

Community Empowerment through Vegetable Processing: Insights from Green Mustard Nugget Production in Petiyintunggal Village

Siti Shoimah, Ari Rusnia Widhya F., Cinta Ayu Amaliyah, Hasmah, Handariyatul Maimunah

Universitas Islam Darul 'ulum

sitishoimah@unisda.ac.id, ari.2021@unisda.ac.id, cinta.2021@unisda.ac.id,

hasmah.2021@unisda.ac.id, handariyatul.2021@unisda.ac.id

Article History:

Receive: July 19th 2024

Revised: July 30th 2024

Accepted: August 24th 2024

Keywords: Vegetable Consumption, Green Mustard Nuggets, Community Empowerment

Abstract: Vegetable consumption is crucial for a balanced diet, providing essential vitamins, minerals, and fiber. In Indonesia, however, average vegetable intake is significantly below the World Health Organization's recommendation, contributing to health issues like stunting, particularly among vulnerable groups such as children and pregnant women. To address this, a community service initiative by Universitas Islam Darul 'Ulum Lamongan focused on Petiyintunggal Village, East Java, aimed to enhance vegetable consumption through green mustard nugget production. The program targeted PKK (Family Welfare Empowerment) members, providing them with training in nugget preparation, from ingredient handling to packaging. Results showed significant improvements in participants' knowledge and skills, with post-training assessments indicating a rise in understanding of nutritional benefits, production processes, and packaging. This initiative successfully combined health benefits with economic opportunities, contributing to local economic resilience and sustainable community development.

Introduction

Vegetable consumption is an essential component of a balanced, healthy diet. Vegetables are rich in vitamins, minerals, fiber, and various phytochemical compounds that play important roles in maintaining body health. However, the level of vegetable consumption in Indonesia is still relatively low. According to data from the Indonesian Ministry of Health (2019), the average consumption of vegetables and fruits by Indonesians is only 173 grams per day, far below the World Health Organization (WHO) recommendation of 400 grams per day. Low vegetable consumption, especially among children and pregnant women, potentially increases the risk of stunting. Stunting or

dwarfism is a condition of growth failure in children due to chronic malnutrition, which can impact children's physical and cognitive development. Efforts to prevent stunting align with the Sustainable Development Goals (SDGs), particularly SDG 2, which aims to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture.

One strategy to increase vegetable consumption is through diversification of processed vegetable products. Processing vegetables into more attractive and long-lasting products, such as vegetable nuggets, can be an alternative to increase interest in vegetable consumption, especially among children. Additionally, processing vegetables into value-added products also opens business opportunities for the community, particularly housewives.

Community service is an essential activity that should be conducted regularly to provide the public with more advanced knowledge. In general, communities greatly benefit from exposure to new ideas that encourage them to think more progressively about preserving and utilizing their environment, particularly in their immediate surroundings.

In this community service initiative, the focus of entrepreneurship development socialization and training was on the Family Welfare Empowerment (PKK) organization. The PKK's extensive reach within communities makes it an effective vehicle for disseminating information and skills (Rodiah S., Lusiana E., and Agustine M, 2016). The Family Welfare Empowerment (PKK) is a community-based movement that emerged in response to societal needs. PKK teams operate at various administrative levels, from the national level down to villages and urban wards, and are organized into different working groups. The PKK's mission encompasses improving health standards, promoting environmental sustainability, and encouraging planned living in all aspects of life, including family financial planning and the habit of saving (Dahniar, 2014: 8). This approach to community development, centered on the PKK, aims to leverage existing social structures to introduce new entrepreneurial skills and knowledge, potentially leading to improved economic conditions and overall welfare for families and communities.

Objectives and Benefits

The objectives of this community service program are:

1. To increase the knowledge and skills of PKK cadres in processing green mustard into nugget products.
2. To develop entrepreneurial spirit among PKK cadres through the production of value-added vegetable products.
3. To increase public awareness of the importance of vegetable consumption through

diversification of processed vegetable products.

Method

1. Location and Time

This community empowerment program is part of the Thematic Community Service Program (KKN-T) of Universitas Islam Darul 'Ulum Lamongan 2024 in Petiyintunggal Village, with a work program focused on the production of Mustard Greens Nuggets. The activity takes place in Petiyintunggal Village, Dukun District, Gresik Regency, East Java during the period of July–August 2024. The target audience for this activity is the women members of the Family Empowerment and Welfare (PKK) organization in Petiyintunggal Village.

2. Ingredients and Preparation Method

The main ingredients for the Mustard Greens Nuggets include fresh green mustard, all-purpose flour, breadcrumbs, eggs, garlic, shallots, salt, pepper, and cooking oil. Optional flavor enhancers may also be used. These ingredients are carefully selected to ensure a balance of nutrition and taste, with the green mustard serving as the primary vegetable component.

The preparation process begins with cleaning and briefly boiling the green mustard before finely chopping it. Garlic and shallots are minced to release their flavors. The core mixture is then created by combining the chopped mustard greens, flour, eggs, minced garlic and shallots, along with salt, pepper, and optional seasonings. This mixture is thoroughly blended to ensure even distribution of ingredients and flavors. The formed mixture is then steamed in a greased mold for 20-25 minutes. Once cooled, it is cut into desired shapes, dipped in beaten egg, and coated with breadcrumbs. The nuggets are then deep-fried until golden brown. The final step involves packaging the cooled nuggets in attractive, hygienic containers with informative labels detailing the composition, production date, and expiration date. This process ensures a product that is not only nutritious and delicious but also marketable and safe for consumption.



Figure 1: Packaging label for mustard greens nuggets

3. Implementation Method

The method applied in the training for making green mustard nuggets is a workshop-seminar, which consists of a seminar or informational session followed by hands-on training and practice. The informational session is conducted through lectures and discussions to provide the participants with basic knowledge. The content of the informational session includes: 1) General information on the nutritional content of green mustard; 2) Tools and materials for making green mustard nuggets; and 3) Information on designing labels and packaging for green mustard nuggets to ensure they are hygienic and have a high market value. The training and discussion phase is conducted through practical exercises, followed by interactive Q&A sessions and experience-sharing between the instructors and participants. Participants are given pre-test and post-test questionnaires to assess their basic knowledge of green mustard nugget production before and after the workshop-seminar.

Result

This training activity was attended by approximately 15 women from the PKK (Family Welfare Empowerment) group and local community members. The training session lasted for 2 hours and was conducted by students from KKN Unisda for the PKK members in Desa Petiyintunggal. The event was opened by one of the students, followed by a welcome speech from the PKK chairperson. The PKK chairperson expressed a positive response to the green mustard nugget-making activity, hoping that it would

provide benefits to the community, particularly in improving family income. The event continued with a pre-test to assess the PKK members' knowledge about green mustard nuggets. This was followed by a theoretical explanation from the instructor, covering the process of making the nuggets, their nutritional benefits, packaging, and calculating the selling price of the green mustard nuggets.

Here are the results from the questionnaires distributed to the training participants:

Pre-Test Results:

- a. **Knowledge of Green Mustard Nutritional Content:** Before the training, 40% of participants had basic knowledge about the nutritional content of green mustard, while 60% were unaware of its nutritional benefits.
- b. **Awareness of Nugget-Making Process:** Only 30% of participants had heard of or had knowledge about the process of making nuggets, while 70% were unaware of how to make green mustard nuggets.
- c. **Understanding of Packaging and Marketing:** Before the training, only 20% of participants understood the importance of hygienic packaging and attractive product marketing, while 80% were unfamiliar with this concept.

Post-Test Results:

- a. **Knowledge of Green Mustard Nutritional Content:** After the training, 90% of participants understood the nutritional benefits of green mustard, with only 10% still needing more knowledge.
- b. **Awareness of Nugget-Making Process:** After the training, 85% of participants were able to explain the steps of making green mustard nuggets, while 15% needed additional guidance.
- c. **Understanding of Packaging and Marketing:** After the training, 80% of participants understood the importance of hygienic packaging and were able to calculate an appropriate selling price for green mustard nuggets, while 20% still felt they needed further study.



Figure 2 Documentation of the green mustard nugget-making training.

Discussion

The training on green mustard nugget-making yielded significant positive outcomes for the participants, particularly in enhancing their knowledge and practical skills. Initially, the pre-test results revealed that a large proportion of the participants lacked basic knowledge in several key areas related to the production and marketing of green mustard nuggets. Specifically, 60% of the participants were unaware of the nutritional content of green mustard, 70% had no prior knowledge of the nugget-making process, and 80% did not understand the importance of hygienic packaging and effective marketing.

However, the post-test results indicate a substantial improvement across all areas after the training. The percentage of participants who understood the nutritional benefits of green mustard rose dramatically from 40% to 90%. Similarly, awareness and understanding of the nugget-making process increased from 30% to 85%, showing that the hands-on practice and theoretical explanations were effective in enhancing the participants' competence in this area. Furthermore, 80% of the participants gained an understanding of hygienic packaging and pricing strategies, a significant increase from the initial 20%, demonstrating the training's effectiveness in providing essential business skills that are crucial for product commercialization.

The improvement in knowledge and skills observed among the participants highlights the value of targeted, practical training programs in community development. By empowering the women of the PKK group with these new skills, the training not only enhances their ability to produce a nutritious and marketable product but also contributes to the broader goal of improving family income and economic resilience

within the community. The positive feedback from the PKK chairperson further emphasizes the potential long-term benefits of such initiatives, suggesting that similar training programs could be replicated in other communities to achieve similar outcomes.

In conclusion, the training successfully addressed the initial knowledge gaps among the participants, equipping them with the necessary skills to produce and market green mustard nuggets effectively. This, in turn, is expected to have a positive impact on the local economy by providing the participants with a viable means of income generation. The significant increase in knowledge and understanding post-training underscores the importance of continuing such community-oriented educational programs to foster sustainable development at the grassroots level.

Conclusion

The training on green mustard nugget-making in Desa Petiyintunggal significantly improved participants' knowledge and skills, addressing initial gaps in their understanding. The pre-test revealed that many participants were unaware of the nutritional benefits of green mustard, the nugget-making process, and the importance of hygienic packaging and marketing. However, post-training results showed a dramatic increase in knowledge: 90% of participants understood the nutritional benefits, 85% could explain the nugget-making process, and 80% grasped the concepts of hygienic packaging and pricing. These improvements highlight the effectiveness of the training in empowering participants with practical skills for producing and marketing a nutritious product. The success of this initiative not only enhances local economic resilience and family income but also aligns with broader goals of sustainable community development

Acknowledgements

We extend our sincere gratitude to Universitas Islam Darul 'Ulum Lamongan for the essential financial support that enabled the successful implementation of this KKN (Community Service Program). We also wish to acknowledge the valuable contributions of the village officials and residents of Petiyintunggal Village, Dukun District, Gresik Regency, whose active involvement and assistance were instrumental to the program's success. Furthermore, our appreciation goes to all members of the KKN team in Desa Petiyintunggal for their dedicated efforts and commitment, which were crucial in achieving the objectives of this initiative.

References

- Alaswad, A., & Kusnandar, K. (2020). Faktor-faktor yang mempengaruhi konsumsi sayur dan buah pada remaja di Indonesia. *Jurnal Gizi Indonesia*, 9(1), 97-105.
- Firdaus, M., & Rahmi, E. (2018). Pemanfaatan sayuran dalam pembuatan produk nugget. *Jurnal Katalisator*, 3(2), 100-109.
- Istiqomah, I., Shoimah, S., Setiawan, R. B., Ardiansyah, S. A., & Sholikhatus, N. V. E. Pemberdayaan Masyarakat melalui Pelatihan Budidaya Hidroponik Sayuran sebagai Upaya Pembentukan Agropreneur Muda. *J-ABDIMAS*, 19(2).
- Kementerian Kesehatan RI. (2019). Laporan Nasional Riskesdas 2018. Jakarta: Badan Penelitian dan Pengembangan Kesehatan.
- Kusnandar, K., Nurjanah, N., & Wulandari, E. (2021). Determinan stunting pada balita di Indonesia: Analisis data Riskesdas 2018. *Jurnal Gizi Klinik Indonesia*, 17(3), 96-107.
- Maulida, S., & Yunani, A. (2018). Peluang dan tantangan pengembangan usaha mikro kecil menengah (UMKM) dari berbagai aspek ekonomi. *Jurnal Ilmiah Manajemen dan Bisnis*, 2(1), 181-197.
- Pratiwi, A. M., & Saputra, D. (2019). Pengembangan usaha nugget sayuran sebagai alternatif diversifikasi olahan sayuran. *Jurnal Agroindustri Halal*, 5(1), 104-112.
- Shoimah, Siti, and Ali Muhajir. *Manajemen Pendampingan Usaha Mikro dan Kecil*. Eureka Media Aksara, 2023.
- Shoimah, S., Saputra, R. A. K., Umah, A. N., Sari, D. P. A. N., & Ismawati, I. (2021). Pelatihan Pembuatan Dan Pemasaran Online Nugget Pisang Sebagai Upaya Peningkatan Ekonomi Masyarakat Di Masa Pandemi. *Ekobis Abdimas: Jurnal*

Pengabdian Masyarakat, 2(2), 66-73.

Sulistiyowati, E., & Widyawati, P. S. (2020). Pelatihan pembuatan nugget sayur sebagai alternatif kudapan sehat untuk anak. *Jurnal Abdikarya: Jurnal Karya Pengabdian Dosen dan Mahasiswa*, 3(1), 63-67.

Widayati, E., & Rosida, D. F. (2020). Pemberdayaan ibu-ibu PKK melalui pelatihan pembuatan nugget sayur di Kelurahan Semolowaru, Surabaya. *Jurnal ABDI: Media Pengabdian Kepada Masyarakat*, 5(2), 114-118.

World Health Organization. (2019). Sustainable Development Goals (SDGs): Goal 2. Diakses dari <https://www.who.int/health-topics/sustainable-development-goals>

Yuliana, O. Y. (2018). Penggunaan teknologi internet dalam bisnis. *Jurnal Akuntansi dan Keuangan*, 2(1), 36-52.