

Food Management in *Pesantren* Based on Integrated Farm Education and Entrepreneurship

Khoirul Umam¹, Mumtaz Jinanul Janan², Isma Aulia Roslan³

^{1,2,3} University of Darussalam Gontor, Indonesia

Email: khoirul.umam@unida.gontor.ac.id¹, mumtazjanan@gontor.ac.id²,

ismaaulia@unida.gontor.ac.id³

Abstract

Food is one of many global challenges that require significant attention. Indonesia, with the majority Muslim population and the largest number of *pesantren* in the world, has become the second biggest food contributor in the world. It is inconsistent with the principles of Islam. This research is concerned with the implementation of an integrative approach to food management in *pesantren* through the integration of agriculture and entrepreneurship education. *Pesantren*, as a self-sustaining community, provides an ideal medium to explore sustainable practices. This research is a qualitative case using the triangulation method with both observation and documentation techniques. This research involves the implementation of a structured education program within the *Pesantren* that combines agricultural practices and entrepreneurial skills. The results highlighted that by integrating agriculture and entrepreneurship education, *pesantren* communities significantly contributed to reducing the number of food. The results of this research demonstrate the effectiveness of integrating agriculture and entrepreneurship education in reduction, honing skills, and fostering a sense of responsibility and sustainable practices among residents. The findings emphasize the importance of integrating education and entrepreneurship for holistic food management in *Pesantren*. The discussion delved into the social, economic, and environmental implications, highlighting the potential for scalability and adaptation in other similar settings. This integrative approach does more than solve the food problem; instead, it also contributes to developing people skills and sustaining the community in *Pesantren*.

Keywords: food management, *pesantren*, farm education.

Introduction

Food is a global issue that is frequently discussed at international events and is included in the 12th point of the Sustainable Development Goals. A study on food in the world shows that 31% of food purchased ends up as. Moreover, more than a third of all food produced globally ends up as (Russell et al., 2017). This amounts to 1.3 billion tons of food, including bread, milk, fresh vegetables, fruits, and meat (Lipinski et al., 2016). Losses due to food amount to 10,300 trillion in industrialized countries and 4,701 trillion in developing countries (Godfray et al., 2010). The average household in developed and developing countries makes 14 million purchases, which leads to food per year. Global

losses amount to 24% of all food prepared for human consumption (Hidayat et al., 2020).

Based on data from the Ministry of Home Affairs on December 31 2021, the Muslim population in Indonesia was 237.53 million, equivalent to 86.9% of the country's population of 273.32 million people (Asiyah & Hakim, 2022), the country with the largest Muslim population in the world, should have a small amount of food. However, in reality, the amount of food in Indonesia is still very high. According to the Economist Intelligence Unit, Indonesia ranks second in the world for contributing the most food and food loss, with a quantity of 300 kg of food kilograms per capita per year. Most of the food comes from households, hotels, restaurants, caterers, supermarkets, and retail outlets. When accumulated, this amounts to 13 million tons of food each year (Srijuntrapun, 2018). Suppose this amount is distributed in the form of proper food to the people of Indonesia. In that case, it will eliminate poverty because it is equivalent to 11 percent of Indonesia's population, or around 29 million people (Agusalim et al., 2018). Meanwhile, the poverty rate as of March 2022 is only 9.51 percent of Indonesia's population (Chaerul & Zatadini, 2020). Of course, if this is well realized, it will create *balдах thayyibah*.

Most research conducted by most people is about the factors that influence the behavior of food, without explaining the appropriate efforts of these factors so that food can be reduced or even disappear (Truong et al., 2019). One of them is Prasetyo's research, which concluded that income level, meal frequency, education level, gender, and the number of household members are things that affect the level of food (Prasetyo & Djuwita, 2020). A series of studies, of them are oriented toward factors that affect food.

The research "Food Management in *Pesantren* based on Integrated Farm Education and Entrepreneurship" expands the scope of research on food wastage by focusing on the implementation of concrete solutions. Most of the previous research, as described in the context of Prasetyo, tends to focus on the factors that influence food wastage behavior without exploring concrete measures to address this issue. In this context, this research contributes by providing integrated education and entrepreneurship-based solutions in the *Pesantren* environment. While previous studies noted factors such as income level, meal frequency, education level, gender, and number of household members that influence food wastage, this study involves concrete actions in the form of education and entrepreneurship programs that can reduce food wastage (Pradini et al., 2016).

As such, this research can be considered a progressive step as it not only identifies factors that influence food wastage but also proposes concrete actions that can be implemented within the Pesantren environment. With this approach, this research has the potential to provide practical guidance to reduce food wastage in Pesantren communities and can be adapted for similar environments.

In addition to being the country with the largest number of Muslims, Indonesia is also the country with the largest number of pesantren in the world, reaching 31,385 pesantren with 4,373,694 students (Pebrianto F. Airlangga, 2021). With this number, it is clear that there is an economic turnover with a large amount of consumption that can empower the pesantren community's economy and support the Indonesian economy to achieve prosperity. However, in reality, the phenomenon of food still occurs in pesantren (Febrianto et al., 2021).

Integrated Farm Education and Entrepreneurship in Pesantren is a holistic approach that combines agricultural knowledge with entrepreneurial skills, creating a symbiotic learning environment. In this context, Pesantren serves as an ideal setting for cultivating sustainable practices through hands-on experiences. The integrated model involves incorporating farming activities into the educational curriculum, allowing students to engage in the entire agricultural process, from cultivation to harvest. Simultaneously, entrepreneurship education equips them with business acumen to market and sell the produce. This interconnected approach not only promotes self-sufficiency but also addresses food by instilling a sense of responsibility and resourcefulness. By immersing students in both farming and entrepreneurship, Pesantren aims to foster a generation that not only appreciates the value of agriculture but also possesses the skills to contribute to local economies and reduce food within their communities (M. Fajar Laksana, n.d.).

The phenomenon of food is also an issue that pesantren in Indonesia are trying to overcome (Syamsuri, 2016). As one of the countries with the most and largest pesantren in the world, of course, there are hundreds of thousands and even millions of students who have a significant impact on food (Mukri & Tamam, 2021). The food phenomenon still occurs in pesantren. With this relatively large amount, it is necessary to have a strategy to prevent and manage food to save food security (Fathrul Quddus, 2021).

Researchers have reviewed several previous studies related to the analysis of food management for saving food resources such as research conducted by

Ramadhita, et.al (2021) that the number of consumers influences the amount of food. Factors that encourage food from consumers are unsuitable food flavors and taking too many portions (Ramadhita et al., 2021). Abdul Hamid (2018) Rational consumers are consumers who intelligently determine commodities for self-benefit and public benefit. Saving food resources can be realized through consumption behavior with several rules that can be used as a guide to realizing rationality in consumption (Graham-Rowe et al., 2014). Indicators of rational consumers can be seen, among others, from consumption behavior that is not full or does not live luxuriously, *israf*, *tabdzir*, *safih*, balance in consumption, and prohibition of consumption of harmful goods and services. Coupled with 1). *Halal* and *Thayyib* principles, 2). Principles of Generosity and Justice, and 3). The principle of *Maslahah* (Hamid, 2018).

In addition, various studies prove that *pesantren* have an important role in saving food resources, Tirta (2017)(Ningsih, 2017), Arip (2017)(Syaprudin, 2019), Maharani, et.al (2016), (Maharani & Hidayat, 2020), Zaelani Adnan (2018), (Adnan, 2018). have successfully conducted research for saving *pesantren* food resources with various strategies. saving *pesantren* food resources is carried out by the people, and for the people, this indicates that the concept of the *pesantren* economy is able to provide opportunities for saving food resources and is also intended to advance the *pesantren* economy (Febrianto et al., 2021).

The data above shows that there are various kinds of economic potentials in *pesantren*, this is proof that *pesantren* are able to save food resources through food prevention and management strategies in the *pesantren* kitchen. In its value, the *pesantren* provides religious values that make awareness of good and wrong actions and a frugal spirit to its human resources (Widodo, 2010).

The economic progress of *pesantren* is one of the efforts to improve welfare in Indonesia. Because *pesantren* position the economic aspect as a form of worship. Suppose the analysis of food management in *pesantren* kitchens both in terms of suppliers and production to produce output. In that case, it will create new economic potential that can be utilized and have a positive impact on society (Bakhri, 2019).

The novelty of this research lies in the integrated approach to managing food wastage in *Pesantren* through integrated agricultural education and entrepreneurship. Previous studies tend to focus on identifying factors that influence food wastage, without providing concrete solutions to address this problem. Meanwhile, this study not only identifies these factors but also offers

solutions through agricultural education integrated with entrepreneurship (Khan, 2020). This integrated approach provides an edge by empowering learners through practical experience in agriculture and entrepreneurship training. It not only teaches sustainability and responsibility but also provides the necessary skills to market agricultural products effectively. Thus, this research not only understands the problem of food wastage in pesantren but also provides concrete solutions that can be implemented to reduce the level of food wastage and stimulate local economic development through innovative educational approaches (Rakhman et al., 2023).

The research method used is qualitative field research, in which research produces descriptive data in the form of written or oral data from the research that the author observes. Moreover collaborate with additional information from library data. By using a literature approach, researchers can better explore and understand the problem of food. Therefore, this research will further elaborate on how to utilize food from the kitchen combined with the concepts of education, agriculture, and farming so that pesantren have a strong spirit of independence.

Result and Discussion

The Discussion of Food

The European Parliament's Agriculture and Rural Affairs Committee defines food as all products discarded from the food supply chain. These products may be used for economic, appearance, or expiry reasons, even though they are still viable and potentially consumable by humans. These products are simply lost without any alternative use, resulting in adverse environmental effects, economic costs, and lost revenue for the company (Garske et al., 2020). Food means the loss of food that occurs at the end of the supply chain; this loss of food is caused by the behavior of consumers or retail businesses so that food that should still be consumed is d (Cahyana et al., 2022).

Based on some of the definitions above, food in this study is food that can still be consumed but is not eaten or d. Consumable food can be avoided because it is food that is d either due to too much purchase or poor storage. The food in question is all types of food in the form of ready-to-eat food, packaged food, snacks, and fresh ingredients that have not been processed (Siaputra et al., 2019).

Indonesia ranks second in the world in terms of its significant contribution to food and food loss, with each individual generating around 300 kilograms of

d food each year. Most of this food comes from households, hotels, educational institutions, restaurants, catering services, supermarkets, and retail stores. When all this food wastage is added up, it amounts to an alarming 13 million tons of food d every year (Chabada et al., 2013).

Imagine for a moment the transformational potential of diverting this massive amount of d food to benefit the people of Indonesia. Suppose we can distribute this surplus food to the people who need it. In that case, it has the potential to address the issue of poverty for around 29 million people, equivalent to around 11% of Indonesia's total population (Saputra & Asih, 2017). The consequences of this food wastage problem go far beyond just the huge amount of food d. (Aktas et al., 2018) This surplus could be used to address hunger, improve nutrition, and enhance the well-being of many families currently living in poverty. It is a valuable resource that can be harnessed to strengthen food security and support social and economic development (Ose, 2017).

To tackle this problem, a comprehensive approach involving government policies, increased consumer awareness, and cross-sector cooperation is required (Bambang Hermanu, 2022). By reducing food wastage, we not only save precious resources and reduce environmental impact but also have the potential to liberate a large portion of Indonesia's population from poverty (Masrurah & Farid, 2019). Indonesia's enormous challenge regarding food wastage is a stark reminder of the untapped potential to tackle hunger and poverty by managing the already within our grasp (Kusumaningtjar et al., 2023). It's not just about food, it's about transforming lives and building a more sustainable and equitable future for all Indonesians.

Indonesia is known as the country with the largest number of Muslims in the world and the country with the largest number of *pesantren* worldwide, reaching 31,385 *pesantren* with a total of 4,373,694 students (Pebrianto F. Airlangga, 2021). With such a large number of *pesantren* and students, it is clear that there is great potential to create a significant economic turnover through large consumption, which in turn can empower the economy of *pesantren* communities and support the development of the Indonesian economy as a whole, to achieve better welfare (Avisena, 2021).

However, the reality is that the phenomenon of food still occurs in many *pesantren*. Although *pesantren* have great potential in high consumption amounts, the challenge that needs to be overcome is managing food resources more efficiently and sustainably. In this context, there is a great opportunity to

reduce food and utilize resources more wisely to enhance the economic benefits of large amounts of consumption (Fauroni, 2011).

Along with reducing food wastage in pesantren, the role of pesantren in supporting local and national economies and contributing to more sustainable development can be strengthened. Through awareness of the importance of managing food wisely, pesantren can be more active in achieving community welfare and inclusive economic growth in Indonesia (Sulaeman et al., 2021).

Definition of *Pesantren*

Pesantren, as the largest Islamic educational institution in Indonesia, has a strategic and important role as an educational institution that forms religious, moralist, and spiritualist characters and behaviors, besides scientific education and socio-economic education as well as entrepreneurship and independence are also formed to be able to interact well with the community (Chusmeru et al., 2017). As a religious and community-based educational institution that has the potential to develop the people's economy, pesantren are expected to be able to make reforms that can optimize their potential (Ningsih, 2017).

Pesantren as an Islamic educational institution, have five elements and characterizes of the fundamental; the cottage, the mosque, the Islamic book (*kitab kuning*), students (*santri*) and scholars (*Kiai*). In addition, to the five elements just as the elements of the complement, for example, hall, field, cooperatives, health services and others. Pesantren, as delivered by Kiai Sahal Mahfudh serves not only as institutions of education and religious social institutions, but also has a central role in the development of society and economy (Hakim & Aksa, 2021). Article 43 of Law No. 18/2019 on pesantren emphasizes that pesantren have a community empowerment function with an orientation towards improving the welfare of pesantren and society in general. This function reflects the role of pesantren as educational and social institutions that not only focus on religious aspects but are also responsible for the development of social and economic welfare in their environment (CME-RJ, 2019).

Furthermore, Article 44 of Law No. 18/2019 on pesantren states that in carrying out the function of community empowerment, pesantren must carry out activities to prepare independent and skilled human resources. It is intended that individuals who leave the pesantren have adequate abilities to play an active role in the development process, both in local and national contexts. The activities in question can include educational programs that provide practical

skills, such as agricultural education and entrepreneurship training, in line with the research objectives of "Food Management in *Pesantren* based on Integrated Farm Education and Entrepreneurship" (CME-RJ, 2019).

Thus, the law provides strong legal support for the integrated approach promoted in this study, as it supports the efforts of *pesantren* to become not only religious and educational institutions but also the driving force for economic and social empowerment in the community.

With its potential, the characteristics of Pondok *Pesantren* have a significant opportunity to become a foundation for overcoming various challenges faced by society, both in the aspect of development and its impact on society as a whole. In the Pondok *Pesantren* environment, there is a collection of values and spiritual life that is an integral part of the education applied by maintaining and combining Islamic teachings with social and cultural contexts. The objectives of Pondok *Pesantren* can be categorized into two, namely general objectives and specific objectives (Fatmsari, 2016). In general, Pondok *Pesantren* aims to guide students to have an Islamic personality and be able to become preachers with in-depth religious knowledge. On the other hand, specifically, Pondok *Pesantren* aims to prepare students to be able to apply the knowledge and religion they learn in their daily lives and share it with the community (Ningsih, 2017).

A significant challenge in facing globalization and modernization is the empowerment of human resources (HR) and economic aspects. However, *pesantrens* are often underestimated because they focus more on the hereafter than on worldly affairs, so they are only seen as a place for moral and spiritual development and learning Islamic religious knowledge (Adawiyah, 2018). In fact, according to Ningsih (2017), because *pesantren* are occupied by tens, hundreds, and even thousands of residential students, they have the potential to become positive consumers and produce, if managed properly, will make a large contribution to saving food resources (Ningsih, 2017).

Pesantren, as one of the Islamic educational institutions has an important role in efforts to save the country's food resources, among others: 1) Producing balanced and qualified individuals in terms of physical, spiritual, and intellectual aspects, as well as having self-awareness and practical morals; 2) Producing a workforce and intellectuals who contribute to the service of society; 3) Developing a group of scientists and scholars who advance and develop modern Islamic scientific disciplines (Rahim, 2006).

Pesantren can realize this role by 1) Responding positively to community

needs, 2) Preserving the scientific tradition, 3) Encouraging social change in society, and 4) Integrating tradition with aspects of modernity to meet the needs of community development and empowerment (Rahim, 2006). Pesantren, as a production institution, has power in several aspects, such as having land used for various activities, having a workforce that can be utilized, and having the technology to process or produce goods or services. Thus, Pondok Pesantren can be considered as one of the producers in the relevant sector. For example, if a pesantren is active in the agricultural sector, then it can be considered a producer in the agricultural sector. Similarly, if a pesantren is engaged in the industrial sector, it can be said that the pesantren is a producer in the industry (Moh. Nasih et al., 2009b). Pesantren can strengthen the economy through food management efforts to save food resources and build the character of santri, who play a role as community developers in the future (Moh. Nasih et al., 2009a).

One pesantren that has adopted a kitchen management model combined with farm and entrepreneurial education innovations is Pesantren Dzikir Al Fath in Sukabumi, West Java. Founded by KH Fazar Laksana, the pesantren initially functioned as a majlis dzikir and was established in 1996 in Nangeleng, Sukabumi. Then, in 2008, the pesantren moved to Karang Tengah, Gunung Puyuh District, and brought unique innovations into the world of pesantren. Pesantren Dzikir Al-Fath has a variety of programs that include religious knowledge, formal education from kindergarten to college level, and entrepreneurial opportunities. In addition, the pesantren also provides opportunities for students to learn Sundanese arts and culture. With an approach that covers three important aspects, namely education, economy, Sundanese arts and culture, and religious knowledge for da'wah, this pesantren has become a recognized institution in Sukabumi City (Sidik, 2019).

In the education sector, the pesantren has achieved international accreditation. In the economic sector, there are various economic facilities such as traditional medicine, motorcycle repair shops, savings and loan cooperatives, canteen, wholesalers, and Al-Zumar cooperatives. While in the field of Sundanese arts and culture, there are activities such as Ngagotong Lisung, the traditional game Bola Leungeun Seuneu, the martial art Pencak Silat Maung Bodas, and the Prabu Siliwangi Islamic Museum. Pesantren Dzikir Al Fath upholds the principles of education, economy, cultural arts, and religion, all of which are adapted to the needs and demands of the times. This makes the pesantren an attractive option for the community, which has recognized its role

and contribution to the community (Sidik, 2019).

The Management of Food

Management comes from the term "manage" and in the Big Indonesian Dictionary is defined as directing, controlling, organizing, and striving to improve, develop, and be responsible for certain tasks. Management is a process that helps formulate policies and goals and provides oversight of all aspects involved in implementing and achieving these goals (Bambang Hermanu, 2022). Management can be understood as management, an activity process that involves planning, organizing, directing, and supervising the efforts of organizational members and the use of other organizational resources to achieve the goals set by the organization (Wrihatnolo & Nugroho, 2007).

Food management is a systematic approach that seeks to reduce food and its associated impacts throughout the earth's life cycle, starting with natural resource use, production, distribution, and consumption, and ending with decisions about recovery or final disposal.(Hidayat et al., 2020) Food is a growing problem in modern society and is an untapped source of energy that will mostly just end up rotting in landfills. Food must be managed properly, as food will become a serious problem that must be faced as it can cause various losses. For every food loss, there are also environmental and economic costs to be paid as well as food natural resources. With losses from various sectors, food requires solutions and must be reduced by providing good management (Affandy et al., 2015).

Management refers to the goal or outcome to be achieved through social change, which is to give people the ability to meet their needs, whether physical, economic, or social. The principle of management involves mastering economic capabilities that include the use and management of production, distribution, and service mechanisms (Sidqoh, 2018). There are three stages in the management process, namely: 1) Awareness, which involves raising the awareness of the community and program organizers about the potential around them as well as new opportunities from both internal and external sources; 2) Capacity Building, which involves providing programs or skills to targets that can manage something; and 3) Empowerment, which involves giving power, authority, and opportunities to targets based on their qualities and expertise (Wrihatnolo & Nugroho, 2007).

According to Harry Hikmat (2001), several internal factors hinder maximum management. These factors include (1). lack of trust between

individuals, (2). lack of ability to innovate and be creative, (3). easily give up and despair, (4). have low aspirations and ideals, (5). difficulty in delaying the pleasure of the results of work, (6). limitations in understanding of time (Harry Hikmat, 2001).

Pesantren Economic Development through Food Management Based on Integrated Agricultural Education and Entrepreneurship Business Units

Based on the field findings, economic development in the pesantren through the integrated agricultural business unit results in increased income. Respondents stated that the business unit made a positive contribution to the operations of the pesantren. Although not the main source of income, the integrated farming business unit helps cover operational costs, strengthening the financial stability of the pesantren. Furthermore, the pesantren, which has developed into a university, can provide full scholarships to all students, a result of the integrated farm and education approach. The concept of the alms economy is also implemented by giving zakat to capable alumni, supporting the construction of mosques and infrastructure inside and outside the pesantren area, and showing the positive impact of the sustainable economic approach implemented in the pesantren.

Income from Integrated Farm Education and Entrepreneurship in Pesantren is the main source of income to support operational costs (Kurniawan et al., 2019). Argued in his journal that the economic business model in Pesantren is directed to support its operational needs. Year after year, most of the operational costs of the pesantren can be met through the sale of products from the integrated agricultural business unit. The results of the analysis show that the income from the business unit contributes significantly to the pesantren's income, increasing their overall economic independence. Positive impacts are also felt by the surrounding community, who are involved in the management, creating jobs, and meeting their own needs.

Not only providing economic impact, the integrated farming business unit also plays a role in improving the knowledge and skills of the surrounding community. Through integrated farming activities, they learn about the care of various types of livestock and the cultivation of crops with modern methods, from the initial stage to harvest. Engaging in these activities provides practical experience in agriculture and fisheries, enhancing knowledge and skills that are beneficial to the development of the local community (M. Fajar Laksana, n.d.).

The feelings and views of students and communities involved in integrated

agricultural activities are in line with view (Rakhman et al., 2023), which states that economic development aims to provide knowledge and skills to meet physical, economic, and social needs. In addition to increasing income, this activity also provides additional knowledge and experience. Involving various parties in integrated agricultural activities indirectly opens up independent business opportunities and creates jobs. The surrounding community can increase the fishery business with the biofloc system without requiring a large area of land. The utilization of maggot cultivation as an alternative to organic processing can also increase sustainability and provide results for fish feed and plant media. Furthermore, by implementing hydroponic or aquaponic farming systems, they can utilize the limited land around them for vegetable cultivation, contributing to local food security.

Based on the results of interviews with several informants, the factors that support the economic development process through integrated farm business units in *pesantren* are as follows: "Must take advantage of existing opportunities." A similar statement was also confirmed by Mr. Gunawan in an interview conducted, namely: "The support, because this facility is already available. We do not have capital. From the results of these interviews, the main supporting factors in economic development through integrated agricultural business units in *pesantren* involve the availability of adequate facilities and infrastructure as well as the expertise of the management in their fields. In addition, self-motivation, honesty, and hard work are also considered important supporting factors. Even so, obstacles cannot be avoided in the implementation of the program. In the context of integrated farming activities, one of the main barriers identified is the marketing of activity results because not everyone knows how to market products effectively (Gunawan, 2023).

As revealed by Mr. Gunawan, program implementation does not always go without obstacles, and in integrated farming activities, marketing of products is one of the factors that hinders. This is due to a general lack of understanding of product marketing strategies. Mr. Gunawan stated, "Actually, there are no obstacles; it is the market. It is the market because not everyone can market." The interview results show that each informant has different constraints in integrated farming activities as part of the *pesantren*'s economic development efforts. Some constraints include pests and weather issues that can affect the quality of the crops and their selling price. Lack of human resources was also identified as an obstacle, especially during harvest season. However, the most significant constraint was recognized to be in terms of marketing due to limited

knowledge and human resources.

In practice, every activity is influenced by some factors, both internal and external. The same thing also occurs in the implementation of pesantren economic development through integrated agriculture. Various supporting and inhibiting factors play an important role in determining the smooth running of these activities; the first supporting factor is resources, which include land that can be used as adequate facilities and infrastructure, supported by administrators who act as expert facilitators in their fields. The second supporting factor is motivation, which comes from within oneself and is influenced by the intention and desire to develop oneself for the better. This motivation can be a major force in running integrated farming activities, especially when accompanied by honesty and determination to work hard.

Food Management Model at Dzikir al-Fath

In the beginning, the kitchen was carefully processed in an animal feed production facility located within the pesantren. There, it is transformed into high-quality animal feed, which is then used as a food source for the pesantren's livestock and fisheries. The products of the livestock business, such as ducks, fish, and chickens, are again integrated into the daily life of the pesantren. They are used as a source of food in the kitchens of the Santri, partly sold to support the sustainability of the pesantren.

In addition, the products from the ducks, namely eggs, are processed into salted eggs which are an important part of the snacks provided in the pesantren, also partly sold in the local market. Not only that, but the animal manure produced from the farm is also used as organic fertilizer through the decomposition process. Similarly, tofu pulp is used as animal feed, and the liquid is converted into organic fertilizer. All this creates a sustainable cycle in resource management.

The tofu, which is also produced in the pesantren's kitchen, is reused as a food ingredient, further contributing to food self-sufficiency. Organic fertilizers produced from livestock and kitchens help increase the productivity of secondary crops, vegetables, and soybeans. This has a positive impact on the food supply in the pesantren kitchen and is also used as fertilizer for herbal plants. In addition to food, the herbs grown with organic fertilizer are also used as herbal medicines at Etnofarmaka Al Fath, which is located inside the pesantren. The plan to convert humans and animals into biogas to be used as fuel in the kitchen shows the pesantren's commitment to protecting the

environment and minimizing it.

With this model, *pesantren* builds a strong foundation of self-sustainability. They not only provide food for the students and the community but also organize alternative health facilities and religious education. The *pesantren* upholds sustainability and environmental values while setting an example to its students on how to make the most of resources and manage them carefully. (M. Fajar Laksana, n.d.)

Conclusion

This study revealed that the economic development of *pesantren* through Food Management in *Pesantren* based on Integrated Farm Education and Entrepreneurship business units had a positive impact, especially in increasing the income and economic independence of *pesantren*. The results showed that despite obstacles such as the low quality of human resources and challenges in product marketing, the main supporting factors were adequate resources, self-motivation, honesty, and hard work. The integrated agricultural business unit also made a positive contribution to improving the knowledge and skills of the surrounding community, expanding independent business opportunities, and creating jobs. In conclusion, this approach has great potential to have a positive impact on the *pesantren* economy and the surrounding community, with challenges that can be overcome through improving human resources and effective marketing strategies.

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