



Community Training in Banana Nugget and Lemongrass Spray Production in Teluk Karang

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ABSTRACT

This community service activity introduced the processing of locally available bananas and lemongrass to women in Teluk Karang Village. Bananas were commonly sold without further processing, while lemongrass had limited household and local market uses. The activity aimed to introduce alternative products through the preparation of banana nuggets, named BANTET, and a lemongrass spray, named PRANGI. Training took place at the Teluk Karang Village Office on December 9, 2025, and combined an explanatory session, questions and answers, demonstrations, and guided practice involving students and community participants. This descriptive report draws on the implementation account and photographic documentation. The documented outputs were practical demonstrations and examples of the two products. These outputs indicate that the activity provided opportunities to practice local resource processing; they do not establish independent production skills, commercial viability, or increased household income. The spray was not evaluated for mosquito repellency, formulation stability, or safety. Follow-up activities should document production procedures, assess participants' skills, and evaluate product quality and costs before wider promotion. The program offers an initial basis for further training in locally relevant product development.

Keywords: banana nuggets; lemongrass spray; community training; local resources

Received: 2 January 2025

Revised: 4 February 2025

Published: 30 March 2025

INTRODUCTION

Residents of Teluk Karang Village engage in driving, plantation labor, and work in household-scale production. Many women manage their households and have limited opportunities to earn additional income. Bananas and lemongrass are locally available, but the original program account describes bananas being sold mainly as raw produce and lemongrass being harvested periodically for household use or sale to neighbors. These conditions provided a practical starting point for a community activity centered on familiar materials. An approach that begins with existing community resources is consistent with the asset-based perspective discussed by Mathie and Cunningham (2003).

Bananas can be processed into a range of food products, although the characteristics of the raw material and the intended product need consideration (Aurore et al., 2009). Research on banana starch and ripening provides a basis for examining texture and consistency during product development (Kim & Youn, 2013; Zhang et al., 2005). The presence of bioactive compounds in bananas does not, by itself, establish a health benefit for a particular fried snack (Singh et al., 2016). In this activity, banana nuggets were introduced as a product diversification option rather than as a nutritionally tested food.

The second product was a lemongrass spray. Published studies of citronella-based preparations provide relevant background, but their findings cannot be transferred directly to an untested village formulation (Maia & Moore, 2011; Rasydy et al., 2020). Botanical identity also matters: the local name lemongrass is insufficient to establish that the plant used was the same species as the citronella grass examined in a cited study. The program therefore aimed to introduce the preparation of BANTET banana nuggets and PRANGI lemongrass spray through demonstrations and guided practice. This report describes the activity and its documented outputs, while distinguishing these outputs from outcomes that require follow-up assessment.

METHODS

The community service activity was conducted at the Teluk Karang Village Office on December 9, 2025. Women from the community participated alongside students involved in the program. The implementation account does not provide an attendance total, participant selection criteria, or the duration of each session. Accordingly, the report is descriptive and does not estimate participation rates or representativeness.

Training comprised two stages. First, facilitators used an explanatory session, discussion, and questions and answers to introduce the potential use of local bananas and lemongrass. Second, demonstrations and guided practice introduced the preparation of banana nuggets and lemongrass spray. Students and community participants took part in the practical activities, and facilitators provided immediate feedback when difficulties arose. The products were presented under the names BANTET and PRANGI.

The available documentation consists of the narrative account of implementation and photographs of demonstrations, products, and participant groups. These materials were reviewed descriptively to identify the activities undertaken and the outputs shown. No pre- and post-training test, structured observation instrument, consumer evaluation, sales record, or follow-up assessment was reported. The report therefore does not calculate changes in knowledge, skills, income, or business performance.

The source materials do not specify a reproducible recipe, ingredient quantities, processing conditions, storage period, or shelf-life assessment for either product. They also do not document botanical authentication, chemical analysis, or mosquito-repellency testing for PRANGI. These omissions limit product evaluation and replication. Findings from published formulation studies are used only to contextualize these limitations, not to supply missing steps or results for the local activity.

RESULT AND DISCUSSION

The activity brought together an introductory discussion and a practical demonstration of the two products. Figure 1 documents the presentation of materials and the demonstration

setting. The implementation account describes participants asking questions and receiving guidance during practice. This supports an account of interactive training, but no assessment was available to determine whether participants could repeat the procedures independently after the session.



Figure 1. Demonstration of materials and product preparation

Examples of BANTET and PRANGI are shown in Figure 2. The photograph records that products were prepared and displayed during the program. The spray packaging includes an antimosquito claim; this wording is part of the original product label and is not evidence of tested efficacy. Neither the photograph nor the descriptive account provides a basis for estimating product yield, production consistency, or shelf life.



Figure 2. BANTET and PRANGI product examples prepared during the activity

For BANTET, the immediate contribution was the demonstration of an alternative use for locally available bananas. Further development should specify the banana variety, maturity, recipe, processing conditions, and storage method. These factors need to be recorded before differences in quality can be interpreted. The banana-processing literature offers a useful framework for such development, while studies of consumer satisfaction with banana nuggets show that acceptance can be examined separately from the act of producing a sample (Aurore et al., 2009; Sulaiman et al., 2024). No consumer satisfaction result was reported for the Teluk Karang activity.

For PRANGI, a central limitation is the absence of a defined and evaluated formulation. Research on essential oils shows that repellent performance is a formulation- and test-dependent question (Nerio et al., 2010; Trongtokit et al., 2005). Sakulku et al. (2009) examined a citronella oil nanoemulsion, a preparation that should not be treated as equivalent to the spray demonstrated here. Similarly, laboratory research on individual plant-derived compounds concerns specified substances and experimental conditions, rather than the performance of an unidentified plant mixture (Hao et al., 2008).

Controlled comparisons of repellent products further illustrate why the presence of a plant ingredient is not enough to substantiate a protection claim (Fradin & Day, 2002; Rodriguez et al., 2015). The activity report provides no tests of mosquito avoidance, duration of protection, or disease prevention. It therefore cannot establish that PRANGI prevents mosquito bites or reduces dengue incidence. Further development would require confirmation of plant identity and appropriate evaluation of the actual formulation. As Maia and Moore (2011) explain, botanical origin also does not automatically establish product safety.

Figure 3 documents the participating community group, and Figure 4 records a group photograph with entrepreneurs. These images help establish the setting and people involved in the activity. They do not demonstrate business formation, continuing production, or changes in household income. The available record supports the completion of a training event and the presentation of product examples; longer-term outcomes remain unmeasured.



Figure 3. Community participants at the training activity



Figure 4. Group photograph with entrepreneurs

The distinction between participation and economic outcomes is important when interpreting a short training activity. Evidence on small-business training reports effects that vary across programs and contexts (McKenzie, 2021). Research involving women entrepreneurs likewise evaluates outcomes over time rather than inferring business improvement from attendance alone (de Mel et al., 2014). The Teluk Karang activity may serve as an entry point for further learning, but its economic contribution would need to be assessed through subsequent production and sales records.

A follow-up program could connect practical production with simple costing, record keeping, and customer feedback. Studies of business practices and simplified financial education provide relevant support for including these topics in future assistance (Drexler et al., 2014; McKenzie & Woodruff, 2017). These components were not documented as part of the present training and should not be reported as completed activities. Similarly, evidence from personal initiative training and management consulting can inform the design of continued support, while remaining distinct from this program's descriptive results (Bruhn et al., 2018; Campos et al., 2017).

The main limitations are the absence of participant counts, standardized skill assessment, reproducible product specifications, and follow-up observations. Photographs provide useful documentation but cannot replace these measures. Future reporting should distinguish attendance, demonstrated skills, product quality, independent production, and commercial outcomes. This would allow the practical value of the activity to be assessed without attributing changes to training that have not been observed.

CONCLUSION

The Teluk Karang activity introduced banana nugget and lemongrass spray preparation through explanation, demonstrations, discussion, and guided practice. Its documented outputs were a completed training activity and examples of BANTET and PRANGI. The available evidence does not establish independent production competence, increased income, or the mosquito-repellent efficacy of the spray. Further assistance should prioritize clear production specifications, product evaluation, skill assessment, and basic business records. These steps would provide a stronger basis for deciding whether the products can support sustained community enterprise.

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