzhou *Macrobrachium rosenbergii* to become a symbolic regional brand.

4.2. Application of Environmental Protection Concepts in Aquatic Product Packaging Design

In the brand packaging design of Lianzhou *Macrobrachium rosenbergii*, the application of environmental protection concepts aims to respond to the current trend of sustainable development and enhance the product's sense of social responsibility. Choosing biodegradable materials as the main component of the packaging can effectively reduce the environmental burden. By using recyclable packaging materials, the balance between green environmental protection and functionality is achieved. The design incorporates simple typesetting and printing technologies that avoid the use of chemical dyes to emphasize the product's healthy and safe attributes. The packaging layout integrates the unique needs of aquatic products, not only ensuring the product's freshness preservation effect but also conveying environmental protection concepts through concise visual design to promote consumers' brand recognition. In the design process, the appropriate use of environmental protection logos can enhance consumers' awareness of environmental protection. Integrating the unique ecological cultural symbols of the region, the packaging design can not only have local cultural charm but also demonstrate an eco-friendly value orientation, shaping a more publicly influential core advantage for the brand image.

4.3. Regional Expression of Vision and Material

In the brand packaging design of Lianzhou *Macrobrachium rosenbergii*, the local characteristic expression of vision and material is a key method to enhance brand recognition. Selecting unique visual elements that can show the local customs of Lianzhou, such as traditional patterns, local colors, and symbolic symbols, facilitates consumers' identification and memory of the product. Choosing

environmentally friendly and high-quality materials can not only effectively comply with the trend of sustainable development but also reflect the beautiful image of Lianzhou's ecological environment. Such packaging design highlights local cultural characteristics, significantly improves the product's visual appeal and touch experience, and thus promotes consumers to generate a strong purchasing desire.

5. OPTIMIZATION DIRECTIONS AND INNOVATIVE STRATEGY DESIGN

5.1. Key Measures to Enhance Visual Appeal

In the field of packaging design, enhancing visual appeal is the key to strengthening brand recognition and market competitiveness. For the "One Town, One Industry" *Macrobrachium rosenbergii* brand in Lianzhou Town, excellent visual performance can make the product stand out on the shelf, attract consumers' attention, and stimulate purchasing desire.

In terms of color selection and combination, the rich natural colors of Lianzhou Town can be borrowed. Lianzhou has a dense water network and many lotus ponds. Designers can adopt a combination of bright pink (symbolizing lotus flowers) and fresh green (representing lotus leaves and the ecological environment) to form a strong contrast color combination, enhance visual impact, and strengthen brand memory effects. Material selection is equally important. Diverse materials can show texture and provide consumers with a high-quality tactile experience. For example, local frosted treatment technology can be used on the packaging to simulate the delicate texture of Lianzhou's lotus ponds; bright surface treatment can be used on key parts to highlight the product's high-end feel and uniqueness. Appropriate color and material combinations can make the packaging more charming and help the brand gain an advantage in the market.

Image design should focus on the regional characteristics of Lianzhou and integrate regionally identifiable elements into the packaging. Taking the "One Town, One Industry" *Macrobrachium rosenbergii* brand in Lianzhou Town as an example, designers can integrate elements such as the lotus pond scenery and traditional fishing boats of Lianzhou into the packaging image, use regional symbols to carry out visual transmission of brand stories, and enhance emotional connection with consumers. At the same time, the simplicity and overall coordination of the design should be considered. Through reasonable layout, blank space treatment, simple modeling, and other techniques, the visual clarity and readability should be maintained to prevent information overload from interfering with consumers' purchase decisions. By improving visual appeal, the efficient improvement of brand packaging is promoted, creating new growth points for the Lianzhou Town *Macrobrachium rosenbergii* brand and regional economy.

5.2. Optimization Paths for Packaging Structure and Functionality

Improving the packaging design of the "One Town, One Industry" *Macrobrachium rosenbergii* in Lianzhou Town focuses on enhancing the packaging structure and functionality. Considering the product's transportation and freshness preservation needs, firm and tight excellent materials should be used, such as high-strength paper gift boxes with waterproof linings, to maintain the product's freshness and integrity.

To improve consumers' overall use experience, functions that are easy to open and close and can be resealed can be designed. For example, zipper seals or magnetic suction opening and closing methods are adopted, which help reduce waste and maintain product freshness. In structural design, innovation should be emphasized, and functions and aesthetics should be coordinated. Handles that are convenient for use should be designed to facilitate consumers' handling; packaging capacity should be reasonably allocated to meet the needs of different consumers. In the internal structure of the packaging, moisture-proof pads or independent partitions can be added to effectively extend the

product's freshness preservation period and improve the consumption experience. In addition, intelligent labels or two-dimensional code technology can be used to provide consumers with product traceability information, realizing interactive communication between the product and consumers. The optimized structural design not only improves product safety and user satisfaction but also strengthens the brand's market competitiveness by highlighting the product's quality and regional characteristics.

5.3. Design Suggestions for Ecological Friendliness and Cultural Narrative

Incorporating ecological affinity and cultural narrative into the brand packaging design of the "One Town, One Industry" *Macrobrachium rosenbergii* in Lianzhou Town is a key method to enhance brand competitiveness. Ecological elements can be added to the packaging design, such as using renewable or degradable materials, to demonstrate the brand's environmental protection responsibility. In terms of cultural narrative, the packaging should highlight the local cultural characteristics of Lianzhou and tell the historical and cultural stories of Lianzhou through visual images and text. For example, the lyrics of Lianzhou traditional fishing songs and the historical stories of Lianzhou's fishery development can be printed on the packaging to enhance consumers' cultural identity. Relying on regional characteristic symbols and traditional crafts, narrative-style designs are created, making the packaging not only the surface presentation of goods but also a tool for cultural communication, thereby improving brand added value and market influence.

6. PRACTICE AND DEMONSTRATIVE VALUE OF BRAND PACKAGING OPTIMIZATION

6.1. Evaluation of Optimized Packaging Effects and Market Feedback

The optimized brand packaging of Lianzhou *Macrobrachium rosenbergii* has shown clear positive effects in the market. With eye-catching appearance design and prominent Lianzhou-style features, the new packaging has enhanced consumers' purchase interest and the product's unique recognizability. Market research shows that the new packaging has received much praise for its bright color matching, reasonable material selection, and exquisite image design. Consumers are satisfied with the packaging's expression of Lianzhou's unique cultural characteristics and environmental protection concepts. Sales data analysis shows that the optimized packaging design has promoted an increase in the sales volume of Lianzhou *Macrobrachium rosenbergii*, expanded market share, and achieved significant brand awareness improvement. Consumers believe that the optimized product packaging has enhanced shelf appeal, improved product added value, and increased brand loyalty.

In the increasingly competitive market environment, the improved brand packaging has become one of the differentiated advantages between Lianzhou *Macrobrachium rosenbergii* and competing products, further strengthening its leading position in the regional aquatic product market. This design improvement practice provides a successful case, serving as a reference model for the brand construction of other regional characteristic agricultural and fishery products, and also contributes significantly to promoting regional economic development.

6.2. Enlightenment for Brand Construction of Regional Characteristic Agricultural and Fishery Products

The optimized packaging design has provided key experience for the brand construction of regional characteristic agricultural and fishery products. By focusing on visual appeal and regional cultural characteristics in the packaging design concept, it is easy to attract customers and enhance market recognition and competitiveness. Integrating local symbols and cultural elements into the design presents unique local customs, deepens consumers' understanding of the brand, and strengthens

emotional connection. The ecological and environmental protection design concept meets consumers' growing environmental protection needs, integrating social responsibility and sustainable development characteristics into the brand. The improvement strategy has enhanced the brand's social influence and continuously attracted consumers. The improved packaging design has improved market adaptability and consumer experience, promoting sales growth and sustainable brand development. This not only promotes the economic benefits of agricultural and fishery products but also creates referable successful experience in regional brand construction, becomes a reference model for the packaging design of other regional characteristic industries, and further drives the overall development of the regional economy.

6.3. Demonstrative Significance for Promoting Regional Economic Development

The optimization of the brand packaging design for Lianzhou *Macrobrachium rosenbergii* plays a crucial guiding role in assisting regional economic development. By strengthening the cultural heritage and visual aesthetics of packaging, it enhances brand market recognition and competitive advantages, attracts more customers, and drives the positive development of the regional aquatic product market. The green design integrating local characteristics promotes the development of the green economy and enhances the overall positive image of regional brands. The excellent practices of this optimization provide reference methods for the brand packaging design of other regional characteristic agricultural and fishery products, expected to promote cooperative development among related industries, and ultimately achieve significant improvement in the overall regional economy.

7. CONCLUSION

This paper takes the improvement of Lianzhou *Macrobrachium rosenbergii* brand packaging design as the research object and proposes improvement directions from aspects such as visual appeal, regional characteristics, and ecological and environmental protection concepts. Through analyzing existing problems, integrating consumer needs and regional culture, the study improves the application of colors, materials, and images in packaging design, enhances recognition, aesthetics, and cultural connotations, and promotes the enhancement of brand image and market competitiveness. It also provides a reference for the packaging design of regional characteristic agricultural and fishery products. This study faces limitations such as insufficient analysis of consumer psychology, verification of mainstream design trends, and evaluation of environmental protection materials. In the future, through consumer behavior theory, research on environmental protection materials, and big data analysis of market feedback, the theory can be further improved, practical benefits enhanced, and social and economic values promoted.

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