

Building Awareness about Food Security among Santri at Ulumul Qur'an Islamic Boarding School, Stabat City, Langkat Regency

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ABSTRACT

Ulumul Qur'an Stabat Islamic Boarding School in Langkat Regency, North Sumatra, seeks to build awareness of food security through a hydroponic farming program. This program aims to empower Santri with knowledge and skills in hydroponic cultivation to utilise idle land in Pesantren. This activity was carried out through several stages: coordination meetings, installation of hydroponic installations, delivery of educational materials, and training in hydroponic farming practices. The program results showed a significant increase in Santri's understanding of and skills in food security and hydroponic techniques. Santri became more aware of the importance of food security and its role in maintaining environmental sustainability. In addition, the program also aroused Santri's interest in developing hydroponic farming as a potential independent business. Challenges such as limited funding and technical assistance must be addressed for program sustainability. This program increased Santri's awareness and skills in sustainable agriculture, making Pesantren a community empowerment model based on education and food security. It is hoped that Pesantren can continue to develop this program to support food security at the local and national levels.

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INTRODUCTION

Islamic boarding school is one of the oldest Islamic educational institutions in Indonesia. It plays a strategic role in shaping the character and morals of the younger generation (Christoper et al., 2024). The pesantren functions as a religious education institution and as a centre for fostering independence, developing skills, and shaping the students' character. Thus, pesantren have great potential to contribute to the surrounding community's social, economic, and environmental development (Wadi, 2020).

Ulumul Qur'an Stabat Islamic Boarding School, located in Langkat Regency, North Sumatra, is an Islamic boarding school firmly committed to developing its students' potential. Established in 1986, this pesantren has strived to provide a balanced education between religious knowledge and life skills so that students are not only able to master religious knowledge but also can adapt to the times (Nurhaliza & Siregar, 2020; Fauzi, 2017). One of the initiatives taken by the Ulumul Qur'an Stabat Islamic Boarding School is to utilize the sizeable empty land for hydroponic farming activities to build awareness of the importance of food security among students.

Food security is an essential and multidimensional global issue that covers social, economic, political, and environmental aspects. In Indonesia, food security is one of the government's priorities in achieving food sovereignty. Food security can be defined as a condition of fulfilling food needs for all households, which is reflected in the availability of sufficient food, both in quantity and quality, safe, equitable and affordable (Suryana, 2014). In addition, food security also includes aspects of accessibility and stability of food supply, which depend not only on production but also on sustainable distribution and consumption.

Islamic boarding schools have a strategic role in raising public awareness about food security, mainly due to their proximity to local communities and ability to mobilize communities through religious approaches (Madusari et al., 2020). Therefore, efforts to build awareness of food security are very relevant through the community service program implemented at Pondok Pesantren Ulumul Qur'an Stabat. This program not only provides knowledge and skills about hydroponic farming but also promotes the values of self-reliance and environmental sustainability.

The hydroponic method was chosen because it has several advantages over conventional farming methods, such as more efficient land use, less water requirements, and the ability to produce high-quality food products relatively quickly (Putri, 2020). In addition, hydroponics is also considered more suitable for use in pesantren environments with limited land and water resources. In this context, the hydroponic farming program is expected to be one of the solutions to optimize the utilization of vacant land in pesantren and, simultaneously, become a means of education for Santri to understand the importance of food security.

With the training and practice of hydroponic farming, the students are expected to develop

valuable new skills for their daily needs and future economic development. This activity is also expected to form a positive mindset and behavior related to the environment and food security so that Santri cannot only meet its food needs independently but can also contribute to maintaining environmental sustainability.

Through the implementation of this program, a more productive and sustainable Pesantren environment can be created, as well as the formation of students who are highly aware of the importance of food security. In the long term, this program is expected to have a broader positive impact on Pesantren and the surrounding community by making Pesantren a model of community empowerment based on education and food security.

METHODOLOGY

This community service activity occurred at Pondok Pesantren Ulumul Qur'an Stabat, Langkat Regency, North Sumatra. The location is on Jl. K. H. Wahid Hasyim No.3, Kwala Bingai, Kec. Stabat. The service method includes several stages of activities that are adjusted to the problems faced, namely:

1. Coordination Meeting of the Service Team with the Partner Group

The first stage was a coordination meeting between the service team and the partner group, namely the students and pesantren administrators. This meeting aims to harmonize training objectives and discuss activity plans. This is important to ensure that all parties have the same understanding of the program and their respective roles during the activity.

2. Installation of Hydroponic Installation

The next stage was the installation of a hydroponic system on the sleeping land in the pesantren. Hydroponics was chosen because this technique does not require a large area of land; it only requires a simple installation that can be made at a low cost. This installation allows students to grow crops efficiently and environmentally friendly. This activity also provides direct experience for students in applying the knowledge they have gained.

3. Material Delivery and Motivation

To increase the students' understanding, materials were delivered about food security, the importance of farming, and hydroponic techniques. The material was delivered by experts in agriculture and followed by an interactive discussion session. Motivation is also provided to encourage Santri to be more enthusiastic and interested in agricultural activities and see it as part of the solution to food security in their environment.

4. Hydroponic Farming Training

This training will provide Santri with practical skills in managing hydroponic farming. The training materials include basic hydroponic techniques, familiarity with growing media, different hydroponic systems, required nutrients, and steps from seeding to harvesting. The training also discusses industrial opportunities from hydroponic farming, providing greater insight into this activity's economic potential.

5. Provision of Supporting Tools for Hydroponic Farming

In addition to the training, students are provided with supporting equipment to start and develop hydroponic farming. This equipment includes small-scale hydroponic installations, growing media, and the required nutrients. The purpose of providing these tools is to ensure that students can continue practising the skills they have learned after completing the training.

RESULTS & DISCUSSION

The community service program at Pondok Pesantren Ulumul Qur'an Stabat was implemented through several stages, namely coordination meetings with partner groups, installation of hydroponic installations, delivery of materials and motivation, and hydroponic farming training to students. Each stage has specific objectives and is arranged systematically to ensure that the program runs according to plan and provides maximum student benefits (Manalu et al., 2024).

1. Coordination Meeting with Partner Group

The initial stage of this community service activity is a coordination meeting between the implementation team and the pesantren as a partner group. This meeting aims to synergize the training objectives between the training team and the pesantren and plan and coordinate all aspects of community service activities. In this meeting, various essential matters such as program objectives, activity schedules, equipment needs, and division of tasks between the implementation team and the pesantren were discussed. The results of this meeting showed that the pesantren was very enthusiastic and fully supported the implementation of this program.

2. Installation of Hydroponic Installation

The next stage was the installation of hydroponic installations on the sleeping land in the pesantren. The installation was carried out by considering the land's physical condition and the hydroponic system's operational needs. The hydroponic installation process includes selecting planting media, installing irrigation systems, and preparing nutrients needed for plant growth. Based on observations, previously unproductive idle land can now be optimally utilized for hydroponic farming activities. This provides added value in terms of the environment and as a practical

3. Material Delivery and Motivation

One of the obstacles faced is the need for Santri to gain more understanding and interest in agriculture. To overcome this, educational materials were delivered on the importance of food security and hydroponic farming. The material was delivered as seminars involving experts and then interactive discussion sessions between participants and speakers. This material aims to provide Santri with an understanding of the importance of food security, the benefits of hydroponic farming, and its economic potential. In addition, this activity also aims to motivate students to be more interested and actively involved in hydroponic farming activities.

4. Hydroponic Farming Training

The core stage of this program is the hydroponic farming training for Santri. This training is comprehensively designed to equip Santri with knowledge and practical skills in hydroponic plant cultivation. The training materials include basic hydroponic techniques, planting media selection, irrigation system management, nutrient management, and harvesting techniques. In addition, the training also includes simulations and hands-on practice to ensure that students truly understand and can apply the techniques taught. Based on the evaluation, the training successfully improved the student's understanding and skills.

5. Providing Supporting Tools for Hydroponic Farming

To support the program's sustainability, the implementation team also provided the pesantren with supporting tools for hydroponic farming. The equipment provided was tailored to the specific needs identified during the preparation and training stages. These tools aim to ensure that hydroponic farming activities can continue even though the community service program has been completed. With adequate supporting equipment, the pesantren is expected to develop hydroponic farming as one of the leading sustainable activities.

6. Program Results and Impact

The results of implementing this community service program showed that students at the Ulumul Qur'an Islamic Boarding School in Stabat experienced a significant increase in knowledge, skills, and interest in hydroponic farming. In terms of knowledge, the students better understood the concept of food security and the importance of hydroponic farming as one solution to overcome food security problems. In terms of skills, students can apply basic hydroponic techniques in daily practice, such as managing planting media, organizing nutrients, and performing plant maintenance.

Another visible impact is the increased environmental awareness among students. Through

hydroponic farming activities, students learn to care more about the surrounding environment, such as keeping the land clean, reducing hazardous chemicals, and utilizing resources efficiently. In addition, this program has also generated an entrepreneurial spirit among students, with some starting to think about developing hydroponic farming as an independent business in the future (Seran et al., 2024).

The success of this program is inseparable from the full support of the pesantren and the students' enthusiasm (Purba & Sudarwati, 2024). Nevertheless, several challenges need to be overcome for its sustainability, such as limited funds for the purchase of hydroponic equipment and the need for continuous technical assistance. Therefore, closer cooperation between the pesantren, the government, and the private sector is needed to support the development of hydroponic farming as part of the food security program in the pesantren environment.





Figure 1. Photo of Community Service Implementation

Overall, this community service program positively contributed to building awareness of food security among the students of Ulumul Qur'an Stabat Islamic Boarding School. Through this program, the pesantren can become a model for developing sustainable hydroponic farming and supporting food security at the local and national levels.

CONCLUSIONS

This community service activity succeeded in increasing the awareness and skills of students at Pesantren Ulumul Qur'an Stabat in hydroponic farming. The program has completed most planned stages, with good acceptance from the partners. The students showed a significant increase in knowledge and greater interest in hydroponic farming as a solution to food security within the pesantren. Overall, this activity positively impacted building awareness about food security among the sentries and providing practical skills that benefit their future. This success is expected to be a model for developing similar programs in other pesantren with similar conditions and challenges.

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