## THE ENHANCEMENT TO PANDANUS LEAF'S PRODUCT IN PHUTTHAMONTHON DISTRICT, NAKHON PATHOM PROVINCE

## Piyamas Klakhaeng \*, Sudarat Pimonratanakan\*\*, Tanawat Wisedsin\*\*\* & Phitphisut Thitart\*\*\*\*

\*, \*\*, \*\*\*, \*\*\*\* Suan Sunandha Rajabhat University, 1-U-Thong Nok, Dusit, Bangkok, Thailand, E-Mail: \* piyamas.kl@ssru.ac.th , \*\* sudarat.pi@ssru.ac.th, \*\*\*tanawat.wi@ssru.ac.th, \*\*\*\* phitphisut.th@ssru.ac.th

#### **ABSTRACT**

Abstract—Development to upgrade local products of Pandan Hom agricultural products in Phutthamonthon District Nakhon Pathom Province. Nakhon Pathom Province Development Plan Pandan leaves are in the category of vegetables. Distributed by cutting fresh leaves and exporting dried pandan leaves to be sold as pandan tea products and exported to the Japanese market and China. At present, pandan farmers are facing problems, namely, product development of pandan agricultural products. The potential of pandan aromatic agricultural products and effective quality control in production of agricultural products, pandan leaves, fragrant in Phutthamonthon Nakhon Pathom Province Study the guidelines and product development patterns of pandan leaf agricultural products. in Phutthamonthon Nakhon Pathom Province To see the potential and problems that lead to the development of their own products with an emphasis on product development Potential for the development of pandan leaf agricultural products

Results of research on farmer's performance Product development model of pandan leaf agricultural products in Phutthamonthon Nakhon Pathom Province Pandan products processing that can arrange model development activities such as salted eggs, pandan leaves, Hom and pandan dishwashing liquid for product development of pandan leaf agricultural products in Phutthamonthon Nakhon Pathom Province

Suggestions for information for community leaders. The chairman of the community enterprise, a group of farmers, realized the importance of product processing. To create an efficient value-added operating system In which the group of farmers must adapt to keep up and have a vision to be an important part in product development.

Keywords—local products, Agricultural products, development, pandan leaves.

#### INTRODUCTION

Nakhon Pathom Provincial Development Plan Hom pandan leaves are plants in the category of vegetables, which are sold as fresh leaves and dried pandan leaves are exported as pandan tea products and exported to markets in Japan and China, which the province Nakhon Pathom is an area where pandanus grows. The problem that is being faced is the potential and quality control in production to be effective. (Nakhon Pathom Province Development Plan 2018-2022) Pandan Leaves (Pandan leaves) are widely used.

The researcher has foreseen the importance of providing information and creating knowledge and understanding on improving the management efficiency of pandan leaf agricultural product development, to be able to meet market demands When consumers focus on food And products that are beneficial to health and safe during the COVID-19 crisis is a good opportunity for farmers, to develop products to meet market demand It also helps to create a competitive edge for agricultural products, with an emphasis on knowledge management development to raise the local level of pandan leaves agricultural products in Phutthamonthon District Nakhon Pathom Province To add added value to small and medium-sized farmers, including the development of network management for pandan leaf agricultural products.

From the problems mentioned above the research team therefore studied the development to raise the level of local products of pandan leaf agricultural products. in Phutthamonthon District Nakhon Pathom Province is qualitative research By exploring the characteristics of the development potential to enhance local products of pandan leaf agricultural products. in Phutthamonthon District Nakhon Pathom Province.

#### Research Objectiv es

- 1) To study the problems and learning of fragrant leaf agricultural products in Phutthamonthon District, Nakhon Pathom Province.
- 2) To study the inspect and format the products of pandan leaves, aromatic agricultural products in Phutthamonthon District, Nakhon Pathom Province.

#### LITERATURE REVIEWS

#### 1. Product

Product means something that is tangible. Products that meet the needs of consumers with product classification criteria (Wanphan Rimpadi, 2011) consist of 1. Life expectancy criteria, divided into 2 categories: durable goods and non-durable goods 2. Physical criteria, divided into 2 categories: Tangible Goods and Intangible Goods

#### 2. New product development

New product development (New Product) Mccathy & Pereault, Jr. (1991) said that product development refers to products used for business. It could be a product or service with a new idea. Or there is some change in the product or the existing product has changed. Must result in consumers or customers being most satisfied with the product. In other words, there should be more satisfaction than consuming the same product. Or perhaps it's the same product offered in a new market.

#### 3. Adding Product Value

Adding Product Value (Warunee Soonthorncharoen-Ngoen, 2013) states that added value is the value that consumers receive from consumption. The product or service is higher, whether from physical contact Or can be experienced from the feeling. "Creating added value" is not just about product design. But the opportunity is in the whole process. In some cases, it may be focused on a single point. But in some cases, it may have to be done in several points at the same time in order to achieve the final result, is to obtain products and services that are available "added value" for consumers

#### 4. Pandan leaves Agricultural products Mangoes

Pandan leaves, agricultural products (Agricultural products Mangoes) refers to perennials that are shrubs. Growing up as a single clump, the leaves are alternately circulating into the top, the leaves are long, dark, shiny, the edges are smooth, but some leaves may have thorns. There is a fragrance from essential oils. The green from the leaves is the color of chlorophyll that can be used to color candy.

# To study the problems and learning of fragrant leaf agricultural products To study the inspect and format the products of pandan leaves, aromatic agricultural products To study the inspect and format the products of pandan leaves, aromatic agricultural products The products of pandan leaves, aromatic agricultural products

**Research Conceptual Framework** 

Figure 1. Research Conceptual Framework

#### **METHODS**

Subject research development to raise the local level of pandan leaves agricultural products in Phutthamonthon District Nakhon Pathom Province with the objectives To study the problems and potential of pandan leaf agricultural products. in Phutthamonthon District Nakhon Pathom Province and to find guidelines and product development patterns of pandan leaf agricultural products. in Phutthamonthon District Nakhon Pathom Province by using the research method as research and development (Research and Development: R&D)

#### **Research Instruments**

1.Step 1 Explore the problem and study the document.

To create a conceptual framework for product development of pandan leaf agricultural products. in Phutthamonthon District Nakhon Pathom Province

Conducted a study to explore problems and study documents with the objective of studying basic information of farmers to know the problems. and enable them to better understand the issues that need to be developed in education and understand the context of farmers in order to create a conceptual framework for this research. Research and development (R&D) consists of a sequence of steps in the development of pandanus leaves. Agricultural products. in Phutthamonthon District Nakhon Pathom Province is RA = Research Activity; RO = Research Results; DA = development activities; DO = development results, details are as follows:

Step R1 A Studying from primary data (Primary Source), the researcher has surveyed the area to study. Context of Farmers in Phutthamonthon District Nakhon Pathom Province by selecting to study the community of Saladin Village Maha Sawat Phutthamonthon District Nakhon Pathom Province starting from 1-20 November 2020.

Step R1 O The researcher compiled data obtained from surveys, document studies, and informal interviews. as well as past studies be used to analyze the content (Content analysis) by considering the preliminary conceptual framework and summarize the conceptual framework of the research to solve farmers' problems.

Step D1 A The researcher improved the clarity of the problem by organizing a forum with farmers who were engaged in the production and sale of pandanus leaves, as well as leaders in Ban Saladin community. which will start on December 1, 2020 at Khlong Yong Subdistrict Municipality.

Step D1 O The result was a clearer summary of the problems and development guidelines in some areas from the participation of farmers in the development of product development potential of pandan leaf agricultural products, such as increasing the number of pandan leaves. promotion, processing and packaging development, etc.



Figure 2. Areas to study the context of farmers

### 1. Step 2: Research and development to create strategies and solve hypothetical problems. Step R2 A

research methodology

Research and development to create strategic solutions using qualitative research methods by participant observation, non-participant observation (non-participant observation), field notes, time division (Periodization) to understand the social phenomenon in Phutthamonthon District. Nakhon Pathom Province.

#### Step R2 O

A systematic research method was obtained to obtain the facts of pandanus leaf production conditions and applied the acquired knowledge as a basis for finding guidelines and product development models for pandanus leaf agricultural products, in Phutthamonthon District Nakhon Pathom Province.

#### Step D2 A

The researcher chose to use the group discussion method to find ways to improve the competitiveness of local products in order to add added value in the supply chain management of pandan leaf agricultural products. in Phutthamonthon District Nakhon Pathom Province consists of a community leader, a local philosopher, a subdistrict agriculturalist, a leader of a group of professionals, manufacturers, distributors, who create a product processing model. It will be processed to make pandan salted eggs. and pandan-scented dishwashing liquid, and has increased the potential of farmers by processing them into pandan-leaf salted eggs. and pandan scented dishwashing detergent.

#### Step D2 O

A development model was obtained to raise the local level of pandan leaves agricultural products. in Phutthamonthon District Nakhon Pathom Province It was found that production potential was important and had an effect on pandan leaf agricultural products.

#### **Production potential**

As for the import factor, farmers have selected quality pandan leaves. Farmers have knowledge and skills in using tools to process pandan leaves. But the proportion of sales will be less compared to the previous year due to the situation of the COVID-19 epidemic. Government policies that government agencies have promoted and developed in various fields such as provincial agriculture and universities have brought various knowledge in manufacturing, processing, building and deploying applications to develop a variety of new market channels. to enhance the ability of the product to design the product Product processing, finding a place to sell and publicize the product to be accepted by

Product processing will be processed into pandan salted eggs. and pandan-scented dishwashing liquid, and has increased the potential of farmers by processing them into pandan-leaf salted eggs. and pandan scented dishwashing detergent



**Figure 3-4**. Production conditions of pandan leaves

#### 2. Step 3: Data Collection and Model Development Experiment

**Step R3 A** The researcher collects field data and examines the data. By collecting field data and verifying information for product processing preparation.

**Step R3 O** Establishing a product development model for agricultural products from pandan leaves in Phutthamonthon District Nakhon Pathom Province that it can be used and how it needs to be improved by evaluating, analyzing the weaknesses and strengths of the model development The model is reviewed by farmers, communities, relevant government officials, suppliers, consumers and revised accordingly.

#### Improving pandan supply chain management

From the study, it was found that the development of pandan leaf agricultural products was important and had an effect on the farmers' performance. The details of the research results are as follows.

Supply chain management

Supply chain management competency characteristics are promoted to increase product quality related to the promotion of planning. Promotion of production, promotion, procurement, transportation, as well as product

development. The development of innovations in a variety of new marketing channels, including upgrading services, can be summed up in 4 issues: 1) Planning 2) Production 3) Procurement 4) Transportation

By sharing knowledge and helping each other in the group, sharing farming equipment, transferring knowledge to farmers

The results of improving agricultural supply chain management lead to farmer operations. From the study, it was found that farmers' groups benefited from the development to upgrade local pandan agricultural products. in Phutthamonthon District Nakhon Pathom Province.

#### Farmer's efficiency

Characteristics of Farmers' Operations for the Development of Agricultural Products from Pandanus Leaves, Phutthamonthon District, Nakhon Pathom Province in processing products from fragrant pandanus leaves, which will be processed into salted pandan eggs. and pandan scented dishwashing detergent.

#### Data analysis and development model for pandan leaf agricultural products Phutthamonthon **District Nakhon Pathom Province**

The qualitative data were analyzed together to explain the conditions of pandan leaf production in order to develop a model, evaluate the model, analyze promote factors and conditions. Then summarize the results of developing the competitiveness of local products to increase the added value of the supply chain management of pandan leaf agricultural products. The developed model has been developed to increase the competitiveness of local products to increase added value.

Supply Chain Management of Pandan Agricultural Products Phutthamonthon District Nakhon Pathom Province, a new model that actually works



Figure 5. Product development model of pandan leaf agricultural products processing



Figure 6. Product development model of pandan leaf agricultural products Processing to make salted eggs and dishwashing liquid with pandan leaves

#### CONCLUSION AND FUTURE WORK

Theoretical conclusions and recommendations From the research, it was found that the problems of pandanus farmers who were able to organize activities to develop pandanus salted eggs and pandanus dishwashing liquid to develop pandanusan products can be summarized as follows.

#### production potential

Production factors can be summarized into 4 issues: 1) import factors 2) demand factors 3) competition and strategy 4) government policies. Farmers have knowledge and skills in using tools to process pandan leaves. In addition, the demand factor ensures that farmers have sufficient reserves. But the proportion of sales will be less compared to the previous year due to the situation of the COVID-19 epidemic. As a result, farmers demand processed pandan leaves. And government policies by government agencies have promoted and developed in various areas such as provincial agriculture and universities have brought knowledge of production and processing.

From qualitative research, guidelines, approaches and product development patterns of pandanus leaves. in Phutthamonthon District Nakhon Pathom Province Farmers focus on and promote new equipment. Assist in product development with an emphasis on local wisdom innovation management Enthusiasm for positive change, creativity and privatization Promoting cooperation and unity for future earnings of farmers

#### Result of upgrading agricultural product processing

From qualitative research on the development to raise the level of local products of pandan leaf agricultural products. in Phutthamonthon District Nakhon Pathom Province Affecting the performance of farmers, which farmers groups benefit from the creation of local wisdom of farmers groups can be summarized as follows

#### **Farmer Performance**

Farmers pay attention to the work of farmers. Processing of products such as pandan-scented salted eggs and pandan-scented dishwashing liquid. To raise the level of local products of pandan fragrant agricultural products Phutthamonthon District Nakhon Pathom Province can be summarized in 2 issues: 1) financial performance 2) non-financial Shows are showing farmers. Which, if it is a matter of performance, will be income in the form of increased profitability. which is the income that comes from the continuously increasing market share And for the non-financial performance, it will be income in the form of expanding the new customer base that continues to increase.

Therefore, the results of qualitative research and development to enhance local products of pandan leaf agricultural products in Phutthamonthon District Nakhon Pathom Province Farmers focus on and promote new equipment. new to help in product development It has given importance to the innovation management of local wisdom. have the enthusiasm to change in product processing to find ways and forms of pandan leaf agricultural product development and the ability to adapt to different situations in order to create a positive, creative perspective and promote cooperation among farmers in the future



**Figure 7**. Cooperation in product development of pandan leaf agricultural products in Phutthamonthon District, Nakhon Pathom Province

#### **Policy recommendations**

- 1. The government should have a policy to accelerate and support the development of supply chain management of local wisdom among Thai farmers by linking with private sector agencies as well as various benefits. This will help create development that truly meets the needs of farmers. Therefore, the government should continue to support the ability to manage supply chains among farmers in Thailand.
- 2. The agency responsible for supporting and involved in the ability to manage the supply chain of Thai farmers. can use the information as a guideline for educating community leaders. Chairman of the community enterprise to manage to create innovation in the operation for farmers. The factors that come from the support of community leaders. Chairman of the community enterprise. This is critical to implementing local knowledge supply chain management.

#### Management suggestions

- 1. To provide information to community leaders Chairman of community enterprises, farmers groups realized the importance of product processing. product design Supplying a place to sell including product publicity to create an efficient value-added operating system. As for the group of farmers, they must adapt to keep up and must have a vision of being an important part in product development to be comparable to other countries.
- 2. To provide information to executives and personnel to know the results of the farmers with clarity in what to achieve. Opportunities for farmers to participate in the development of business competitiveness that must be adapted for sustainable survival. Whether it's setting results Emphasis on achievement and motivating members of the farmer group to strive for success.

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