

EMPOWERING WOMEN OF BHAYANGKARI RANTING DUKUH PAKIS THROUGH TRAINING IN MANUFACTURING FUNCTIONAL EDIBLE BIRDS' NEST DRINK WITH LOCAL FLAVOR

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Abstract

Edible bird's nest (EBN) functional drinks are beverages with numerous benefits, including anti-inflammatory and antiviral properties. The potential of EBN functional drinks in community service has been previously studied *in silico*. Additionally, the processing techniques for making EBN drinks in this community service are based on previous results from the 2021 Scientific Research program. This innovation offers numerous health benefits for those who regularly consume EBN. The EBN functional drinks in this community service have advantages when combined with other functional ingredients such as cloves and cinnamon. With these unique advantages, this innovation has significant commercial value due to its local flavor that is well-received by the Indonesian community. The aim of this community service is to train the Bhayangkari women of the Dukuh Pakis Branch to make EBN functional drinks. The methods used in this community service include needs surveys, EBN drink production, packaging, distribution permit processing, and marketing. The training for making EBN functional drinks has been successfully conducted at the Dukuh Pakis Police Sector by empowering the Bhayangkari women of the Dukuh Pakis Branch. This initiative not only may enhance their economic well-being but also strengthens community ties and contributes to public health improvements.

Keywords: edible bird nest, veterinary medicine, public health.

Abstrak

Sarang burung walet (SBW) adalah minuman fungsional yang memiliki banyak manfaat sebagai anti inflamasi dan antiviral. Potensi minuman fungsional SBW telah diteliti sebelumnya dengan menggunakan teknik *in silico*. Pada pengabdian kepada masyarakat kali ini, teknik pembuatan minuman SBW ini dilakukan sebagai lanjutan dari Program Penelitian Sains 2021. Inovasi ini telah memberikan banyak manfaat kesehatan bagi masyarakat yang rutin mengonsumsi SBW ini. Metode pembuatan minuman fungsional SBW menggabungkan dua bahan lokal asli Indonesia yaitu cengkeh dan kayumanis. Dengan inovasi ini akan menambah nilai komersial karena rasa lokalnya yang diterima baik oleh masyarakat. Tujuan pengabdian kepada Masyarakat ini adalah untuk melatih ibu-ibu Bhayangkari Cabang Dukuh Pakis dalam pembuatan minuman fungsional SBW. Setelah survei ke Kantor Polisi Cabang Dukuh Pakis, penyampaian materi dilakukan dengan bahan materi meliputi produksi minuman SBW, pengemasan, pengurusan izin produksi, dan pemasaran. Hasil pengabdian kepada masyarakat menunjukkan keberhasilan ibu-ibu Bhayangkari Cabang Dukuh Pakis dalam pembuatan minuman SBW. Selain itu, kegiatan ini diharapkan mampu meningkatkan perekonomian rumah tangga dan memperkuat komunitas ibu-ibu Bhayangkari Cabang Dukuh Pakis serta berkontribusi meningkatkan kesehatan masyarakat.

Keywords: sarang burung walet, kedokteran hewan, kesehatan masyarakat.

INTRODUCTION

The necessity of economically supportive activities for community groups like Bhayangkari women has been increasingly acknowledged (Wambrauw 2023). Their current engagements, which are largely non-productive, fail to contribute to their economic independence and overall well-being. This predicament is a significant barrier to their active and enthusiastic participation in social activities. There is a pressing need for initiatives that can transform these engagements into economically beneficial activities.

In the era of Industry 4.0, the role of women is increasingly critical as societies and economies worldwide undergo rapid transformations driven by technological advancements (Rapitasari et al., 2024). The primary issue faced by our partners, the Bhayangkari women of Dukuh Pakis, is the lack of activities that support their economic well-being. Their current activities are mostly limited to brief meetings, social gatherings, and other non-productive engagements. This situation leads to boredom and a lack of enthusiasm for participating in social activities. On the other hand, our partners need activities that can help improve their economic conditions.

EBN functional drinks have emerged as a promising solution to this issue. These drinks, which have been patented with Patent IDS000007207 (Ningrum, 2023a) and researched under the ENIMAS LPPM UWKS program 2022, offer a dual advantage. They are not only beneficial for health, boasting anti-inflammatory and antiviral properties (Ningrum et al., 2023a), but also have high commercial value (Benjakul & Chantakun, 2022). This makes them an ideal focus for a

community service program aimed at economic empowerment. Therefore, this community service program aims to provide training to teach our partners about selecting raw materials, formulating edible bird's nest (EBN) drinks, mixing EBN drink formulas, packaging, and marketing EBN drinks.

This initiative aligns with broader objectives of enhancing the practical application of academic research and fostering stronger ties between universities and community partners. By translating research findings into practical training and economic opportunities, the program seeks to address both immediate community needs and long-term global challenges, particularly in the realm of public health.

The training program was designed for the Bhayangkari women of Dukuh Pakis Branch covers several key areas. First, it focuses on the selection of raw materials, ensuring that participants understand the importance of quality in producing effective EBN functional drinks. This includes identifying the best sources of edible bird's nests and other functional ingredients like cloves and cinnamon, which enhance the drink's health benefits and local flavor (Saati et al., 2021; Eneojo & Martins, 2024; Setyowati et al., 2023). Next, the program addresses the formulation of EBN drinks. Participants are taught how to create effective and palatable formulations, balancing the functional benefits with taste and marketability. This involves understanding the properties of different ingredients and how they interact to produce a drink that is both beneficial and enjoyable to consume. The training also includes practical sessions on mixing the formulations. Participants learned the techniques and processes required to

produce EBN drinks consistently and at scale. This hands-on experience is crucial in building their confidence and competence in production (Gwangwava, 2021). Packaging is another critical aspect covered in the training. Proper packaging not only ensures the quality and safety of the EBN drinks but also enhances their market appeal (Saha 2022). Participants were taught about different packaging materials and techniques, as well as the importance of labeling and branding in attracting customers.

Finally, the program includes training on marketing the EBN drinks. Participants learn about market analysis, pricing strategies, and effective sales techniques. This equips them with the skills needed to successfully launch and sell their products, contributing to their economic independence and overall community prosperity. Hence, the Community Service Program for the Bhayangkari women of Dukuh Pakis Branch addresses a critical need for economically supportive activities. By providing comprehensive training in the production and marketing of EBN functional drinks, the program offers a practical solution that enhances both economic well-being and public health. This initiative is not only empowers the participants but also strengthens university-community ties and contributes to global health efforts. Through this program, we demonstrated the practical application of academic research, fostering a collaborative and progressive approach to addressing contemporary community challenges.

METHODS

Needs Survey for EBN Functional Drink Production

The community service team conducted a needs survey with our partner, the East Java Regional Police, specifically the Dukuh Pakis sector located in Surabaya, East Java. A total of 20 Bhayangkari women has participated in this training. The selection criteria for the participating Bhayangkari women was based on age, specifically those aged between 20 and 40 years.

Production of EBN Functional Drinks

The objectives of this invention were achieved through the technical solution of composition of edible bird's nest beverage with cinnamon and clove from Patent IDS000007207 (Ningrum, 2023). This composition maintains the nutritional potential of the edible bird's nest as food. The EBN, after being thoroughly cleaned using a soaking method with Seamon method (Ningrum et al., 2023b), was mixed with cloves and cinnamon in a pot. Subsequently, standard drinking water and rock sugar were added to the mixture, which was then heated until boiling.

Packaging

Glass jars of 70 mL size were first sterilized using the boiling method. Once sterilized, the cooked EBN functional drink was aseptically transferred into the jars. The jars were then sealed with appropriately sized aluminum foil and heated to ensure a proper seal. Subsequently, the jars were closed using caps that fit the bottle neck size. Labeling was performed according to regulatory requirements, including the brand name, production address, production code, expiration date, and ingredient contents.

Distribution Permit Processing and Marketing

Marketing techniques for products without a distribution permit are very limited. Therefore, this community service program assisted the community in obtaining distribution permits and marketing their products. In this section, we invited a keynote speaker from edible bird's nest industry, PT. Sumber Alam Borneo Indonesia Makmur. The procedures for obtaining a distribution permit and marketing techniques have been taught through a workshop followed by a participant Q&A session.

RESULTS AND DISCUSSION

Bhayangkari is an organization of police wives whose members take on multiple roles, not just as spouses but also as role models for their families and communities (Rompegading & Ruing, 2023). The community service activity through training in manufacturing functional edible bird's nest drink with local flavor was successfully performed in Bhayangkari women. This initiative stemmed from the previous research under the 2021 Scientific Research Program Grant Number 161/E4.1/AK.04.RA/2021. The functional edible bird's nest drink, developed as a result of prior research, was effectively introduced to the community, specifically to the Bhayangkari Ranting Dukuh Pakis organization in Surabaya. A total of 20 participants attended the training organized by the Faculty of Veterinary Medicine, Universitas Wijaya Kusuma Surabaya. The training highlighted participants' prior experience with consuming bird's nest, revealing that only 2 out of 20 had previously consumed it. This finding underscored the importance and efficacy of the

seminar in transferring knowledge and raising awareness about the health benefits of bird's nest consumption (Figure 1). Participants displayed a strong willingness to incorporate bird's nest drinks into their daily routines post-training. Additionally, the training discussed the business potential of bird's nest drinks. The challenges of succession and the growth opportunities for a small family business has the potential to grow and expand as the demand for this commodity increases (Setiawan & Dhewanto, 2021).



Figure 1: EBN functional drinks seminar

A keynote speaker from PT. Sumber Alam Borneo Indonesia Makmur, an industry leader in bird's nest products, emphasized the types of products that could be produced and marketed at a household level (Figure 2). The training may empower the women of Bhayangkari to leverage this opportunity as a small and medium-sized enterprise (UMKM) to improve their household economies (Andita et al., 2024). During the Q&A session, half of the participants expressed interest in starting a bird's nest drink business, while the other half were more inclined towards personal consumption. However, a significant challenge identified was the high cost of bird's nest, which can reach up to IDR 13 million per kilogram (Al Reza et al.,

2023), making some participants hesitant to pursue the business seriously. Despite this, the positive outcome of the training was the shift in participants' mindset towards recognizing the substantial health, beauty, and economic potential of bird's nest, as endorsed by the Dukuh Pakis Police Chief. The Police Chief's support was pivotal, encouraging the Bhayangkari women to develop bird's nest drinks as an UMKM venture to bolster their daily economies. This endorsement was well-received by participants, given its influence on their activities.



Figure 2: Business potential of bird's nest drinks training

The assessment of the training outcomes was conducted by the service team. All participants successfully presented their group projects, adhering to the evaluation methods aligned with the SNI 8998:2021 standard for bird's nest (BSN, 2021), including proper packaging and labeling. The participants also had the opportunity to innovate with the packaging and ingredients of the bird's nest drink, incorporating local flavors such as cloves and cinnamon, which emphasized nationalistic and creative capabilities. Each group's unique approach to the training output is expected to enhance participants' problem-solving skills in the

competitive UMKM landscape. The development of functional bird's nest drinks also addresses the risk of unimplemented Bhayangkari programs in the current year. Discussions with the Dukuh Pakis Police Chief further suggested that the training could be extended to field studies in the bird's nest industry to deepen participants' knowledge. As a best practice, participants can adopt the methods demonstrated by the service team in producing functional bird's nest drinks. It is crucial to consider participants' conditions and abilities when producing these drinks, and the simplified production process introduced during the training is intended to facilitate independent community production.

CONCLUSION

A community service activity successfully trained Bhayangkari women in manufacturing functional edible bird's nest drinks with local flavors. The training introduced health benefits to the Bhayangkari Ranting Dukuh Pakis organization in Surabaya, with only 2 of 20 participants having prior experience. This highlighted the seminar's effectiveness, with participants keen to incorporate the drinks into their routines. The training also explored the business potential of bird's nest drinks, despite high costs and succession issues. A keynote speaker emphasized household-level product potential, empowering Bhayangkari women to become UMKM entrepreneurs, supported by the Dukuh Pakis Police Chief. Training outcomes met SNI 8998:2021 standards, with participants innovating on packaging and ingredients. Recommendations include further industry studies and simplified production processes for independent community production.

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