

The Participatory Development of Community Identity Products from Waste Materials

1. Introduction and Pain Points

Moo 6 Saikam community is one of six villages of Dontago Sub-district, Thasala District, Nakhon Si Thammarat Province. There are rice fields, fruit plantations, creeks and canals in the area. The weather is tropical monsoon mixing between summer and raining season. The majority of people engage in agriculture, cultivating rubber trees, rice, and fruits including mangoteen, durian, rambutan, longkong, which is the foundation of their primary sources of income, in addition to growing cattle such as cow, buffalo, duck, and chicken. (Dontako Subdistrict Administrative Organization, 2024)

Some people who own little land for farming and planting must work as general laborers or engage in small-scale trade in the Saikam community by passing down their local wisdom from generation to generation in order to make locally distinctive food products, for example localized desserts, coconut sticky rice in bamboo, marinated fish etc.

The Pla Sai Ouan Maegwad community enterprise (Ancient recipe) consisting of about 30 members in the Siakam village applies the 100-year grandmother's secret recipe to produce the traditional Thai food--marinated Nile Tilapia fish fillet with ground roasted rice. In the south Thai dialect, this food is called as Pla Sai Ouan. Pla means fish, Sai means put together and Ouan means ground roasted rice. This recipe is rooted from grandma Thongkrib, followed by mother Gwad (Maegwad), and the present community enterprise's chairman, respectively. The product's main selling point is that it is long-lasting and fermented dry rather than wet. This product was once distributed in the community and wrapped in a plastic bag with a rubber strap. In past recent years, the community enterprise developed many points for the better performance by 1) using larger fish (0.7-1.0 kgs. per fish) for more fillet as raw material 2) separating materials into fillet without any bone and fillet with small bone and 3) cutting material into a bite size before marinating process 4) receiving FDA standard for the production place 5) using new package and label to provide more information 6) using more online marketing such as facebook and line.

The present pain points of this product are 1) this product seem known in elderly rather than the youth. Certainly, most customers of this product are older people. 2) this product is rather salty and its taste is better when eating with hot/worm streaming rice. However, the market for this product is still limited because this product is a food for elderly people rather than young ones.

2. Procedure of Solving Problems

1. “co- listening” students and lectures visited the community enterprise, met members and the chairperson of the community enterprise. The pain points in the production process were addressing “fish bones are the wastes material”.
2. “co-thinking” Members of the community enterprise and students brainstormed what they should do with its waste material “fish bones”. Although there are many options, how to increase its worth is the most crucial aspect of fish bones. (Program/Activity: Counseling for New Production Development)
3. “co-practicing” Students joined the community enterprise, grinding the fish bones and adding it to the nugget and french fries ingredients. They produced a variety of recipes using varying amounts of fish bones and Pla Sai Ouan. These prototypes were freely given to others so they may provide comments on their preferences and physical appearance. They did two time. (Programs/Activities: Creation of Nugget and French fries Prototype)
4. “co-evaluating” in the second time of prototype cooking, they joined another community enterprise to participate the ad-hoc activity: How to set up a manufacturing plant for food standards. They took their prototypes to test market too. Its market testing result showed that most customers prefer the fish bone french fries flavored by Paprika. But these sample products still have to be improved in order to keep its crispness for an extended period of time. as well as packaging that keeps its crispness.

3. Knowledge Used

The knowledge about the new produce development process along with the design thinking are applied in this project.

4. Impact to Society, Community and Economy

Using waste raw materials or adding more value to them can increase income for the community enterprise. The more enterprise’s productivity, the more employment in the community. Definitely, workers who make more money from their occupations can reduce inequality and poverty in society. Additionally, our environment gets cleaner the less waste there is.

5. Continuing Plan for Sustainability

The product has to be continuously improved. Since the sample products struggle to stay crisp for an extended period of time and the suitable packaging is required, we suggested ongoing product development by accessing to Walailak university facilities such as the business

incubation scheme, which includes being knowledgeable about appropriate and modern food preparation equipment.

The Project has also worked along with the Nakhon Si Thammarat Province's agricultural tourism network and community enterprise, the Bankhaek community enterprise, the Pla Sai Ouan community enterprise, students and lecturers in the School of Accountancy and Finance of Walailak University to arrange and participate both planned and ad-hoc programs/activities/training workshops aimed at creating a new product using fish bone waste material for the target market and raised revenue for the community in a steady and sustainable basis.