

**INNOVATION IN PROCESSING LOCAL FOOD PRODUCTS  
FOR STUDENTS OF THE TOURISM MARKETING  
MANAGEMENT STUDY PROGRAM AT THE INDONESIAN  
UNIVERSITY OF EDUCATION**

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**ABSTRACT**

*Development of food innovations that use local raw materials as the main ingredient. This includes organic foods and food products that support local farmers. Traditional Indonesian food products such as rendang, chili sauce and crackers have undergone innovation in a more modern and ready-to-eat form for the global market. One of the innovations in processed local food products is cassava, cassava, or cassava in English, which is an important root crop in Indonesia. food consumption in many countries around the world. Innovation in the processing and use of cassava has played a major role in increasing food production and added value. Modernization in the processing and processing of cassava products in local food is an effort to create products that are more diverse, of higher quality, and in line with current consumer trends. This modernization can provide added value to processed cassava products and help promote the use of cassava in various dishes, one of which can be applied in cassava Bomb Brulle cheese sauce, Desert coconut snowballs. The collaboration between the NHI Tourism Academy (AKPAR) and students from the Indonesian University of Education (UPI) to organize training is a positive step in improving the skills and knowledge of UPI students, especially in the tourism marketing department, to equip graduates to open entrepreneurship. Consider establishing long-term cooperation between Akpar NHI and UPI. This could include regular training, student exchanges, or other joint projects that are beneficial to both parties.*

*Keywords: Cassava; Product Innovation; Bomb Brulle; Coconut Snowball*

**INTRODUCTION**

**Situation Analysis**

Food in a general context refers to all types of food used to meet human nutritional and energy needs. Food is the material we consume to maintain life, grow, and carry out daily activities. This includes the various types of food

we eat whether obtained from plants, animals, or other food sources.

Food in Indonesia is a broad and important topic considering that Indonesia is a country that has a large population and a variety of natural resources. Indonesia is known for its rich and varied culinary diversity. Various regions in Indonesia develop

local food products that utilize natural resources and local culinary traditions.

Indonesia is committed to sustainability efforts in food production, with a focus on sustainable agriculture, reducing food waste, and using local raw materials. Indonesia has an important role in the world of food as one of the countries with the largest population. Food in Indonesia reflects cultural diversity, culinary traditions, and challenges related to food security, sustainability, and community nutrition. Sustainability and food safety are issues that continue to receive attention in efforts to ensure Indonesians have access to sufficient, safe, and nutritious food.

Food development refers to developments in the production, distribution, and consumption of food throughout the world. This is an area that continues to change over time and is influenced by social, economic, technological, environmental, and cultural factors. Ever-evolving agricultural technology has increased agricultural productivity, enabling greater food production to meet growing global demand. Awareness of the importance of sustainable agriculture and environmental

conservation has influenced the way we produce food. Practices such as organic farming, vertical farming and waste reduction have become a trend.

Food not only meets nutritional needs, but also has additional health benefits. Demand for organic food continues to grow, with consumers increasingly concerned about the ingredients in the food they consume. Awareness of the problem of food waste and its impact on the environment has driven efforts to reduce food waste and recycle unused food.

The population in Indonesia has now reached 278.69 million people in mid-2023 (Annur, 2023) and rice is the staple food in Indonesia, and consumption is very high. With consumption of around 35.3 million metric tons per year, this reflects the importance of rice in the daily diet in Indonesia. Rice is commonly eaten in a variety of dishes, and rice is a staple in most Indonesian dishes.

Apart from rice, the Indonesian population consumes 6.66 million tons of wheat flour per year, indicating the use of wheat flour in various bread products, cakes, noodles, and other

processed foods in Indonesia (Akbar & Levyda, 2022).

This reflects variations in foods containing wheat, including white bread, sweet bread, and noodles. Apart from that, sugar consumption in Indonesian society consumes around 3 million tons of sugar per year. Sugar is an additive that is widely used in making sweet foods and drinks in Indonesia. Sugar is often used in drinks such as sweet tea, coffee, and desserts such as cakes, candy, and traditional sweet foods.

These three foods are important components of the daily diet in Indonesia and reflect the country's rich culinary culture. Rice is a staple food that is almost always present in every Indonesian dish, wheat flour is used in various bread and cake products, and sugar is a food flavoring that is often used to add a sweet taste to dishes and drinks.

Food consumption policy in Indonesia is managed by various ministries and government agencies. The main objective of food consumption policy is to ensure an adequate and safe food supply for the entire Indonesian population, as well as to improve public nutrition and health.

Rice is the staple food in Indonesia and the government has implemented various programs to maintain rice supply stability and affordable prices.

The Indonesian government has taken several steps to encourage consumption of cassava as an alternative or supplement to rice, especially to increase food security and diversify diets. The Indonesian government has launched programs to encourage people to consume alternative foods such as cassava and corn. This includes an educational campaign about the benefits of staple foods other than rice.

Globalization has opened access to various types of food from various parts of the world, enriching the variety of foods available on the global market. Consumers are increasingly paying attention to food quality, including the source of food ingredients.

AKPAR NHI Bandung activities with the Indonesian Education University have been running since 2020. The Indonesian University of Education (UPI) is a state university located in Bandung, West Java, Indonesia. UPI is known as a university that focuses on education

and human resource development, especially in the fields of education and teacher training. UPI is also active in research activities, especially in the fields of education and human resource development. This university is committed to improving the quality of education in Indonesia through relevant research.

The profile of students at the Indonesian University of Education (UPI) varies depending on the study program and level of education they are attending. However, in general, UPI students cover a variety of backgrounds, interests, and aspirations. UPI has various study programs, including teacher education, sports science, mathematics, languages, arts, educational technology, and many other programs. Therefore, UPI students can come from various academic backgrounds.

UPI students have various career aspirations. Some may aspire to become teachers or lecturers, while others may plan to work in industry, government, or non-governmental organizations in various roles related to education and human resource development. Many UPI students are committed to improving education in

Indonesia. They may have an interest in creating positive change in education systems, research, or innovation in learning. UPI students often feel a strong sense of togetherness because they have a shared vision to improve education in Indonesia. They also participate in campus activities and cultural events that strengthen their sense of community.

The MPP study program is expected to produce graduates who understand tourism marketing management who care about preserving nature, culture and improving the socio-economic welfare of the community. Examining the external environment is carried out by analyzing industry needs through focus group discussions with alumni and academics from tourism campuses other than UPI, the tourism industry, industry associations and professional associations in the tourism sector.

These stakeholders are invited to be able to explore constructive input for the study program and to find out the development of attitudes, skills and knowledge needed by users and graduates. UPI graduates have job opportunities in various sectors, including as teachers in schools,

lecturers in universities, teaching staff in training institutions, educational administrators, researchers, educational consultants, and various roles in the education and human resource development sectors.

Success in finding work depends on an individual's combination of skills, experience, and interests, as well as readiness for a career in education.

The collaboration between the NHI Tourism Academy (AKPAR) and students from the Indonesian University of Education (UPI) to organize training is a positive step in improving the skills and knowledge of UPI students, especially in the tourism marketing department, to equip graduates to open entrepreneurship. Consider establishing long-term cooperation between Akpar NHI and UPI. This could include regular training, student exchanges, or other joint projects that are beneficial to both parties.

### **Partnership Problems**

The Tourism Marketing Management (MPP) study program was established in 2005 based on the Decree on the establishment of the PP study program Number 6 of 2004 and

the Operational Permit Decree 1339/J33/PP.03/2005. This study program is one of the tourism study programs at the Faculty of Social Sciences, Indonesian University of Education. Since 2010, this study program has received a B accreditation from the National Accreditation Board for Higher Education (BAN-PT), and afterwards in 2015 this study program succeeded in upgrading its accreditation to A.

Currently the A accreditation status has been extended from 2020 to 2025. In 2016 the MPP study program also received UNWTO TedQual accreditation. Since 2010, the MPP study program has collaborated with and been part of The ASEAN International Mobility for Students (AIMS), so that it routinely accepts international students every semester, except during the global COVID-19 pandemic.

The situation analysis in this community partnership program is focused on helping students to provide images or ideas in innovating to create new products. Apart from that, AKPAR NHI Bandung supports entrepreneurial programs and business incubator programs for MSMEs

(Micro, Small and Medium Enterprises) which are important steps in efforts to develop local businesses and empower the community's economy.

Business incubators for MSMEs (Micro, Small and Medium Enterprises) are programs or institutions specifically designed to help MSMEs develop their businesses. This business incubator, run by students majoring in tourism, provides various types of support and resources to help MSMEs grow, develop, and increase their competitiveness in the market, one of which is increasing local food products.

MSMEs may receive mentoring by the incubator to help them plan business strategies, overcome emerging problems, and achieve growth goals. The Incubator provides training and education to MSME owners on various aspects of business, including financial management, marketing, operational management, and entrepreneurial skills, in addition to the incubator provides access to experienced business consultants who can provide advice and guidance to MSME owners in overcoming business challenges. MSME business incubators

play an important role in increasing the competitiveness and sustainability of MSMEs, which are the backbone of the economies of many countries. Through this comprehensive support, the incubator helps MSMEs overcome business challenges and achieve sustainable growth.

AKPAR NHI Bandung, in this case, is a provider of vocational education which produces research in the form of experiments in the field of food processing, through its collaboration program assisting UPI students in coming up with ideas for local food products which will be used as sales ideas for MSMEs.

## **IMPLEMENTATION METHOD**

### **Coordinate with the Head of the Tourism Marketing Study Program**

The head of the AKPAR NHI Bandung research and community service unit coordinated with the head of the marketing study program regarding the letter from study program no. 743/UN40.F7/DL.17/2023 to carry out INNOFEST 2023 activities. INNOFEST was held in the framework of the 69th Anniversary of UPI in 2023. The exhibition took place on 18 - 20 October 2023 at the Center of

Excellence (CoE) building, Bumi Campus Siliwangi.

This innovation exhibition contains innovation products resulting from matching funds, industrial teaching, research, and development, as well as entrepreneurial products organized by the Business and Entrepreneurship Incubator, Directorate of Innovation and Center for University Excellence (DIPUU) UPI. Apart from that, there are innovation talks, fashion shows and talk shows.

**Determine The Priority and Event Schedule for Each Solution Offered**

Determining the priorities and schedule for each solution is carried out by holding meetings with all or representatives of parties related to the community service program. The results of the meeting are in the form of priorities for the solutions offered.

**Implement Each Activity According to Priority**

Implementation of each activity is based on a priority scale. The implementation method is as follows.

**Table 1: Implementation Method**

No	Activity Solutions	Method
1	Providing knowledge about various local food products	Presentation and question and answer
2	Providing knowledge about innovative ways to process local food products	Presentation and question and answer
3	Training in making local food products	Demo dan simulation

**Activity Evaluation**

Evaluation is carried out after all partnership solutions have been implemented. The evaluation step is carried out together with the management of the tourism marketing study program by:

1. Hold meetings with the management of the tourism marketing study program.
2. Feedback and input from INNOFEST 2023 activity participants
3. Sustainability plan

**Cassava**

Cassava is the third-largest source of food carbohydrates in the tropics, after rice and maize. Cassava is a major staple food in the developing world, providing a basic diet for over half a billion people. It is one of the most drought-tolerant crops, capable of growing on marginal soils. Nigeria is

the world's largest producer of cassava, while Thailand is the largest exporter of cassava starch.

Cassava is classified as either sweet or bitter (Britannica, 2023). Like other roots and tubers, both bitter and sweet varieties of cassava contain antinutritional factors and toxins, with the bitter varieties containing much larger amounts. It must be properly prepared before consumption, as improper preparation of cassava can leave enough residual cyanide to cause acute cyanide intoxication, goiter, ataxia, partial paralysis, or death. The more toxic varieties of cassava have been used in some places as famine food during times of food insecurity. Farmers often prefer the bitter varieties because they deter pests, animals, and thieves.

The cassava root is long and tapered, with a firm, homogeneous flesh encased in a detachable rind, about 1 millimetre (1/16 inch) thick, rough, and brown on the outside. Commercial cultivars can be 5 to 10 centimeters (2 to 4 in) in diameter at the top, and around 15 to 30 cm (6 to 12 in) long. A woody vascular bundle runs along the root's axis. The flesh can be chalk-white or yellowish. Cassava roots are

very rich in starch and contain small amounts of calcium (16 milligrams per 100 grams), phosphorus (27 mg/100 g), and vitamin C (20.6 mg/100 g). However, they are poor in protein and other nutrients. In contrast, cassava leaves are a good source of protein for animal and human nutrition, but deficient in the amino acid methionine. Some of the benefits of cassava for health include:

1. High source of carbohydrates. Cassava contains high calories and carbohydrates; therefore, cassava can be used as a staple food to replace rice.
2. Helps lose weight. The high calories in cassava make the feeling of fullness last longer so that your appetite will be reduced.
3. Helps cure diarrhea. Cassava boiled water with added salt can help overcome dehydration experienced by mild diarrhea sufferers. The processing method is to peel and clean the cassava until clean and boil until boiling. Drink boiled water when it is cold 2 times a day.
4. Gluten-free and prevents diabetes. If someone is allergic to gluten,



- cassava is the right choice because cassava is a gluten-free ingredient.
5. Healthy digestive system. Cassava contains resistant starch, which is very easily digested by the body, which improves intestinal health by maintaining good bacteria in the intestine. The fiber in cassava dissolves easily in water, thereby helping the absorption of toxins that enter the digestive tract. In this way the health of the digestive system can be maintained.
  6. The benefits of cassava from the leaves. Cassava leaves have the potential to cure or relieve several other health problems including migraine, healthy eyes, fever, rheumatism.

The problems that exist with this Community Service are:

1. Production process that is still manual
2. Knowledge related to how to process cassava.
3. Collaboration with cassava farmers

Indonesia is known to be the fourth largest producer of cassava in the world after Nigeria, Thailand, and Brazil. The cassava growing centers in Indonesia

mostly come from the provinces of North Sumatra, Lampung, West Java, Central Java, DIY, East Java, NTT, and South Sulawesi. Cassava production in 2020 was recorded at 16.35 million tons from a planting area of 630 thousand hectares. Cassava production continues to decline as the area of cassava plants decreases every year because farmers divert them to other more profitable crops. The main problems faced in developing cassava plants are the low productivity and selling price and the relatively long harvest time (10 months). The current average productivity of cassava is around 20 tons/hectare, still far from the genetic potential of productivity of around 40 tons/hectare. Therefore, it is necessary to strengthen the cassava crop intensification program both in food estate areas and outside food estates in cassava producing centers in Indonesia. In the upstream section, support is needed to provide financing through a credit program scheme (KUR) for business capital, seeds with high productivity and early maturity and fertilizer in adequate quantity and quality. In the middle part (on farm) assistance is needed for farmers in implementing cassava cultivation in

accordance with good agricultural practices (GAP). Meanwhile, downstream, a cassava processing industry must be built that absorbs the results from farmers to provide food and non-food.

## **RESULT AND DISCUSSION**

The results achieved in the Community Service activity "Innovation Training in Processing Local Food Products" in collaboration with the Tourism Marketing Management Study Program have overall reached 100% of the entire program plan. The stages that have been carried out include:

1. Licensing and copying proposals.
2. Coordination with the Tourism Marketing Management study program. This coordination concerns the material that will be presented in the training.
3. Coordination with training participants

This stage analyzes the potential of training participants. From this stage it is found that there are several students who do not yet have a business incubator work program that will be applied to MSMEs.

### 4. Counseling (Education)

Training activities were carried out at the Center of Excellence (CoE) building campus, Bumi Siliwangi Campus of the Indonesian University of Education, which was attended by approximately 150 students and 14 lecturers within the Tourism Marketing Management study program.

Community service targets are given material about local food products which will be made into processed innovations as superior for MSMEs.

This outreach on innovation in processing local food products aims to increase student awareness to elevate local food products produced by local farmers to become superior products for MSMEs. With counseling, students are expected to be able to understand the positive impact on them in developing entrepreneurial programs and developing MSMEs. With this program, it is hoped that students will be inspired to promote local food ingredients into superior products as material for developing MSMEs.

The training is continued with a demo program or cooking class. This program discusses how to process local food ingredients into contemporary

food products so that they can be used as land for developing MSME business incubator programs.

### CONCLUSIONS

The Community Service activity of Local Food Product Processing Innovation Training in collaboration with the Tourism Marketing Management Study Program at the Indonesian Education University can be concluded in several ways, namely: (1) The business incubator program for students majoring in Tourism Marketing Management is already running, but there are some students who are still confused about what to do. (2) Understanding of local food products used as business incubators is still not being utilized properly. (3) Technically, Tourism Marketing Management students in food processing do not have the basics of food processing, so in forming a business incubator they need to collaborate with other parties, one of which is by involving AKPAR NHI Bandung students as their business incubator project.

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