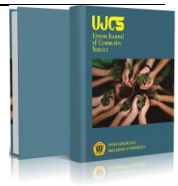
UJCS 6(4) (2025)

Unram Journal of Community Service

https://jurnalpasca.unram.ac.id/index.php/UJCS



Diversification of Local Food Products through Banana Heart Processing

Nurliani[1*], Suherah[2], Agustrai[1], Mukhlis[3]

[1] Agribusiness Study Program, Agriculture Faculty, University of Muslim Indonesia, Makassar, Indonesia.
[2] Agrotechnology Study Program, Agriculture Faculty, University of Muslim Indonesia, Makassar, Indonesia.
[3] Agribusiness Study Program, Department of Agriculture Business, Politeknik Pertanian Negeri Payakumbuh, Lima Puluh Kota, Indonesia.

Received: November 9, 2025
Revised: November 30, 2025
Accepted: December 16, 2025
Published: December 31, 2025

Corresponding Author:
Nurliani
nurliani.karman@umi.ac.id

DOI: 10.29303/ujcs.v6i4.1304

Abstract: The demand for animal protein is increasing in line with public awareness of the importance of balanced nutrition, population growth, and increased purchasing power. Satay and shredded meat are popular foods that are sources of animal protein. The price of meat continues to rise, prompting people to seek alternative products that are less expensive to produce yet still nutritious. Processing banana hearts into banana heart satay can be an alternative solution. The "Mekar Bersama" Women Farmers Group is one of the community groups in Maros Regency that partners with us to provide education, training, and assistance in processing local agricultural products into creative, affordable, and nutritious food products. The program solution implemented is the Community Service Program (PkM), which includes education on the benefits and nutritional value of consuming banana hearts, as well as demonstrations of techniques for processing banana hearts into plant-based satay. The results of the activities showed an average increase of 66.67% in the knowledge and skills of the partners. The partners enhanced their understanding of the benefits and nutritional content of banana hearts, gained knowledge about the environment, and developed skills in processing banana hearts into vegetable satay.

Keywords: Added Value, Banana Hearts, Vegetable Satay.

Introduction

The banana plant (*Musa spp*) is a tropical plant belonging to the *Musaceae* family. Banana plants thrive in tropical regions with warm temperatures and high humidity. Banana plants can grow in a variety of soils, both in gardens and on yard plots. Banana fruit is rich in nutrients and can be consumed directly or processed into various products. Bananas can be processed into different products to increase their selling value and diversify the product range, such as fried bananas and cheese bananas. Banana leaves can be used as craft materials or food wrappers. Fibres from banana stems can be used as raw materials for the textile or paper industry. Banana hearts can be cooked as vegetables (Dwivany et al., 2021).

The banana heart is an edible part of the banana plant that is often used in traditional cuisine in several countries, including Indonesia. The banana heart is not a fruit, but rather a part of the banana flower that has not yet developed into a fruit. Botanically, the banana heart is part of the banana inflorescence, which consists of small, unripe flowers. It is called the banana heart because it resembles a human heart in shape. The banana heart originates from the growth of flowers on the banana tree that do not develop into fruit. The shape of the banana heart itself varies, including spindle-shaped, lanceolate, rounded, or rounded. The banana heart is composed of protective leaves. The colour of the banana heart can be either consistent or yellowing towards the base. The taste of the banana heart is relatively bitter and astringent (Wikipedia, 2025).

Banana hearts are often wasted and discarded as a vegetable ingredient, despite having many uses and a nutritional content that is beneficial to health. The high fibre content in banana hearts can help improve

How to Cite:
Nurliani, Suherah, Agustrai, & Mukhlis. (2025). Diversification of Local Food Products through Banana Heart Processing. *Unram Journal of Community Service*, *6*(4), 969–975. https://doi.org/10.29303/ujcs.v6i4.1304

digestion and bind fat and cholesterol (Sari & Kartikaningsih, 2021). Banana hearts are rich in nutrients. The main nutritional content in 100 grams of banana hearts is approximately 27 calories, 5-6 grams of carbohydrates, 1-2 grams of protein, 0.5 grams of fat, 2-3 grams of fiber, 10-15 mg of vitamin C, approximately 0.1 mg of vitamin B6, 20-30 mcg of folate, 2-4 mcg of vitamin K, 150-200 mg of potassium, 30-40 mg of magnesium, 0.5-1 mg of iron, calcium: approximately 10-15 mg, and 10 mg of sodium (Anonim, 2025).

Temmappaduae Village is located in Marusu Subdistrict, Maros Regency, South Sulawesi. It is located about 8 kilometres from the administrative centre of Maros Regency. Temmappaduae Village has an area of 7.54 km2 with a population of 3,093. It has vast agricultural land potential, especially for food crops and horticulture. Various types of vegetables, such as chilli peppers, shallots, and fruits like bananas, mangoes, oranges, papayas, and pineapples, are grown here. The production of the horticultural sub-sector in Maros Regency is as follows: the highest fruit production is oranges at 309,332 tons (57.43%), followed by mangoes at 164,245 tons (30.49%), and bananas at 63,166 tons (11.73%). The potential for bananas and banana hearts in Temmappaduae Hamlet, Marusu Subdistrict, Maros Regency is quite good (BPS, 2024). This area is known for producing kepok tanjung bananas. A 4-hectare kepok banana plantation can generate IDR 900 million per harvest. Banana harvests are usually sold directly to collectors, sold at markets, or consumed by the producers themselves. Despite the high production of bananas, the selling price is not adequate. Dahlia et al (2016); Sunisha et al (2019); Marpaung et al (2021) explain that kepok bananas are usually sold for Rp 10,000-12,000 per bunch.

The Women Farmers Group "Mekar Bersama" is one of the women's groups located in Temmappaduae Village, Marusu District, Maros Regency. The target of the assistance program is women who are members of the "Mekar Bersama" Women Farmers Group. Considering that women manage the finances and provide food for their families, they must know how to manage finances and prepare food that is inexpensive, hygienic, and nutritious. Processing banana hearts into satay and shredded meat can be a business opportunity to increase the productivity of women and the family's economic well-being.

The location of the partner was determined purposively, considering that the yard land is generally planted with dense banana trees that produce bananas throughout the year. Banana trees have a unique characteristic in their life cycle, namely that they only bear fruit once in their lifetime (*monocarpic*). After bearing fruit, the banana tree will die and be replaced by new shoots. The banana heart usually appears when the banana plant is 7-9 months old (Dwivany et al., 2021).

The problem is that the abundant banana harvest is immediately sold to collectors, sold at the market, or consumed by the farmers themselves. Banana production is high, but the selling price is not adequate. As a result, farmers' profits are low. Therefore, banana fruit processing is necessary to add value to the product.

Banana hearts are a type of fruit that is part of the banana flower and can be consumed as a vegetable. With a soft texture and a combination of sweet and savoury flavours, banana hearts are commonly used in soups, stir-fries, and as a topping for vegetables. Not only do they taste good, but banana hearts also have various health benefits. Some of the benefits of banana hearts include maintaining digestive health, supporting heart health, regulating blood pressure, boosting energy, and even helping to prevent anaemia. Banana hearts have numerous uses and a nutritional content that is beneficial for health. The high fibre content in banana hearts can help facilitate digestion and bind fat and cholesterol. Banana hearts have numerous uses and a nutritional content that is beneficial for health. The high fibre content in banana hearts can help facilitate digestion, bind to fat, and reduce cholesterol levels. Fruits and vegetables are foodstuffs that have a short shelf life or are easily damaged. Processing and utilising banana hearts into innovative food products is one solution to overcome existing problems. Additionally, this form of food innovation can also enhance the value of banana hearts, making them more appealing to individuals who do not typically enjoy eating vegetables (Poerba et al., 2015; Poerba et al., 2017).

Banana hearts are often underutilised and discarded as a conventional vegetable ingredient, despite their potential as an alternative food source. The average age of the women farmers in the group ranges from 40 to 60 years old. At this age, a diet rich in fibre, fruits, and vegetables is recommended. Therefore, it is necessary to empower the community through counselling, training, and assistance in processing banana hearts into inexpensive yet nutritious foods, such as banana heart satay or vegetable satay. One simple and easy way to stimulate appetite for vegetables is through vegetable variation (modification) (Heath et al., 2011; Dewi et al., 2017).

Considering the challenges faced by partners, it is essential to implement a partner empowerment program through the Community Partnership Program. The Community Partnership Program (PkM) aims to increase the knowledge and skills of partner group members regarding banana cultivation techniques, nutritional content, benefits, and properties of bananas and banana hearts (improving cognitive aspects), providing information *on the* economic *value added* from

processing banana hearts into inexpensive and nutritious foods, and providing training and assistance on processing banana hearts as a fiber- t food into inexpensive but nutritious foods, namely processing banana hearts into "banana heart satay."

Method

Implementation of the Community Partnership Program (PkM) in Temmappaduae Village, Marusu Sub-district, Maros District. There are 15 community service activity partners. The program will be implemented from August to December 2024.

The community service procedure was carried out in a structured and gradual manner, starting with planning, site surveys, problem identification, counselling, training, mentoring, monitoring, and evaluation. This activity aimed to improve the knowledge, skills, and attitudes of homemakers in utilising banana heart waste to make banana heart satay. The activity was conducted using counselling, training/application, mentoring, and evaluation methods.

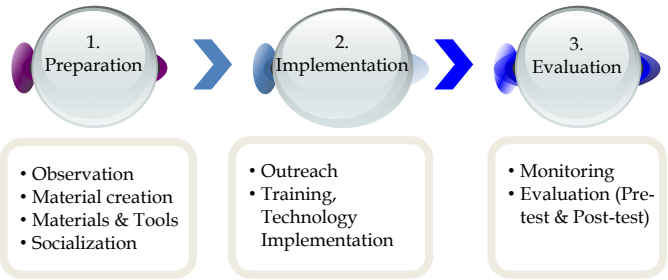


Figure 1. Flow of Community Partnership Program Activities

Preparation

Community Service activities began with observations in Temmappaduae Village, Marusu District, Maros Regency. The objective was to determine the conditions of the community and its surrounding environment, which was achieved through two methods: field observations and interviews with residents. Next, the problems faced by the partners were identified.

Implementation

The activities were implemented using a combination of counselling, training, mentoring, monitoring, and evaluation methods. The counselling method aimed to provide solutions to the problem of low knowledge among homemakers regarding cultivation techniques, benefits, and nutritional content of banana heart vegetables. The method used was in the form of interactive lectures.

The training and mentoring methods were carried out in two forms of activities, namely: 1) Demonstration of the technique of calculating the economic added value of processing banana hearts into vegetable satay, and well as a demonstration of processing banana hearts into vegetable satay. The materials and tools used were: banana hearts, flour, spices, eggs, a grinder, a rolling pin, a tray, and plastic box packaging.

Evaluation

Evaluation was conducted in two stages: before the community service activity began, participants were given a questionnaire (pre-test), and after the activity ended (post-test).

Table 1. Partner Issues, Activity Implementation, and Methods

Priority Issues of the Partner	Steps	Methods	Participation
Issue-1 Partners' knowledge about the benefits and nutritional content of banana hearts is still low	a. Initial observation b. Team and student coordination meeting, division of tasks and responsibilities among team members c. Preparing materials and educational materials	▪ Survey ▪ Focus group discussions ▪ Educational session, using lecture and discussion methods ▪ Evaluation	▪ Service team ▪ Students ▪ Participants
Issues Participants do not yet know how to calculate the economic value added from processing banana hearts	a. Preparing educational materials b. Assisting in the practice of calculating economic added value	▪ Training ▪ Hands-on practice ▪ Guidance ▪ Monitoring and evaluation	▪ Service team ▪ Students ▪ Participants
Issue-3 Participants are not yet skilled at processing banana hearts into banana heart satay	a. Preparing ingredients and grinding tools b. Practice processing banana hearts c. Practice in packaging	▪ Implementation and guidance in making processed banana heart products ▪ Monitoring and evaluation	▪ Service team ▪ Students Participants

Result and Discussion

The Community Partnership Program (PkM) activities at the target partner, namely the "Mekar Bersama" women farmers group in Maros Regency, were carried out in 3 (three) stages. The Village Head attended these activities, along with the implementing team of lecturers and students from the Faculty of Agriculture at the University of Muslim Indonesia, and all members of the partner group participated. The stages of the activities are as follows:

Preparation Stage

A preliminary survey was conducted at the planned location of the activity in Temmappaduae Village, Marusu Subdistrict, Maros Regency. Socialisation was carried out through meetings and focus group discussions with the chairperson and several members of the partner group to discuss the program activity schedule. The survey results indicated that the potential for fruit and banana production in the area was quite promising. This area is known for producing kepok tanjung bananas. A 4-hectare kepok banana plantation can generate IDR 900 million per harvest. Banana hearts are conventionally used as a vegetable ingredient, but are often not utilised and discarded, even though they have many uses and good nutritional content for health.

Implementation Stage

The implementation of community service activities was carried out using three methods: counselling, training and mentoring, as well as monitoring and evaluation.

Extension

Figure 2. Extension Activity

The *outreach* activity was held on September 18, 2025, attended by the village head, the outreach team, students, field officers, and 15 members of the partner group. Extension materials: (a) educational methods on the benefits and nutritional content of banana heart vegetables, and (b) techniques for calculating the economic added value of processing banana hearts into banana heart satay. The outreach activity began with a speech from the village head, followed by a lecture on the material by the outreach team. It continued with a discussion and question-and-answer session (information sharing), as shown in Figure 2.

The results of this program can increase the knowledge and skills of the participants. The *first* material of the extension activity was education about the benefits and nutritional content. Horticultural commodities, especially vegetables, have several strategic roles, namely: (1) a source of nutritious food for the community that is rich in vitamins and minerals; (2) a source of income and employment opportunities, as well as business opportunities; (3) raw materials for agro-industry; (4) a potential export commodity that is a source of foreign exchange for the country; and (5) a market for the non-agricultural sector, especially the upstream industry (Pujiharto, 2011; Irawan, 2012). Vegetables are one of the food groups. Vegetables are essential in a balanced diet, as they serve as a rich source of vitamins and minerals. Vegetables contain more minerals than fruits (Restianti, 2019). Insufficient consumption of vegetables can lead to a deficiency in one or more of the essential vitamins and minerals they contain. This will have an impact on health (Rosidi & Sulistyowati, 2012).

Vegetables and fruits contain vitamins, minerals, dietary fibre, and phytochemicals that are essential for the body. Without vitamins and minerals, the body cannot optimally utilise the nutrients consumed (Aswatini et al., 2008). Without dietary fibre, bowel movements will not be regular. The main vitamins in vegetables and fruits that are difficult to replace with other foods are vitamin C, folic acid, and carotenoids, especially beta-carotene, which acts as an antioxidant. Vegetables are a source of vitamins and minerals that are low in energy but high in fibre.

Consuming vegetables and fruits is essential for the body as a source of vitamins, minerals, and fibre, which are crucial for achieving a healthy diet in accordance with balanced nutrition guidelines for optimal health. Some of the vitamins and minerals found in vegetables and fruits function as antioxidants, thereby reducing the incidence of non-communicable diseases related to nutrition, which can result from nutritional excess or deficiency. Consuming a sufficient amount of vegetables can help prevent various diseases, including high blood pressure, obesity, coronary heart disease, certain types of cancer, and type 2 diabetes.

The *second* material for the technical *extension* activity on vegetable cultivation is that banana hearts are often not utilised and discarded, even though they have many uses and a good nutritional content that is beneficial for health. The high fibre content in banana hearts can help improve digestion, bind to fat, and lower cholesterol levels (Sari & Kartikaningsih, 2021). Banana hearts are rich in nutrients. The main nutritional content

in 100 grams of banana hearts is approximately 27 calories, 5-6 grams of carbohydrates, 1-2 grams of protein, 0.5 grams of fat, 2-3 grams of fiber, 10-15 mg of vitamin C, approximately 0.1 mg of vitamin B6, 20-30 mcg of folate, 2-4 mcg of vitamin K, 150-200 mg of potassium, 30-40 mg of magnesium, 0.5-1 mg of iron, calcium: approximately 10-15 mg, and 10 mg of sodium (Anonim, 2025).

Processing banana hearts into vegetable satay provides economic added value. This activity opens up new home-based business opportunities based on processed vegetable foods. Several participants have started producing banana heart vegetable satay for family consumption and family gatherings. This contributes to a reduction in household consumption expenditure. This program contributes to strengthening food security based on local resources and enhancing community capacity in developing value-added alternative food products. With this innovation, banana hearts are no longer viewed as agricultural waste but as a functional food commodity with potential for sustainable development.

Training and Assistance in Making Banana Heart Satay

The training and assistance activities were conducted in September and October 2025, attended by a team of community service workers, students, field officers, and 15 representatives from partner groups.

The training began with the preparation of tools and materials, practice in peeling banana hearts, seasoning, steaming, smoothing banana hearts, shaping, and finally steaming or frying and seasoning the satay.

Figure 3. Banana Heart Satay Making Activity

Organoleptic Test

Organoleptic testing of banana heart satay products aims to assess consumer acceptance of product sensory quality based on the five senses. This activity measures the extent to which participants and panellists like banana heart satay in terms of taste, aroma, texture, and colour.

Figure 4. Organoleptic Testing Activity

Table 2. Table of Organoleptic Test Results for Banana Heart Satay

No	Test Parameter	Average Score	Assessment Category
1	Color	3.07	Somewhat Like
2.	Aroma	4.0	Like
3.	Taste	4.07	Like
4.	Texture	3.13	Somewhat like
Average		3.67	

The organoleptic test results in Table 2 show that the participants well accepted the banana heart satay product. The average score for all parameters was in the range of 3.07–4.07, which indicates the categories "somewhat like" to "like." This shows that the product is quite acceptable in terms of sensory quality.

The taste parameter received the highest score (4.07) in the "like" category. This indicates that the seasoning formulation and processing techniques successfully produced a flavour that met the participants' preferences. Taste is a significant factor in the acceptance of a food product, so the high score on this parameter is a considerable advantage of banana heart satay as a plant-based food alternative.

The aroma parameter obtained an average score of 4.0, indicating that the aroma produced was quite appealing to the panellists and did not give the impression of a weak aroma, which often occurs in plant-based raw materials such as banana hearts. This shows that the initial treatment of the material (such as boiling and soaking) was effective in reducing the undesirable characteristic aroma.

The texture parameter scored (3.13) and was categorised as "somewhat liked." This indicates that the texture of the product is still acceptable but has potential for improvement, for example, by adjusting the boiling time, using fibre softening techniques, or adding plant-based binding agents to make the texture softer and more similar to meat.

The colour parameter (3.07) received the lowest score. The unappealing colour and visual appearance, which resemble satay, remain unappealing. Poor product appearance significantly reduces interest in the product before it is consumed. Overall, the average score of 3.67 indicates that banana heart satay has a pretty good level of acceptance and has the potential to be

further developed as a plant-based local food product. Improvements can be focused on texture and colour to enhance the overall quality of the product.

Monitoring and Evaluation

Community service activities aim to improve the knowledge and skills of partner women's groups. The following visually displays the condition of the partner women's group before the partner activity, compared to the condition after the Community Service activity. The results of the pre-test and post-test evaluations are shown in Table 3.

Table 3. Condition of partners before and after the PKM activity.

No	Partner's condition before the PKM activity (Before)	Partner condition after the community service activity (After)
1.	Participants who knew the benefits and nutritional content of banana hearts numbered 5 out of a total of 15 participants (33.33%).	Participants who know the benefits and nutritional content of banana hearts: 15 out of a total of 15 participants (100%). There was an increase of 66.67%
2	Participants who were able to calculate the economic value added obtained from processing banana hearts numbered 0 out of a total of 15 participants (00.00%)	Participants who were able to calculate the economic value added obtained from processing banana hearts were 10 out of a total of 15 participants (66.67%). There was an increase of 66.67%
3	Participants skilled in processing banana hearts into banana heart satay/vegetable satay averaged 0 out of a total of 15 participants (0%)	Participants skilled in processing banana hearts into banana heart satay/vegetable satay averaged 10 out of a total of 15 participants (66.67%). There was an increase of 66.67%

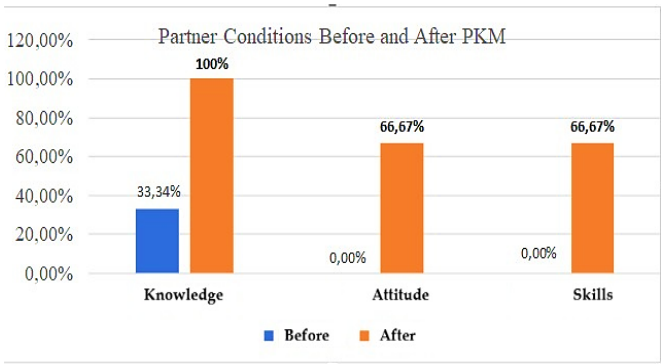


Figure 5. Partner Conditions Before and After PKM

The evaluation results show that the average knowledge of participants about the benefits and nutritional value of banana hearts was 5 people, or 33.34% (pre-test), and increased to 15 people, or 100% (post-test). The average ability of participants to calculate the economic value added from processing banana hearts into banana heart satay increased from an average of 0 people (0.00%) (pre-test) to 10 people (66.67%) (post-test). Furthermore, regarding the partners' skills in processing banana hearts into banana heart satay, no participants had ever made it before (0% in the pre-test). In contrast, after attending the demonstration, 10 participants, or 66.67%, were willing to make, serve, and consume one banana heart.

The increase in participants' knowledge and skills regarding the benefits and nutritional content of banana hearts, as well as their ability to calculate added value, was demonstrated by the improvement in their skills, as reflected in the growing number of participants who demonstrated these skills. These results align with the research, which found that the extension material received a positive response from participants, as indicated by the number of participants and their enthusiasm during discussions and question-and-answer sessions. Furthermore, Febriyanti & Windirah (2021) found that the results of community service activities showed an increase in public understanding of the benefits of spinach and an improvement in the public's ability to process spinach.

Conclusion

Based on the results of community service activities carried out, it can be concluded that participants' knowledge and skills increased after receiving counselling and demonstrations on processing banana hearts into banana heart satay. Organoleptic test results indicate that participants will receive banana heart satay products. The average score for all parameters was in the range of 3.07–4.07, indicating a preference for the categories "somewhat like" to "like." This shows that the product is quite acceptable in terms of sensory quality. Additionally, this innovation promotes public awareness of the importance of local food security and home-based business opportunities, leveraging the potential of local resources. With this activity, banana hearts, which were previously considered waste, now have higher utility and commercial value.

Acknowledgments

This community service activity was made possible with the assistance and support of the Chairman of the UMI Waqf Foundation, the Rector of the Indonesian Muslim University (UMI-Makassar), and the Chairman of the Community Service Institute (LPkM-UMI). We also express our sincere gratitude to the various parties involved in the implementation of this activity.

References

Anonim. (2025). Manfaat Jantung Pisang bagi Kesehatan. https://www.alodokter.com/ketahui-manfaat-jantung-pisang-bagi-kesehatan

Aswatini, Noveria, M., & Fitranita. (2008). Konsumsi Sayur Dan Buah Di Masyarakat Dalam Konteks Pemenuhan Gizi Seimbang. Jurnal Kependudukan Indonesia, III(2), 97–119. https://doi.org/https://doi.org/10.14203/jki.v3i2.171

BPS. (2024). Kabupaten maros dalam angka. BPS Kabupaten Maros.

Dahlia, A., Haryanto, A., & Suhandy, D. (2016). Pisang Muli Studies On The Use Of Kmn To Extend The Shelf Life Of. Jurnal Teknik Pertanian Lampung, 5(2), 67–72. https://jurnal.fp.unila.ac.id/index.php/JTP/article/view/1308/1205

Dewi, E. C., Muharyani, P. W., & Kusumaningrum, A. (2017). Pengaruh Modifikasi Sayur Terhadap Porsi Konsumsi Sayur Anak Prasekolah. Jurnal Keperawatan Sriwijaya, 4(2), 19–25. https://jks-fk.ejournal.unsri.ac.id/index.php/jk_sriwijaya/article/view/52/51

Dwivany, F. M., Wikantik, K., Sutanto, A., Ghazali, F., Lim, C., & Kamalesha, G. (2021). Indonesian Bananas. ITB Press Publisher.

Febriyanti, S. A., & Windirah, N. (2021). Training in Spinach Chip Production as an Alternative Home Business. Tribute: Journal of Community Services, 2(2), 78–84. https://doi.org/https://doi.org/10.33369/tribute.2.2.78-84

Heath, P., Houston-price, C., & Kennedy, O. B. (2011). Increasing food familiarity without the tears . A role for visual exposure ? Appetite, 57(3), 832–838. https://doi.org/10.1016/j.appet.2011.05.315

Irawan, B. (2012). Agribisnis hortikultura: peluang dan tantangan dalam era perdagangan bebas. SOCA : Jurnal Sosial Ekonomi Pertanian, 3(2), 107–209. https://ojs.unud.ac.id/index.php/soca/article/view/4029/3018

Marpaung, S. D. S., Cahyani, D., Utari, W. N. A., Indriyani, A., & Apriliani, R. (2021). Physicochemical Changes Of Dwarf Banana (Musa acuminata). Jurnal Teknik Pertanian Lampung, 10(2), 193–199. https://doi.org/http://dx.doi.org/10.23960/jtep-l.v10i2.193-199

Poerba, Y. S., Handayani, T., & Witjaksono. (2017). Jurnal Ilmu-ilmu Hayati A B. Berita Biologi, 16(1), 85–93. https://doi.org/https://doi.org/10.14203/beritabiologi.v16i1.2210

Poerba, Y. S., Witjaksono, & Handayani, T. (2015). Pembentukan dan Penampilan Pisang Rejang Hibrid Triploid Hasil Persilangan Pisang Rejang Mixoploid Dengan Pisang Rejang Diploid. Jurnal Biologi Indonesia, 12(1), 19–30. https://jurnalbiologi.perbiol.or.id/storage/journal/ac4d8198-ee3d-4e48-8914-3ae893bb2b4b/journal-02102019021400.pdf

Pujiharto. (2011). Kajian Potensi Pengembangan Agribisnis Sayuran Dataran Tinggi di Kabupaten Banjarnegara Propinsi Jawa Tengah. agritech, XIII(2), 154–175. https://media.neliti.com/media/publications/42106-ID-kajian-potensi-pengembangan-agribisnis-sayuran-dataran-tinggi-di-kabupaten-banja.pdf

Restianti, H. (2019). Applying a Healthy Lifestyle: Diet and Nutritional Balance. Puri Pustaka.

Rosidi, A., & Sulistyowati, E. (2012). Peran Pendidikan Dan Pekerjaan Ibu Dalam Konsumsi Sayur Anak Prasekolah. Jurnal Gizi Universitas Muhammadiyah Semarang, 1(1), 1–8. https://doi.org/https://doi.org/10.26714/jg.1.1.2012.%25p

Sari, M. P., & Kartikaningsih, I. H. (2021). The Effect of Substituting Banana Hearts (Musa parasidiaca) on the Fiber Content of Milkfish (Chanos chanos) Otak-Otak. Brawijaya University.

Sunisha, K., Claudia, K. L., & Mathew, G. (2019). Effect of Vacuum and Shrink Packaging on Shelf Life of Banana (Musa Paradisica). International Research Journal of Engineering and Technology (IRJET), 6(11), 1681–1685. https://www.irjet.net/archives/V6/i11/IRJET-V6I11161.pdf

Wikipedia. (2025). Jantung Pisang. https://id.wikipedia.org/wiki/Jantung_pisang