

Research on Creative Packaging Design of Agricultural Products Based on Renewable Materials

Aili Wang

Dalian Polytechnic University, Dalian, Liaoning, China

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Abstract: With the improvement of the overall quality of people in modern society, consumers have increasingly higher requirements for quality of life, from material abundance to the pursuit of quality to aesthetic requirements, and the importance of environmental protection has also increased dramatically. Green ecological packaging has become the direction consumers are chasing and buying. The application of green ecological packaging on agricultural products not only returns agricultural products to nature and returns to nature, but also plays an important role in creating a good living environment for people.

1. Introduction

My country's agriculture ranks first in the world, with diverse agricultural products and rich varieties. As an important link in the modern industrial chain, packaging is bound to explore an ecological packaging road that meets the development requirements of the new era and new situation. At first, agricultural products were in a state without any packaging, then gradually changed to simple packaging, and finally appeared in the scene of excessive packaging, not only affected by social diversity, but also by the packaging concepts of other countries in the world, the packaging structure is changing rapidly. Nowadays, the packaging of agricultural products has entered an "ecological" stage of upgrading. Agricultural product packaging must show green health, pass on ecological concepts, and spread creative environmental protection ideas, so as to meet the psychological needs of consumers and to pass on the value of agricultural products themselves.

2. Classification and Characteristics of Renewable Materials in Creative Packaging Design of Agricultural Products

Renewable materials in the design of agricultural product packaging refer to the materials remaining in the production process of agricultural product packaging, or the materials found in waste that are harmless and have reuse value. According to the characteristics of agricultural products and packaging design requirements, renewable materials with the possibility of constituting their packaging can be divided into daily life and industrial production. First of all, the renewable materials for daily life mainly come from the recyclable items in life. Which can be divided into recyclable types (such as wood, paper products, textiles, etc.) and non-recyclable types (such as branches, lime soil, etc.). Renewable materials for daily life are one of the most familiar materials. The current environmental pressure in our country is high. However, it is not enough to apply these renewable materials that can be recycled in life to the packaging of agricultural products, often confusing the above items with garbage. Direct processing, lack of awareness of recycling. Secondly, renewable materials for industrial production mainly come from wastes in industrial production, such as waste glass and waste parts. With the construction of new rural areas, there are many industrial production wastes in rural areas. Actively realizing the recovery, processing, and reuse of these resources can extend the life cycle of resources, reduce the production cost of agricultural product packaging and also benefit environmental protection. For example, the waste glass fragments in industrial production can be spliced with waste wood materials to form new and creative rural agricultural product packaging. It not only can reasonably design and use renewable resources, but also has certain artistic characteristics.

Agricultural product packaging as a material carrier with visual factors, not only is the external form of agricultural product storage and promotion, but also can clearly reflect the internal aesthetic concepts and cultural concepts in industrial development. With the advancement of the sustainable development strategy, people began to re-examine the characteristics of renewable materials and pay attention to their use in agricultural product packaging design. Compared with traditional agricultural packaging materials, renewable materials have the following characteristics.

Environmental protection features. Due to the variety of types of renewable materials, there are many recyclable resources. In the face of the conflict between resource waste and changing design trends, the resources can be fully recycled to reduce environmental pollution. Decorative features. After the renewable materials are recycled, after being reprocessed, designed and used in agricultural product packaging by designers, they not only have the inherent characteristics of the original items themselves, but also incorporate new artificial ideas, making them more advantageous in decorative characteristics and unique. Artistic effect. Low-cost features. Since the first production and use of renewable materials have been completed, the application of them to the packaging of agricultural products has greatly reduced the production cost budget and is economically adaptable.

3. The Concept of Renewable Materials in the Creative Packaging Design of Agricultural Products

At this stage, the sales of agricultural products in my country continue to expand, breaking the geographical restrictions, and the expansion of the consumer market has put forward new requirements for the packaging of agricultural products. The original agricultural product packaging design lacked comprehensive consideration of the resource environment, economic environment, and moral environment, making it difficult to enter the broader sales market for commercial operation. Therefore, in the packaging design of agricultural products, renewable materials first need to have their own unique ideas, so as to fully package the creative ideas and connect design with environment, design and culture.

The sustainable concept of renewable materials in the design of agricultural product packaging mainly refers to the redesign of the abandoned items that people think of in life, to realize the concept of sustainable use of materials in agricultural product packaging. The sustainable concept of renewable materials is mainly caused by the deterioration of the ecological environment and other reasons. Due to the rapid development of the industrial era, the excessive consumption of resources is induced, and the effective integration of resources and the continuous use are one of the innovations in the development of agricultural product packaging design. The application of renewable materials in the packaging design of agricultural products to regain the original value of the original materials has the advantages of environmental protection, shortened production cycle, and cost savings. In rural areas, it is often possible to take local materials and carry out re-design, which can not only quickly connect and coordinate the environment, economy and design, but also reduce the loss of material resources for agricultural product packaging.

The aesthetics of agricultural product packaging means that the visual design of the external shape of the packaging and the design of the internal components must conform to the regional beauty, ecological beauty, and distinctive beauty of the agricultural product. Due to the current lack of overall planning for agricultural product packaging and the lack of professional agricultural product packaging design talents in China, we still focus on the quality of agricultural products and ignore the visual beauty of agricultural product packaging. In traditional agricultural product packaging, simple foam and carton packaging are still used, which cannot fully display the characteristics of agricultural products from the visual effect, and lacks appeal to consumers. In the innovation of agricultural product packaging design, the use of sustainable materials in design can be considered from the characteristics of the renewable materials themselves, such as the texture beauty, color beauty, structural beauty, etc., combined with the form of beauty, to give full play to the aesthetic value of the material and break the traditional consciousness. People's understanding of renewable materials in China has formed a new visual beauty, so that the aesthetic concept of

renewable materials can be fully reflected in the packaging of agricultural products.

At present, my country's agricultural product packaging is facing the fundamental problem of long production cycle and large production cost. The application of renewable materials in agricultural product packaging can effectively improve the efficiency of resource use and reduce the raw material production costs of agricultural product packaging companies. In the packaging design of agricultural products, if we can consider the use of renewable materials in rural areas for reuse, we first solve the two problems of transportation costs and production costs from the cost. Secondly, it can also solve the problem of attribution of sustainable materials, reducing the original cost of processing these materials. Therefore, from the economic point of view, it can be said to maximize the value of renewable materials. For example, taking the eggs in agricultural products as an example, due to the special requirements for transportation, the degradable wheat straw can be woven into a storage shape is similar as the egg shape, and the eggs are stored therein for transportation and sales, which reduces the egg packaging. The production cost also reduces the cost of environmental pollution treatment caused by the burning of wheat straw.

4. Application of Renewable Materials in Creative Packaging Design of Agricultural Products

First, the hygienic requirements for renewable materials. Because renewable materials are mostly abandoned or surplus materials, people often feel that they have hidden dangers in terms of health and safety. Therefore, the use of renewable materials as the material basis in the packaging design of agricultural products, we first need to consider its hygienic requirements. Designers first need to select safe materials as the category of renewable materials. At the same time, they can consider how to easily make renewable materials meet the hygienic requirements through cleaning, high-temperature disinfection, etc., in line with the hygienic standards of agricultural product packaging. Secondly, creative fashion requirements for renewable materials. Due to the process of discarding renewable materials before, its appearance are more or less traces of use, or outdated feeling. Therefore, the designer can redesign the selected renewable materials according to their characteristics, and integrate the popular fashion elements, so that in the redesign process, through the decoration method to give people a new visual element, which is in line with the current trend. Again, the suitability requirements for renewable materials. Any type of agricultural products needs to choose packaging that meets their characteristics. In addition to the innovative expression of all agricultural product packaging designs, it also needs to return to the most suitable packaging material matching based on the characteristics of the agricultural products. For example, the packaging of dried mushroom products in agricultural products needs to avoid moisture during storage and transportation. Therefore, if renewable materials are used as packaging materials, materials with dry characteristics should be selected as the basis first There is the best applicability among packaged agricultural products.

In the creative packaging design of agricultural products, based on the material and visual characteristics of renewable materials, the application methods of renewable materials can be divided into direct application methods and recycling application methods. Direct application method of renewable materials in creative packaging design of agricultural products. It mainly refers to the direct use of the substance without changing its original characteristics and appearance. For agricultural product packaging design, the direct use method can repeatedly and reasonably use some renewable resources, reducing waste of resources and environment. First of all, the simplest way is to design a package with the characteristics of the original material based on the original material. For example, the waste wood in the village can be dug directly to form a concave interior, which can be used as a package for storing fresh and live mushroom farm products. This can not only maintain the freshness of such agricultural products, but also reflect a certain degree of creativity. Secondly, it is the designers who give full play to their creative thinking and take the product characteristics of agricultural products as the starting point, so that the renewable materials have new functions. Recyclable material recycling application method in agricultural product creative packaging design. This application method mainly refers to the extraction and processing of renewable materials to extract materials with reusable value and to redesign and reuse them. The

cyclical application method is to use new technology to reposition renewable materials to form a creative and developmental design, rather than simply transforming or patching materials. This puts forward higher requirements for designers, requiring designers not only to understand the safety properties of materials, to follow the ecological design concept, but also to understand their material properties. In recycling applications, appropriate extraction of renewable materials is required. Form a new type of packaging materials for agricultural products with practical value and aesthetics. Application methods of renewable materials in creative packaging design of agricultural products. With the continuous development of lifestyles, consumption concepts have also changed. For the packaging needs of agricultural products, on the premise of satisfying the original basic functions of storage and transportation, according to the aesthetic needs of products, more visual effects and visual characteristics are required to meet the product characteristics of agricultural products. This development trend has aroused the increase in the overall demand for materials, colors, and styling components in agricultural product packaging design, and it has continued to promote the innovation of agricultural product packaging design.

5. Conclusion

With the change of lifestyle, agricultural products, as the main form of promotion of emerging agricultural supplementary products, are increasingly concerned by consumers. Renewable materials are used as the basis for agricultural product packaging design to innovate, which not only meets the ecological concept of resource recycling, but also meets the needs of my country's sustainable development. Combined with the current status and development needs of agricultural product packaging design, from the scope of renewable materials, and its conception and application in agricultural product packaging design, analysis and research of agricultural product packaging innovation possibilities, provide new packaging design for agricultural products Development ideas, in order to ease the contradiction between economic development and resources and environment, is conducive to the sustainable development of China's agricultural industry.

References

- [1] Zhang Le, Zong Min. Research on creative packaging design of agricultural products based on renewable materials. *Journal of Wuzhou University*, 2019, 029(003):32-36.
- [2] Lu Minghui, Fan Chuanguo. Research on agricultural brand image packaging design based on cultural creativity perspective. *The House of Drama*, no. 24, pp.125-126, 2018.
- [3] Ling Ni, Zhang Da. Research on Internet + Times Creative Agricultural Product Packaging Design. *Packaging Engineering*, vol. 39, no 10, pp.57-63, 2018.
- [4] He Xia, Chen Zhan, Chen Wenfeng. Innovative design of agricultural product packaging based on sustainable development. *Packaging World*, no. 3, pp. 6-8, 2018.
- [5] Zhou Hongyu, Zhang Yan. Research on the Design of Agricultural Product Brand Packaging Driven by Informationization. *Public Art*, vol. 458, no. 8, pp.123, 2019.