

## Packaging Development of Crispy Lotus Blossom Cookie Local Food Product Group Moo.4, Ko Taeo Sub-district, Songkhla Province

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### Abstract

This research studied the development of product packaging for Crispy Lotus Blossom Cookie of the group of housewives, Moo 4, Ko Taeo, Mueang District, Songkhla Province. This research aimed to develop a packaging for Crispy Lotus Blossom Cookie. The satisfaction of the packaging of Crispy Lotus Blossom Cookie for the local dessert product group, Moo 4, Ko Taeo, Mueang District, Songkhla Province was measured for 3 models. The research revealed that the members of the group liked the second form of Crispy Lotus Blossom Cookie packaging the most, accounting for 63.33%, and a high level of satisfaction with the packaging of the selected type was at 4.57 for the continuous development.

**Keywords:** Packaging, Crispy Lotus Blossom Cookie, Satisfaction

### Introduction

Thai desserts are unique in Thai national culture, which is delicate in the selection of ingredients. The method is meticulous, tastes delicious, sweet, colorful. Appetizing appearance in ancient times, Thai people made sweets only for important occasions, such as merit-making, important festivals, or welcoming important guests. The shape is appetizing. In the old days, it was very popular as one of the main ceremonies such as ordinations, weddings, new houses, etc. Thai sweets such as gold picks, gold drops, or foie gras were popular in the past up until now.



The Maid Group, Moo 4, Ko Taeo Sub-district, Muang District, Songkhla Province, is another place that produces Crispy Lotus Blossom Cookie sweets as an auxiliary profession. This group produces well-tasted and well-known to the locals and can also be applied by using medicinal vegetables as an ingredient to make the jog snacks more appetizing. But since the packaging of sweets is not currently unique. It cannot create appeal and memorize consumers. From various research, Ourairat (2016) investigated various design methods, elements, and executions in search for the suitable package of the Jekchuy Saohai rice from Saraburi province. The result shows that package number 3 is the most appropriate one for the rice because of the interesting design, the creative material usage, and the useful function of the package. The clear and unique design of the product logo also helps reflect the quality of the product and represents the local wisdom and their way of life. Steenis et al. (2017) investigated whether and how packaging sustainability influences consumer perceptions, inferences, and attitudes towards packaged products. A framework is tested in an empirical study among 249 students using soup products varying in packaging material and graphics. The results show that (packaging) sustainability is a highly salient association but is only moderately important for consumer attitudes. Paladsongkhram et al. (2021) designed and developed packaging for Khanom Khai-Pla-NgaDum, Takola farmers community Enterprise, Takua Pa District, Phang Nga Province. The results show that the developed packaging with unique graphics makes the product outstanding and better access to consumers. From the evaluation, the best design consists of the following characteristics: the inner packaging is made from laminated Nylon/CPP. The color of the bag is cream, and the pattern is Anaxagorea Javanica which is the Phang Nga Provincial flower to represent the unique, warmth, and freshness from ovens. The letter colors are brown and dark brown. Bidyut et al. (2016) examined the impact and role of product packaging on the buying behavior of consumers for the dairy products of government-owned Mother Dairy. It has been observed that packaging elements such as color, background image, wrapper design, and innovative ideas, have a significant impact on consumers' buying behavior. The study also concludes that visual appeal is more important than the qualitative aspect of packaging in the study area. In the case of Mother Dairy, the quality of material used in packaging and the information printed on the packaging of the products, do not have any significant bearings on the consumers. Waheed et al. (2018) indicated product

packaging has a significant effect on consumer purchase intentions. It was also found that packaging material has the strongest influence on consumer purchase intentions followed by packaging color, font style, packaging design, and printed information. Future studies may investigate how consumer purchase intentions are influenced by other elements of packaging in the context of Pakistan. Mukem (2017) designed and developed packaging prototype of dried shrimp paste product of Bann Nop Pring and evaluates the graphic design prototype on the package as well as the efficiency of packaging. The finding result shows that most people agreed with the selection of packaging no. 2 which the images were beautiful and the information was consistent with the brand image, easy to read and understand, as well as colors which could be immediately attracted when seen.

The researchers realize the importance of developing the packaging of the Housewives of Moo 4, Ko Tao Sub-district, Muang District, Songkhla Province. Therefore, the value of Crispy Lotus Blossom Cookie candy products is developed and increased to be unique and different from their competitors. It is convenient and easy to transport and offers a way to develop in terms of furthering local wisdom. It also promotes income for community product manufacturers, which is another solution that will create community prosperity to improve the well-being of people in the community. It is always good to eat until the expansion of exports to foreign countries.

### Objectives of research

1. To develop the product packaging for Crispy Lotus Blossom Cookie of the group housewives, Moo 4, Ko Tao, Mueang District, Songkhla Province.
2. To assess the satisfaction of the packaging for Crispy Lotus Blossom Cookie of the group housewives, Moo 4, Ko Tao, Mueang District, Songkhla Province.

### Concept of Theory

#### 1. Packaging meanings

Packaging or packaging refers to the science and art used to package goods using modern and environmentally friendly technology. Protect the product in good condition from the production source to the customer's hands without damage. Packaging must also have a reasonable production cost.



## 2. Packaging Design

In packaging design, science and art must be taken into account for solving each aspect of packaging design problems to achieve effective packaging design results. Achieve two main packaging objectives: packaging structure design and packaging graphic design. as follows

### 2.1 Packaging project design requirements

2.1.1 The type of material that is suitable protects the products throughout the shelf life.

2.1.2 Harmonious pattern conforms to the goods

2.1.3 Fit size and can bear cargo weight

2.1.4 Forming, packing Convenient on-off No hassle

2.2 Graphic design on packaging design and placement of fonts, patterns. The composition of the artwork is to provide a beautiful harmony and achieve the objectives laid out.

### 2.3 Packaging Design Procedures

2.3.1 Target audiences

2.3.2 Brand Name

2.3.3 Choose the material used to make the packaging.

2.3.4 Consider the suitability of the packaging shape.

2.3.5 Color and graphics

### 2.4 Packaging Satisfaction Assessment

2.4.1 The meaning of satisfaction is that a person's feelings or attitudes towards something can be good or bad, or positive and negative, which only happens if that thing can meet that person's needs.

2.4.2 Satisfaction Measurement Whether enough is done depends on the learning management process and the level of sensation. Therefore, in measurements. Satisfaction can be done in several ways.

The use of questionnaires, which is one of the most widely used methods.

1. Interview which is a lying method. The interviewer's techniques and special expertise will motivate the respondent to answer the question based on facts.
2. Observation is observed both before and after the activity.

Therefore, the packaging design and selection of material should be determined thoughtfully. Four main groups of packaging materials are used for direct food contact: glass, metal, paper/cardboard (wood included), and a wide variety of plastic (Otto et al., 2021).

## Methodology

### 1. Populations and samples

The population is composed of members of the folk confectionery product group Moo 4, Ko Taeo, specifically 30 persons.

### 2. Methodology

- 2.1 Study the basic information of the production process of Crispy Lotus Blossom Cookie of Ban Dan Folk Confectionery Group. Moo 4, Ko Taeo, Muang, Songkhla
- 2.2 Study the original product information of Ban Dan Folk Confectionery Group. Moo 4, Ko Taeo, Muang, Songkhla
- 2.3 Analyze the documents and research information and ask group members to use the information obtained to design new packaging of Crispy Lotus Blossom Cookie.
- 2.4 Design the 3 photoshop packaging designs
- 2.5 Issue a packaging satisfaction assessment questionnaire to guide the design of the packaging. With expert interview review
- 2.6 Assess the satisfaction of the 3 packagings by members of the local confectionery product group. Moo 4, Ko Taeo 30 persons
- 2.7 Analyze the data from interviews and questionnaires obtained from the manufacturers of Crispy Lotus Blossom Cookie products of the maid group. Moo 4, Koh Tao Sub-district, Songkhla Province, using ready-made programs
- 2.8 Analyze the findings
- 2.9 Summarize the findings

## Results and Discussion

### 1. Packaging Design

- 1.1 Study of the Production Process of Crispy Lotus Blossom Cookie

From the area of Ban Dan Folk Confectionery Group. Moo 4, Ko Taeo, Muang, Songkhla on Tuesday, March 8, 2020, to study the production process of Crispy Lotus Blossom Cookie as follows:

1.1.1 Mix the dough by adding rice flour, wheat flour, oily flour. Then add the eggs and beat them again.

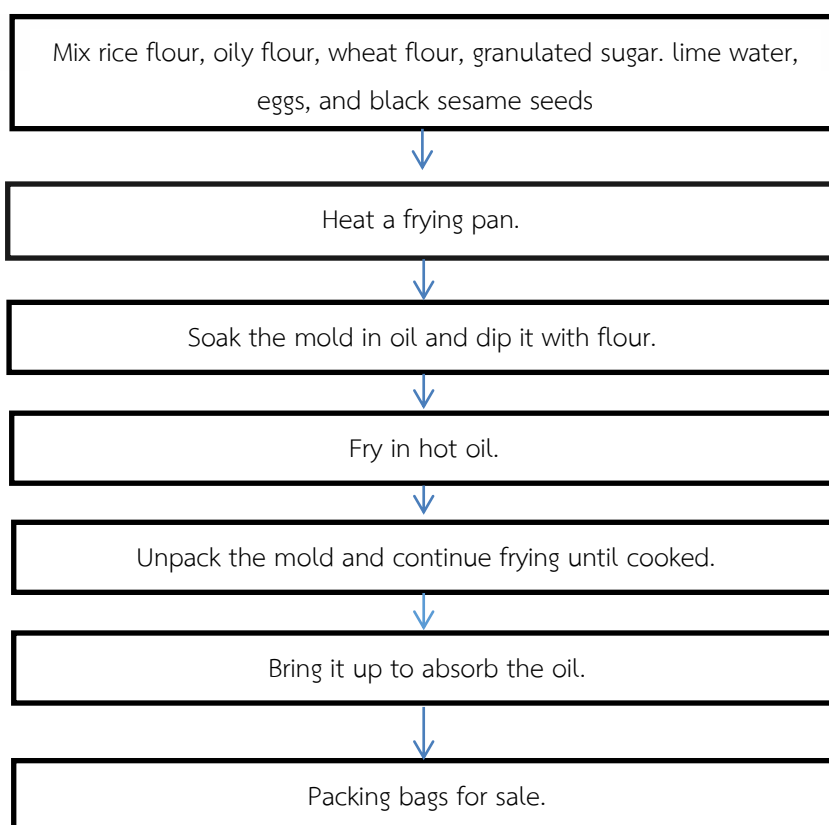
1.1.2 Add black sesame seeds and stir to combine.

1.1.3 Heat a saucepan, pour the oil over, wait for it to heat. Put the mold for making the jog pastry and soak it in oil to heat the mold.

1.1.4 Dip the mold into the dough then fry it. Once the pastry has started to set, unpack it from the mold and fry until it has yellow on both sides.

1.1.5 Bring it up to absorb the oil.

1.1.6 Packing bags for sale.



**Figure 1** Production process of Crispy Lotus Blossom Cookie

## 1.2 Study of the original information of Crispy Lotus Blossom Cookie packaging

From the area of Ban Dan Group. To explore the group's original packaging information and packaging needs to meet the needs of customers and increase sales to the group. On June 1, 2020, the original packaging information was released. It is a clear plastic bag that extends the buttocks, contains 5 pieces of flowers, and has a square sticker 2 centimeters wide and 5 centimeters long with the message "Folk candy group" with the halal sign, address, and phone number.



Figure 2 Sticker label and original packing style of Crispy Lotus Blossom Cookie

## 1.3 Packaging Design

According to a study of the production of Crispy Lotus Blossom Cookie by members of the housewife group, the production of Crispy Lotus Blossom Cookie uses raw materials and labor in the community. The group's original packaging was not versatile and could only be sold to consumers in the community for 10 baht per bag. It was found that the packaging design was edging to create a unique and value-added product for Crispy Lotus Blossom Cookie products to be sold to external consumers including coffee shops. They also want to promote careers for group members to earn more money. Therefore, the researchers conducted a unique study. The prominence of Crispy Lotus Blossom Cookie product's Housekeeping Group. This includes information that can tell you the key features of the group's products and then take this information. Let's develop packaging of Crispy Lotus Blossom Cookie products. Local Confectionery Range covers the following details which are as follows:

1.3.1 Design labels, candy packaging, general distribution (wholesale-retail). Instead of the original sticker label, it also adheres to its original identity: the Muslim women's logo, group name, and phone number. This result is in agreement with Ourairat



(2016) who concluded that the interesting design, creative material usage, and useful function of the package. The clear and unique design of the product logo also helps reflect the quality of the product and represents the local wisdom and their way of life. Paladsongkhram et al. (2021) reported that the developed packaging with unique graphics makes the product outstanding and provides better access to consumers. Mukem (2017) concluded that the images were beautiful and the information was consistent with the brand image, easy to read and understand, and colorful which could immediately attract consumers.



**Figure 3** The new sticker labels on products

1.3.2 Design packaging of Crispy Lotus Blossom Cookie, a leading store type such as Amazon, leading coffee shops, shops in the city, and other districts

**Table 1** Percentage of Demand for Crispy Lotus Blossom Cookie by members of the housewife group Moo 4, Ko Tao, Muang, Songkhla (N=30)

Requirements of Crispy Lotus Blossom Cookie by members of the housewife group Moo 4, Ko Tao, Muang, Songkhla	amount	percentage
1. The packaging used makes the product visible.	2	6.67
2. The packaging is suitable for the price of the product.	3	10.00
3. The logo is unique.	3	10.00
4. The packaging attracts the consumers to order.	3	10.00
5. The packaging make the products easy to handle.	5	16.66
6. Crispy Lotus Blossom Cookie is damaged during transportation.	2	6.67
7. The packaging is durable.	4	13.33



**Table 1** (Continue)

Requirements of Crispy Lotus Blossom Cookie by members of the housewife group Moo 4, Ko Tao, Muang, Songkhla	amount	percentage
8. The packaging can accommodate many pieces of Crispy Lotus Blossom Cookie.	2	6.67
9. The packaging has been modified.	3	10.00
10. The packaging should be more attractive.	3	10.00
<b>Total</b>	<b>30</b>	<b>100</b>

According to Table 1, the local confectionery product range was found to be the most popular snack in Moo 4, Ko Tao, Muang, Songkhla. The most demanding packaging model is packaging for the packaging make the products easy to handle (16.66 percentage). Secondly, the packaging is durable is 13.33 percentage. Next, the packaging is suitable for the price of the product, the logo is unique, the packaging attracts the consumers to order, the packaging has been modified, and the packaging should be more attractive, equally at 10 percentage.

1.1.3 The design of the packaging of Crispy Lotus Blossom Cookie from the meeting with the group members concluded the design of the desired packaging as follows:

1). Packaging for sale of top stores



**Figure 4** The packaging for leading stores

2). Packaging for sale as souvenirs or booths at events or department stores can contain 2 bags of Crispy Lotus Blossom Cookie



Figure 5 Packaging as souvenirs, booths, or shops at events or shopping malls

## 2. Packaging Satisfaction Assessment

Summary of packaging design concepts interviews with design comments from group members 30 researchers studied the design of Crispy Lotus Blossom Cookie packaging. By appointment of the housekeeping group to evaluate from the questionnaire, the design of the candy product packaging was conducted in the interview. Get the following information:

2.1 Analysis of the data from answering 3 packaging satisfaction questionnaires of Crispy Lotus Blossom Cookie products Moo 4, Ko Tao, Muang, Songkhla

Table 2 Package Format Percentage (N=30)

Packaging model	amount	percentage
1. Packaging Image Type 1	8	26.67
2. Packaging Image Type 2	19	63.33
3. Packaging Image Type 3	3	10.00
Total	30	100

According to Table 2, members of the folk confectionery product group were found to be in the Moo 4, Ko Tao, Muang, Songkhla There was the 63.33 percentage demand for the second most type of packaging, second only to 1 percentage to 26.67 percentage and 3 percentage to 10 percentage respectively.

2.2 Selected Packaging Satisfaction Results (Type 2) Satisfaction Data Analysis.  
Results It is divided into 3 sections as follows:

2.2.1 Part 1 General Status is the basis of the respondent

**Table 3** General Health by Gender

Gender	amount	percentage
1. Male	0	0
2. Female	30	100
<b>Total</b>	<b>30</b>	<b>100</b>

According to Table 3, 30 respondents were female, representing 100 percentage.

**Table 4** General Health by Age

Age	amount	percentage
1. 18-25 years old	0	0
2. 26-30 years old	1	3.33
3. 31-40 years old	12	40.00
4. 41 years and over	17	56.67
<b>Total</b>	<b>30</b>	<b>100</b>

According to Table 4, many respondents were 41 years of age or older, with 56.67 percentage of respondents aged 31-40, 12 percentage at 40.00 percentage, and 26-30 years old with 3.33 percentage.

**Table 5** General Status by Occupation

Occupation	amount	percentage
1. Farmer	28	93.33
2. Trade	2	6.67
3. Government Officials/State Enterprises	0	0
4. Company Employees	0	0
5. Private Business	0	0
6. Other	0	0
<b>Total</b>	<b>30</b>	<b>100</b>

According to Table 5, the majority of respondents had a farmer's career 28 percentage of the 93.33 percentage of the total was traded, with 6.67 percentage.

2.2.2 Part 2 Satisfaction with the style of the candy packaging selected by the member is the second one.

**Table 6** Average and standard deviation of satisfaction levels based on model assessment scores of Crispy Lotus Blossom Cookie packaging local confectionery Moo 4, Ko Tao, Muang, Songkhla

Need for the packaging style of the housewife group. Moo 4, Ko Tao, Muang, Songkhla	$\bar{x}$	S.D.	Meaning
1. The packaging used makes the product visible.	4.57	0.50	Very satisfied
2. The packaging is suitable for the price of the product.	4.60	0.50	Very satisfied
3. The logo is unique.	4.80	0.41	Very satisfied
4. The packaging attracts consumers to order.	4.63	0.49	Very satisfied
5. The packaging make the products easy to handle.	4.57	0.63	Very satisfied
6. Crispy Lotus Blossom Cookie is damaged during transportation.	4.40	0.67	Very satisfied
7. The packaging is durable.	4.50	0.51	Very satisfied
8. The packaging can accommodate many pieces of Crispy Lotus Blossom Cookie.	4.57	0.50	Very satisfied
9. The packaging has been modified.	4.57	0.50	Very satisfied
10. Packaging should be more attractive.	4.57	0.50	Very satisfied
<b>Total</b>	<b>4.578</b>	<b>5.22</b>	

According to Table 6, the majority of respondents were satisfied with the format of the Crispy Lotus Blossom Cookie packaging, which was the total ( $\bar{x}$  = 4.578), and considering that it was very satisfied with the most average level, the packaging had a unique logo ( $\bar{x}$  = 4.80). Moreover, Approach 2 was very satisfied with the high average level, the logo is unique ( $\bar{x}$  = 4.80) and packaging should be more attractive ( $\bar{x}$  = 4.57)

which corresponds to several studies. Steenis et al., (2017) and Bidyut, et al. (2016) concluded that visual appeal is more important than the qualitative aspects of the packaging and design. Waheed et al. (2018), concluded that the touch and sound of the packaging have the highest impact on buying behavior.

### 2.2.3 Part 3 Group Feedback and Comments

The members of housewife group Moo 4, Ko Tao, Muang, Songkhla comprised 19 people from 30 people who commented on the packaging of the group's Crispy Lotus Blossom Cookie products and provided a way to develop them to be beautiful. It is unique and increases local income. In summary, the feedback is provided as an open-ended question in the questionnaire as follows:

- 1). The cost price of packaging of Crispy Lotus Blossom Cookie products should not be too expensive. Can be sold at a modest profit.
- 2). The characteristics of the packaging should be the material that can withstand storage treatment. Not as resistant to storage as it should be.

## Conclusions and Recommendations

1. Summary of guidelines for the development of Crispy Lotus Blossom Cookie packaging, housewife group Moo 4, Ko Tao, Muang, Songkhla

1.1 There is a demand for packaging patterns for Crispy Lotus Blossom Cookie products which is packaging that increases the ease of transportation by 16.66 percentage.

1.2 There is a demand for packaging model type 2, representing 63.33 percentage.

2. Summary of satisfaction assessment of Crispy Lotus Blossom Cookie product packaging

Member of the housewife group have 30 people responded to the satisfaction assessment form for the development of Crispy Lotus Blossom Cookie packaging. The results of the data analysis showed that the majority of respondents were satisfied with the packaging of Crispy Lotus Blossom Cookie products, which was very satisfied ( $\bar{x} = 4.578$ ).



3. Survey results for folk confectionery products Moo 4, Ko Taeo, Muang, Songkhla found the packaging Style of Crispy Lotus Blossom Cookie has a target audience that wants packaging patterns. Approach 2: Packaging is a rectangular box. The product name is located in the box. It can contain 2 bags, preventing concussions during transportation.

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