

Utilizing Facebook Marketplace to Support PKK Groups in Ngoro Village, Ngoro District, Jombang Regency

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Abstract

Through training, this community service project seeks to introduce and develop a hydroponic plant system in Ngoro Village. The potential of Ngoro Village, especially the enthusiasm of the PKK group for the initiative to empower hydroponic plants, is the motivation. The fact that every household has limited land makes hydroponic gardening very important. This exercise utilizes training and socialization techniques. The aim of the outreach is to provide information about hydroponics, and the aim of the training is to practice growing green lettuce and other hydroponic plants. The success of this activity is evaluated using previously established metrics. Generally, sixty percent of those who receive invitations come to this activity. From the beginning of the material to the practicum, participants showed high enthusiasm. Thanks to this training, the residents of Ngoro Village can immediately start growing hydroponically.

Keywords: *ultivation; hydroponics plants; facebook marketplace*

Abstrak

Melalui pelatihan, kegiatan pengabdian masyarakat ini berupaya untuk mengenalkan dan mengembangkan sistem tanam hidroponik di Desa Ngoro. Potensi Desa Ngoro, khususnya antusiasme kelompok PKK terhadap inisiatif pemberdayaan tanaman hidroponik menjadi motivasinya. Keterbatasan lahan yang dimiliki setiap rumah tangga membuat berkebun hidroponik menjadi sangat penting. Kegiatan ini memanfaatkan teknik pelatihan dan sosialisasi. Tujuan dari penyuluhan ini adalah untuk memberikan informasi tentang hidroponik, sedangkan tujuan dari pelatihan ini adalah untuk mempraktikkan cara menanam selada hijau dan tanaman hidroponik lainnya. Keberhasilan kegiatan ini dievaluasi dengan menggunakan metrik yang telah ditetapkan sebelumnya. Secara umum, enam puluh persen dari mereka yang diundang hadir dalam kegiatan ini. Sejak awal materi hingga praktikum, peserta menunjukkan antusiasme yang tinggi. Berkat pelatihan ini, warga Desa Ngoro dapat langsung memulai bercocok tanam secara hidroponik.

Kata Kunci: *budidaya; tanaman hidroponik; facebook marketplace*

A. INTRODUCTION

There are eight hamlets in Ngoro Village, Ngoro District, Jombang Regency. The surrounding environment of the village residents already has their own plants such as ginger, turmeric and ginger, as well as plants such as banana trees, mangoes, longan and rambutan, indicating that the village

community is satisfied with these planting efforts. Apart from that, there is a scheme that requires residents to only plant fruit trees. Field surveys revealed that almost every resident's house was planted with trees that produce fruit. The results of this plant are often given to local village residents and even to people outside the village, including KKN students. The Family



Welfare Development Group, often called PKK, is one of the social groups in society that participates in this planting program. The PKK group is a local community organization that seeks to use its activities to inspire the community to develop as a village.

The level of prosperity of a village can be determined by how developed each member of the PKK group is, resulting in a group filled with many housewives. Village success is directly influenced by household prosperity, which is one of the indicators. Therefore, in this case the PKK organization sent invitations to related parties based on the focus of its activities. For example, the PKK Women's Organization, which collaborates with professional groups, empowers hydroponic plants that can be cultivated in soil. Hydroponics is a planting technique that uses water as a planting container, not soil, according to Hamdani et al. (2023). Minerals and nutrients from specific solutions are present in this water. Given its practical application and space-saving potential, this planting concept is easy to implement in any resident's home. Hydroponics has many uses, including food production, water conservation, and preserving growing space.

Advances in information technology have the potential to change culture, because the internet functions as a channel for sharing knowledge for society. The internet can be utilized by high-class individuals and small, medium and medium-sized companies to advertise their services. Septian et al, 2021. Presenting a media marketplace as a forum for promoting goods and the results of empowering hydroponic plants is the aim of this service, because even though information technology has advanced, many business actors still do not understand and know how to use digital media. (et al., Solihin, 2021). According to a 2020 opinion survey conducted by the Indonesian Survey Center (ISC) and the Indonesian Internet Service Providers

Since hydroponic systems ensure efficient management of air, energy and output in limited spaces, they represent a promising development in the field of plant growing. It

has been demonstrated that a model soilless plant system known as hydroponic culture allows target compounds to be absorbed without causing disruption to the soil matrix. Hydroponic culture has been used in experiments by a number of authors to eliminate various types of environmental pollution. Using hydroponically grown cabbage and a specific strain of the same species that can be produced quickly, researchers have shown how to remove pharmaceuticals contained in biosolids and wastewater.

Association (APJII), 73.7% of Indonesians accessed the internet that year. Information available until the end of March 2023 shows that there are 175.3 million Facebook users in Indonesia. This amounts to 82 percent of all internet users in the country, or 63.4 percent of the population, which is projected to grow to 276.36 million by 2023. Facebook has a market share of 81% and more than 130 million members worldwide. Due to continued user attention, Facebook applications are increasingly important as a tool for businesses looking for online sales leads. Facebook includes many features that make life easier, such as a marketplace function that makes online sales and marketing easier.

Promotional media is intended to highlight the advantages of a product and influence potential customers or clients. Facebook's market-representing feature is one of the most popular online sales channels. Similar to traditional markets, these websites or online programs make it easy to buy and sell goods from various stores. It is not the market owner's responsibility to supervise the goods being sold; they only provide premises and transactional support. The simplicity and convenience of doing business on Facebook Marketplace, where vendors send goods directly to consumers, is one of the supporting factors for its success. Judge, Rizki Aulia (2023).

Regarding the current use of Facebook as a promotional tool, Maqasid Syariah states that it consists of the phrase maqasid and sharia.

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Maqasid can indicate direction, leaning, or holding fast. This field of Islamic science provides an explanation of the basic ideas underlying Islamic religious law. As-Syatibi, on the other hand, stated that sharia is a path to a water source or a path to living a moral life. Al-Syatibi explained that maqasid sharia is the aim of the law revealed by Allah SWT in the book al-Muwafaqat. Syaltout and Sayis define sharia as a system of divine regulations that allows humans to live happy lives both in this world and in the afterlife. The aim of Islamic law in developing its regulations for the benefit of all mankind is known as maqasid sharia.

B. IMPLEMENTATION AND METHODS

There are two approaches used to carry out this activity: training and outreach. Providing information about hydroponics, including planting techniques, is part of the outreach approach. Definition, different ways of growing, as well as the advantages and disadvantages of hydroponic gardening are all covered in the content. Practicing growing hydroponic plants under the supervision of a trainer is a training approach. This practice needs to be carried out to measure the PKK group's understanding of hydroponic gardening.

Activity Targets

The PKK group in Ngoro Jombang village, most of whom are housewives, were the targets of this action. It is estimated that there are 28 people in the PKK organization as a whole. They are good targets for this community service activity because they are individuals who are very enthusiastic about growing plants.

Activity Stages

Table 1. Timeline of Stages of Community Service Activities

No	Activity Stages Kegiatan	Date Activity Survey
1	Activity Survey	1-7 June 2024
2	Preparation for activities	8-9 June 2024
3	Implementation of activities	10 June 2024

The hydroponic plant planting exercise in Ngoro Jombang Village is divided into three main stages. The schedule of activity stages is presented in Table 1.

Activity Survey




The initial stage of this activity is a field survey which will be carried out on 1-7 June 2024 on Saturday and Friday. The Ngoro Village community, especially the PKK group, needs to be surveyed regarding several things, including planting activities. Based on activity survey data, the people of Ngoro Village, especially the PKK group, have a high passion for farming activities.


Prepare Activities

The expert training team prepared equipment, tools and teaching materials for planting hydroponic plants on Saturday and Sunday, 8–9 June 2024, after completing the activity survey. Using training-related power points and projectors, a knowledgeable training team will present content using outreach strategies. So that people can easily buy hydroponic planting equipment, tools and materials can be obtained at the hydroponic equipment shop located in Ngoro Village. The following equipment and supplies are required for training.

1. Tool



Table 2. Equipment for Hydroponics Instructions

Tool's Name	Picture
Salver	
Skeewer	
Measuring cup	

Tool's Name	Picture
Hacksaw	

2. Material

Table 3. Resources for Training Requirements

Material's name	Picture
Rockwool	
Lettuce seeds	

3. Steps

- With a hacksaw bit, cut the rockwool into 2.5×2.5 cm pieces.
- Drill holes 0.5 cm deep in the rockwool.
- Insert one or two green lettuce seeds into the hole.
- Place the rockwool on a tray and wet it with water until it covers it completely.

Task Execution

On Monday 10 June 2024 at noon, a team of skilled trainers will carry out training at the Ngoro Jombang Village Hall after preparing all the necessary equipment, tools and materials. Each team participates in the implementation of activities to track participant actions to evaluate indicators of activity success. The implementation session for this activity consists of two main parts, including the following.

- Providing Hydroponic Plant Equipment Understanding, different planting techniques, as well as the advantages and disadvantages of hydroponic gardening are all covered in the information presented.
- Hydroponic Planting Techniques After distributing goods to activity participants, the PKK group will begin planting procedures. The PKK group is actually divided into five factions. Accompanied by

two teams of experts, each group carried out cooperative hydroponic plant planting exercises. This type of hydroponic wick system will be used.

Measures of Activity Success

These community service activities demonstrate the characteristics of success, are carefully designed to align with our planned targets and are based on extensive research. The three criteria that determine the success of hydroponic plant planting training activities are: level of participation, level of understanding of the material, and level of impact of the training.

Engagement Rate

Researchers evaluate participation levels to measure participant enthusiasm based on the number of individuals involved in the activity. The more people who participate, the more enthusiasm will grow for this hydroponic planting training activity. The success of this criterion is determined by the presence of a minimum of 50% of all Ngoro Village PKK group participants. To assess the effectiveness of these efforts, the expert committee will examine the records of the PKK group's presence in Ngoro Village at the Village Hall.

Depth of Understanding

Like any smart businessman, I understand the importance of materials. Researchers assessed participants' understanding of hydroponic planting materials based on certain criteria. One way to measure the success of this criterion is to look at the participants' commitment to completing the activity, their attention to the presenter, and their active participation in the question and answer session. To measure the effectiveness of this standard, the committee will closely monitor participant engagement and participation during the presentation of the material.

Impact of Training Level

Researchers used training impact criteria to assess the effectiveness of delivering material during practice sessions. One way to measure the success of this criterion is to observe participants who take the initiative to plant hydroponic plants independently and

actively discuss it. To measure the effectiveness of this action, activity participants will be divided into several groups. Two teams of experts will be there to accompany each group during the practical sessions. Apart from acting as practicum assistants, the expert team also closely monitors participants' activities during the practicum to assess their effectiveness.

C. RESULT AND DISCUSSION

After the activities have been prepared, the expert team can continue the implementation by planting hydroponic plants in the PKK group in Ngoro Village. Ngoro Village is an ideal location for cultivating hydroponic plants. Apart from the village residents' strong enthusiasm for farming activities, each resident's house also has a small garden. Growing hydroponic plants offers advantages because they can be suitable for planting in small yards. Hydroponic planting is a soilless method that relies on water as a medium and additional tools such as gravel and rockwool. This activity aims to provide benefits to the Ngoro Village PKK group in a sustainable manner. This group is actively involved in the development of Ngoro Village through various activities. The majority of Ngoro Village PKK administrators are housewives who have a lot of free time at home in addition to their other responsibilities.

There is potential for PKK women in Ngoro Village to utilize their free time by cultivating hydroponic plants in their own homes. In exploring the world of hydroponic plant cultivation, their main goal is to share their expertise and insight with fellow residents of Ngoro Village. This is because the PKK group has a strong organizational structure and is a forum for village community activities. This has the potential to become social capital that can empower villages. This activity was carried out on Monday 10 June 2024 at around 10.00-12.00 at one of the PKK members' houses in Ngoro District, Jombang Regency. Only 15 of the 28 PKK members were expected to attend the event, even though invitations had been sent. The results of this

activity are described in two stages, which are outlined in the activity implementation plan.

Hydroponic Plant Material



Figure 1. Resource Person for Hydroponic Plants

Various advantages of hydroponic gardening are highlighted in research on this technique, such as efficiency in using water and nutrients, optimizing available space, and maintaining precise control of the growing environment. Compared with conventional farming methods, the author highlights the advantages of hydroponic systems, especially NFT, in producing high-quality and productive vegetable crops. They classify hydroponic systems into six categories, with NFT being the most popular for producing a variety of vegetables. The roots of plants grown using a hydroponic system are supported by various media, such as rice husks, perlite and coconut air. The performance of hydroponic cultivation is highly dependent on maintaining ideal pH and TDS levels.

There are three material topics presented. Let's start with the definition of hydroponics. This material is important to communicate as a starting point for participants to understand the concept of hydroponic plants. Next, the second material discusses various hydroponic planting techniques. The speaker introduced seven types of hydroponics, including drip systems, EBB and flow systems, nutrient film techniques (NFT), deep water cultivation (DWC), wick systems, aeroponics, and deep flow techniques (DFT). Each of the seven models has its own advantages and disadvantages based on specific conditions in the field. Lastly, information is available regarding the pros and cons of hydroponic plant cultivation.

In terms of benefits, one of the advantages that stands out is 1) increasing the guarantee that plants are free from pests and

diseases. (2) Plants grow faster and utilize water and fertilizer resources efficiently, (3) If plant death occurs, easy replacement options are available, (4) Plants can thrive in locations that are usually unsuitable for their growth, (5) There is no vulnerability to flooding, erosion, drought, or other environmental factors. Although hydroponic growing has its advantages, there are some disadvantages to consider. These include the need for significant financial investment on a commercial scale, the need for regular and thorough equipment maintenance, the need for close monitoring of plant growth, constant water availability, and the challenges of dealing with non-recyclable waste from the substrate. After the three material topics were discussed, participants were invited to ask what they had about hydroponic plants. There were participants who asked about hydroponic systems that had not been discussed in the previous material, especially aquaponic systems.

Diffusion through the boundary layer, also known as the stationary film, that encases the roots of hydroponic plants is hypothesized to play a role in the uptake of low concentrations of ions. Then, we postulated that diffusion across the boundary layer would be the rate-limiting factor for very dilute solutions and fast uptake rates, and that agitation of the solution could thin the film and enhance ion transfer to the root surface. To find out whether the uptake rate increased, some plants were cultivated in a stirred solution in the first experiment. The temperature of the solution can also be increased by stirring. Solute uptake rates may show indirect impacts on various plant activities when root temperature is also considered. It is therefore difficult to predict how temperature will directly affect solute uptake because plant characteristics such as growth rate, transpiration rate, translocation rate, and root respiration rate may be correlated with temperature variations. For example, a number of factors, including higher water viscosity, decreased root permeability, and decreased metabolic activity, can combine to

explain the decreased water uptake that occurs when temperature is lowered.

Practice of Empowering Hydroponic Plants



Figure 2. Group Representatives to See Plant Results

After the material has been presented, the next important step is to carry out hydroponic plant breeding. This is the initial stage in the entire process of cultivating hydroponic plants. The plant chosen for practical use is green lettuce seeds. To foster effective supervision and create a conducive environment for participants in planting practice, the participants were divided into five groups. Each group is assigned two teams of experts who will serve as practical assistants. Each group member gets the opportunity to plant green lettuce seeds. The following are the steps that must be taken when sowing green lettuce plants: (1) Use a small hacksaw to cut rockwool measuring 2.5 x 2.5 cm; (2) Put rockwool into the tray; (3) Make a hole in the rockwool 0.5 cm deep; (4) Put 1-2 green lettuce seeds into the hole; and (5) Spray water on the rockwool until it is wet and damp.

After explaining hydroponic planting, the next step is to use Facebook Marketplace as a promotional medium for hydroponic plants.

How to create a Facebook account specifically for hydroponic plants

1. Start by downloading the Facebook application from the Play Store.
2. Now, the next step is to create an account.



Figure 3. Create Account

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3. Please click the "Next" button located on this page.



Figure 4. Next Button

4. After you click on the previous command, the next step is to simply click register.

Figure 5. Register Account

5. After clicking register, the PKK hydroponic plant group Facebook account is now registered and ready to use.

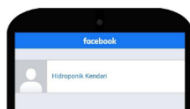


Figure 6. Account Registered

6. The next step is to upload your Facebook account profile photo.



Figure 7. Upload Profile Photo

7. Once a profile photo is entered or provided, the home page will be displayed.



Figure 8. Profile Photo

8. After the home page appears, the next page is to log in to your Facebook account.

Tips for Selling on Facebook Marketplace

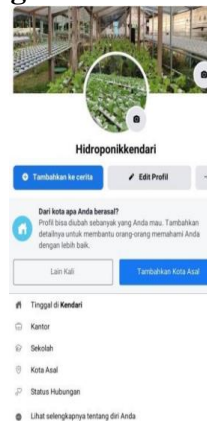


Figure 9. Account Dashboard

Selling on Facebook Marketplace is simple - all you need is a Facebook account. Here are several ways or tutorials for selling on Facebook Marketplace:

1. Access your Facebook account

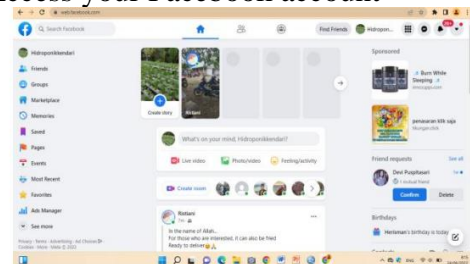


Figure 10. Facebook Account

2. Once you're logged in, just click Marketplace.

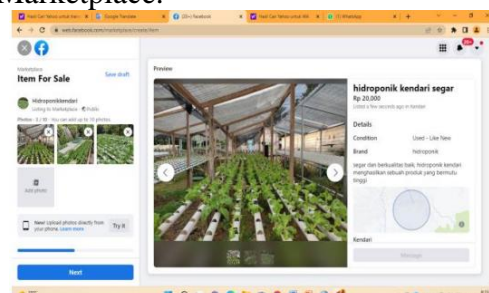


Figure 11a. Facebook Marketplace

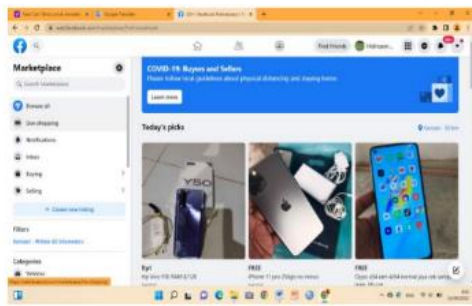


Figure 11b. Facebook Marketplace

3. Select the “sell items” option and then select “items to sale”.

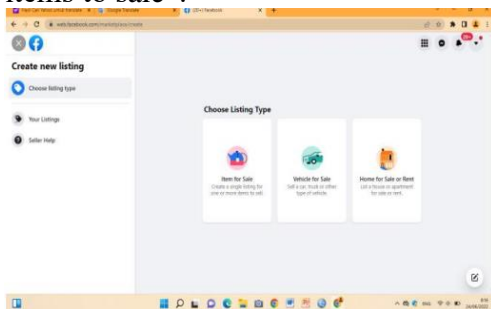


Figure 12. Item to Sale

4. Once you have selected “Items for Sale”, the next step involves a page where you can upload an image of your sale.

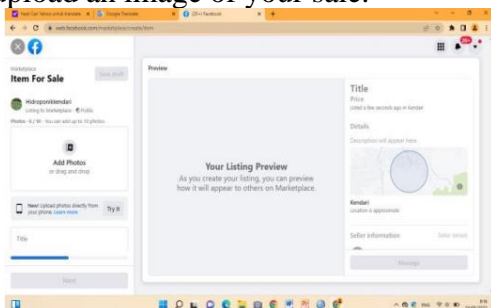


Figure 13. Upload Item Image

5. Select the photos you want to upload to the marketplace and provide the necessary details such as title, price, category, condition, description and location.

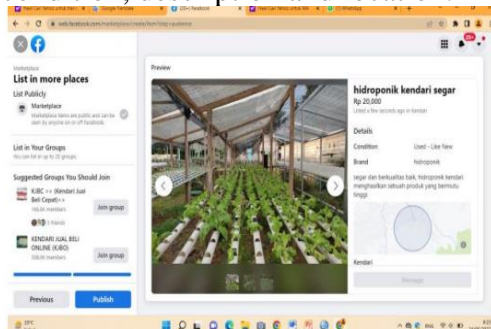


Figure 14. Complete Item Details

6. Just click next then click publish.’

Now, all you need to do is click publish. If you want to promote products that have been sold on the marketplace, make sure to complete the payment process. The pkk group's personal account doesn't have any ads yet, so the next step is to publish it.

Managerial Implications

It is hoped that the findings of this application will be provide a better understanding to many community groups, including academics, researchers, PKK groups, expert teams working in the field of empowerment, and villages. The results can be used as teaching material in the community to help housewives learn how to continue to be productive, make money from hydroponic plants, and increase their capacity to sell in the market. These findings can help researchers better reach PKK women's groups in the hamlet and build a valuable information network for the future. Considering that researchers are prospective teachers with a digital foundation who will ultimately be able to offer the best advantages in managing their business. It is hoped that these findings can increase and complete scientists' knowledge about managing hydroponic plants in a village.

D. CLOSING

Conclusion

The hydroponic plant planting training activity was carried out successfully according to the planned schedule. Starting from providing hydroponic information to actually planting green lettuce plants. In general, this effort is considered successful based on previously established measures of success. A fairly large number of participants, namely 60% or 15 people from the total PKK members of Ngoro Village, were actively involved in this activity. Participants showed high enthusiasm throughout the activity, showing a clear understanding of the material. The impact of this training can be seen in the participants' new ability to cultivate hydroponic plants independently, so this program has long-term value. By carrying out these two basic activities, the Ngoro Village PKK group succeeded in implementing the hydroponic

plant planting model in their own homes. To ensure the long-term sustainability of this program, the PKK group was provided with six sets of hydroponic plants to continue their efforts.

Recommendation

Housewives can benefit from PKK group empowerment initiatives by gaining new skills, information and perspectives. Additionally, even if someone's yard is small, they can still grow hydroponic plants and raise awareness of its benefits. It is recommended that similar actions be repeated in the future and in different locations to ensure that similar actions continue. The implementation of Facebook Marketplace in the future will have a significant impact on the sales value of the PKK group's hydroponic plant products. The act of selling through Facebook marketplace makes this possible. Housewives can increase the selling value of hydroponic plant products and easily access the market by understanding the procedures or processes involved.

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