

## Increasing Production Capacity and Competitiveness of Bakery and Dairy SMEs in Babussalam Al-Firdaus Islamic Boarding School, Malang

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### Abstract

Babussalam Al-Firdaus Islamic Boarding School is located in Bocek village, Karangploso, Malang Regency, East Java. In the beginning, the boarding school leaders tried to build economic independence by producing pasteurized milk in a simple way carried out by the students. Some of the obstacles faced by the students are the short shelf life of pasteurized milk products and simple packaging. The leadership of Babussalam Al-Firdaus Islamic Boarding School has the desire to develop dairy and bakery products but does not have sufficient knowledge in processing these products. In the 2021 Doktor Mengabdi (DM) activity, the initiation of the establishment of SMEs involving students at the Babussalam Al-Firdaus Islamic Boarding School was carried out through the diversification of dairy-based processed products and bakery products. The activities carried out in the first year were observation of partner problems, exploration of partner potential, providing online material on various bakery products, dairy processing technology, packaging and storage technology, food quality assurance and Good Manufacturing Practice (GMP), training on dairy and bakery products including various breads, various cakes, pastries, yogurt, and milk candy, production equipment assistance to facilitate various bakery and dairy production activities. To increase the income of these business units, assistance and training are carried out aimed at increasing product diversity, improving packaging design, increasing production capacity, increasing the selling value of the final product, assistance in processing SPP-IRT and halal certificates/labels, and marketing assistance both offline and online. As a result of this activity, the DM team has tested new bakery product formulas to be given to DM partners. In addition, the DM team has conducted socialization and taught materials related to improving packaging design, assistance in applying for SPP-IRT, assistance in applying for halal certificates, and new product development materials. Partners have also received training/practice in making bakery products such as wasant, cake, and sweet bread. This year, the partner's NIB has been successfully obtained.

**Keywords:** Bakery; Processed Milk; Babussalam Al-Firdaus Islamic Boarding School; SPP-IRT; Halal Certificate

### INTRODUCTION

Islamic boarding schools are among the long-standing educational establishments in Indonesia that have emerged as vital components in the advancement of community education (Nurcholis et al., 2022).

Initially, the primary objective of pesantren was to educate and empower individuals, known as santri, in the domains of religious sciences and da'wah. However, in light of contemporary

developments, pesantren are expected to play a crucial role in fostering community development and empowerment across all sectors, including economics.

An example of a pesantren in Malang Regency that is anticipated to assist its santri in attaining financial independence is Babussalam Al-Firdaus Islamic Boarding School.

Babussalam Al-Firdaus Islamic Boarding School is situated in Bocek Village, Karangploso, Malang

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Regency, East Java, and is a contemporary Islamic boarding school.

Since 2007, the modern boarding school Babussalam Al-Firdaus has continued to pioneer developments in education, culture, and business.

Development of a milk-producing cattle breeding region is possible in the vicinity of Babussalam Al-Firdaus Modern Islamic Boarding School.

Conversely, subsequent to the training we conducted in 2021, partners encountered a number of challenges. These included the bakery and yoghurt business unit's processed products, which continued to be limited in variety and substandard in quality; the packaging design, which remained unattractive and failed to contend with comparable offerings on the market; the product marketing area, which remained confined to the boarding school canteen; and endeavors to broaden the marketing area.

Because of their flavor and the fact that they are simple to digest, bakery items enjoy a significant amount of popularity among consumers of all ages across the world. In addition, the availability of a wide variety of items, such as bread, cookies, biscuits, muffins, cakes, tortillas, rolls, wafers, and pies, has made their consumption much simpler. However, variations in processing settings and the quality of the raw materials cause a large number of biochemical changes, complex reactions, and physical modifications. These are the aspects of the food industry that are the most complicated and least understood to this day. The baking process has been found to have a poor assimilation of controls, which is the cause of many operational and product failures that have been detected (Bredariol et al., 2020; Cappelli et al., 2021; Jerome et al., 2019; Manik & Nur, 2021; Nur & Sunarharum, 2019; Nurul Badriyah et al., 2023).

It is necessary to provide assistance and training aimed at increasing product diversity, improving packaging design, increasing production capacity through the purchase of equipment in the form of ovens, which are more attractive to increase selling value, assistance in managing PIRT and

also assistance in managing halal labels, and marketing assistance both offline and online in order to increase the income of the business unit. These steps are necessary in order to accomplish the goal of increasing the income of the business unit.

With the assistance and training provided through this community service endeavor, this pesantren business unit is anticipated to expand its operations. In addition to selling its products in the pesantren canteen, these items will also be available for sale outside the pesantren environment, specifically in the Karangploso region, Malang city, and its environs. Moreover, they will be capable of competing with similarly processed goods, thereby achieving economic independence (Nurcholis et al., 2022).

By participating in the "Dokter Mengabdi" community service program, boarding school students are anticipated to enhance their knowledge, develop the ability to manufacture a diverse range of processed food items, increase the economic value of milk and bakery-based products, and extend their shelf life. As a result of the mentoring and training provided during this service activity, it is anticipated that the boarding school will develop into a new SME with robust economic independence, specializing in bread and milk processing (Nurcholis et al., 2022)

The primary objectives of this program are as follows: 1) to impart processing technology knowledge to the students enrolled at Babussalam Al-Firdaus Islamic boarding school, and 2) to grant the institution economic or financial autonomy through the establishment of small and medium-sized enterprises (SMEs) specializing in bakery and milk processing.

## **MATERIAL AND METHOD**

To assess the effectiveness of the program, the Dokter Mengabdi approach includes the following: observation, discussion or counseling, trials and training, demonstration or practice, monitoring, evaluation, and post-program counseling/consultation (Nurcholis et al., 2022).

### **Data Collection**

The data gathering phase is conducted through the fieldwork of students participating in Dokter

Mengabdi activities. This data gathering yields the anticipated advantages of more comprehensive information, so ensuring that the proposed problem-solving approach remains accurate and on-target. The data collection phase consists of the following: 1) Identification of challenges encountered by the Babussalam Al-Firdaus Islamic boarding school; 2) Identification of processed products produced by the institution; 3) Identification of resources available at the Babussalam Al-Firdaus Islamic boarding school, including student potential for the establishment of small and medium-sized enterprises; and 4) Identification of viable alternatives to dairy and bakery products. The data gathering phase is conducted through the fieldwork of students participating in Doktor Mengabdi activities. This data gathering yields the anticipated advantages of more comprehensive information, so ensuring that the proposed problem-solving approach remains accurate and on-target. The data collection phase consists of the following: 1) Identification of challenges encountered by the Babussalam Al-Firdaus Islamic boarding school; 2) Identification of processed products produced by the institution; 3) Identification of resources available at the Babussalam Al-Firdaus Islamic boarding school, including student potential for the establishment of small and medium-sized enterprises; and 4) Identification of viable alternatives to dairy and bakery products.

Training in the Technology of Food Processing Community service partners receive multiple trainings on processing technologies, packaging procedures, and food quality assurance throughout this phase. This undertaking will be executed in its entirety in order to facilitate the production of a wider range of goods for end users. Pre-existing products will undergo enhancements to improve their quality. Various forms of training, which are detailed below, will be delivered to service partners.

1) Instruction in the production of a variety of milk-based goods (kefir, yogurt, milk candies, etc.). 2) Instruction in the production of a variety of pastry goods (various breads, various pastries,

various cakes). 3) Support in the manufacturing process of diverse bakery items and dairy products. 4) Training on proper storage and packing methods and product label.

Assistance with Business Management and Marketing

Mentoring community service partners in business management and marketing is a critical phase that can significantly improve their well-being and revenue (Babussalam Al-Firdaus Islamic Boarding School). The following are examples of activities that may be offered at this phase: 1) Instruction in business feasibility and economic calculations (NPV, IRR, B/C ratio, and payback period computations); 2) Support in doing a SWOT analysis (strengths, weaknesses, opportunities, and threats) to ascertain an effective and suitable marketing strategy, 3) Support in the process of organizing the registration of products for the home industry (PIRT), 4) Assistance with the development of traditional and digital marketing networks, 5) Business evaluation.

## **RESULT AND DISCUSSION**

### **Trials and formulation of dairy and bakery products**

The formulation of bakery and dairy products is facilitated through the participation of students in the Doktor Mengabdi Program. The investigation aimed to ascertain the most influential phases of formulation and procedure for the production of bakery and milk products. The product of the experiment is illustrated in Figure 1.



**Figure 1a.** New product wasant



**Figure 1b.** New product banana cake



**Figure 1c.** Sweet bread products

**Students undergoing food processing technology training (theory and practice)**

Extension activities were conducted to augment the understanding of community service partners (students and owners at the Babussalam Al-Firdaus Islamic Boarding School, Malang). Dairy and milk processing technology, bakery processing technology, packaging and storage technology, quality assurance, and food safety are some of the activities associated with providing lectures. Each talk lasted approximately one and a half hours.

**Practice for the students**

Staged food product education is designed to equip students with the knowledge and skills necessary to operate a bakery and dairy product. The training activity documentation is illustrated in Figures 2 and 3.



**Figure 2.** New Product Creation Practice



**Figure 3.** Product making practice

**SSOP and SPPIRT, and Halal Regulation**

Sanitation and hygiene are the primary challenges that both new and established industry implementers encounter. Collaboration among students of Babussalam Al-Firdaus Islamic Boarding School is currently required for the establishment of a milk and bakery production business unit, guidance on dairy product production and marketing, business economic calculations, product design planning and promotion, marketing and business evaluation, and product design planning and promotion socialization and taught materials about improving packaging design, applying for SPP-IRT, applying for halal certificates.





Figure 3. Discussion between Doktor Mengabdikan Presenters and Santri



Figure 4. DM team of lecturers, students, and leaders of Babussalam Al Firdaus Islamic Boarding School

### Monitoring and Evaluation

To ascertain the autonomy of service partners in the manufacturing of bakery and milk products, monitoring is conducted. Staff members from the Research Institute and Community Service of Universitas Brawijaya were present at this event to assess and monitor the program.

### Publication via digital media platforms

Community service initiatives have been disseminated through two digital media platforms, as demonstrated in the subsequent hyperlink:

<https://tabloidmatahati.com/empat-doktor-universitas-brawijaya-pkm-di-pm-babussalam-al-firdaus/>.

<https://tp.ub.ac.id/dosen-ub-bantu-tingkatkan-bakery-ponpes-babussalam/>

<https://tabloidmatahati.com/doktor-universitas-brawijaya-mengabdikan-ajari-santri-babussalam-al-firdaus-produksi-roti/>

### IMPACT OF ACTIVITIES

As a result of this activity, the DM team has tested new bakery product formulas to be given to DM partners. In addition, the DM team has conducted socialization and taught materials related to improving packaging design, assistance in applying for SPP-IRT, assistance in applying for halal certificates, and new product development materials. Partners have also received training/practice in making bakery products such as wasant, cake, and sweet bread. This year, the partner's NIB has been successfully obtained.

### CONCLUSION

Through observation, discussion, lectures, practical applications of bakery and milk processing technology, packaging and storage technology, and several efforts were made to expand students' knowledge. Students engage in the formulation of bakery and dairy products before doing practical exercises. The DM team tested new bakery product recipes for distribution to DM partners through this work. Furthermore, the DM team has done socialization and taught materials about improving packaging design, applying for SPP-IRT, applying for halal certificates, and developing new products. Partners have also received instruction and practice in preparing various bakery products such as wasant, cake, and various sweet breads. The partner's NIB was successfully secured this year.

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