

UTILIZATION OF HYDROPONIC VEGETABLE CULTIVATION IN ORDER TO INCREASE COMMUNITY INCOME IN THE SOUTH KEMBANGAN REGION

Orlin Cicilia¹, Yananto Mihadi Putra², Rika Ristiani³, and Dhea Enggi Mey Wulandari⁴

Accountancy, Economy, and Business Faculty
Mercu Buana University
Jakarta, Indonesia
ciciliaorlin@gmail.com

ABSTRACT

Hydroponics is an alternative business opportunity that people can use if they want to increase their income to meet their daily needs. Because, public awareness of healthy food that can be obtained from vegetables grown with good media (without using pesticides) is the basis for the presence of hydroponics which is very popular today. This community service activity that has been carried out socializes the steps in carrying out correct & appropriate hydroponic planting so that the harvested product can be a product with good quality and have a high selling price when on the market. This community service activity which was held on March 16, 2023 in the South Kembangan sub-district hall socialized the use of hydroponic vegetable cultivation to increase community income in the South Kembangan area. Participants who attended this activity were South Kembangan PKK women who directly wanted to learn more about how to plant hydroponic vegetables hydroponically correctly. The aim of the socialization is to help participants in planting hydroponic vegetables in the right way and can be done independently in their respective homes. The results of this community activity resulted in a new understanding for the participants and team from the community activity that hydroponic vegetable planting has techniques that need to be considered in detail by the grower so that the vegetables to be harvested can develop well and have a nice & large shape.

Keywords: Planting, Hydroponics, Income, Socialization, South Kembangan Region

A. INTRODUCTION

The community economy for the middle to lower scale category is usually detected and present through daily income or income, especially the community economy for household groups. The income or income obtained is usually focused on meeting basic needs, such as food needs. However, due to the situation and conditions of the pandemic and the price increase (inflation) that has not yet been resolved, people's income is often not enough to cover their daily needs. This is the reason most of them look for side jobs to earn additional income.

Side jobs done by people usually start from doing things they like or doing new things that have never been done before. This side job can lead to work that focuses on work that is very easy to do and does not require too much money, such as farming which leads to a hydroponic system. Hydroponics is agricultural cultivation without using soil, so hydroponics is an activity where agriculture is carried out using water as a medium to replace soil (Kurniaty *et.al*, 2021).

Hydroponics can be profitable if you want to use it as a solution to increase people's income or income at any level or scale. Because, hydroponics has techniques that can be imitated by everyone who intends to have activities related to planting that generate profits. Many Indonesian farmers are starting to use this technique to grow their plants, in fact the market potential for hydroponics is still wide and can still develop in the future (Linda *et.al*, 2021). This is because hydroponic planting media is very helpful for households who do not have empty land for farming so that even small areas of land can be used to grow vegetables such as lettuce, pak choy, mustard greens and so on which have economic value (Ariati and Raka, 2019).

Most people in the southern developing region have problems increasing their income, especially during the pandemic, which currently requires time to recover because the resulting impact is quite large. Most people in the southern developing region are still hesitant to start a new business with not too much capital or without any capital at all. Then, some of them felt they needed another job that could meet all the costs incurred for their daily needs. As one of the best solutions, hydroponic cultivation can be an alternative for people in the southern developing region to increase their income. This is because the demand for hydroponic vegetables is increasing from time to time, coupled with the high price of vegetables (Linda *et.al*, 2021).

Partner issues happened now are people in the South Kembangan Region are still hesitant about starting a business or looking for work due to news of a recession that continues to blow in 2023. Because, even though the pandemic condition is considered non-existent, the resulting impact and

the news of the recession mean that people's income is still insufficient to cover the necessary daily needs in the future. To meet their needs, the community is continuously looking for ways to ensure that their economic level remains adequate and stable.

This community service is indirectly to provide a solution that can increase income in many ways with minimal capital and equipment that does not need to be purchased new (using equipment already available at home), such as carrying out hydroponic cultivation. This community service activity that has been carried out socializes the steps in carrying out correct & appropriate hydroponic planting so that the harvested product can be a product with good quality and have a high selling price when on the market. Waliyanti *et al.* (2022) stated that there are many business opportunities that can be carried out during the pandemic. This community service will provide activities that is not only able to direct people in the South Kembangan area to have ideas for doing a business, but can also educate people in practicing hydroponics planting which must pay attention to the methods and techniques so that the plants produced can grow well and healthy.

This community service has an external target that led to the development of new knowledge about running a business, increasing competitiveness in the use of other resources, and knowledge about how to carry out hydroponic planting properly.

B. IMPLEMENTATION AND METHODS

This community service uses an activity method that culminates in socialization or direct offline direction to the community in the south Kembangan region regarding the use of hydroponic vegetable cultivation to increase people's income in the southern Kembangan region. Based on these objectives, the author thinks that this community service is suitable for using activity methods that lead to socialization or direct guidance. This is because this activity method is

considered quite effective for the community because the socialization carried out will be carried out simultaneously with direct practice of planting plants hydroponically. The community is PKK women, heads of households, teenagers, and adults that have desire to try new things and make use of the results from hydroponic plants.

C. RESULTS AND DISCUSSION

The community service was held on March 16, 2023 in South Kembangan) Hall starting with a speech given by the Urban Village Head (RM. Pradana Putra, S.STP., M.Sc.). The Urban Village Head is very happy and enthusiastic about the community service activities organized by Mercu Buana University because the knowledge that will be obtained by the community can increase and be updated regarding hydroponics.

The community service event presented a resource person who directly had a deep understanding of hydroponics, namely Mr. Sugi. He explained that hydroponics is very easy to do and is simple (does not require a lot of equipment or money) if the hydroponic practitioner (planter) practices it in the correct and appropriate way. During the activity, Mr. Sugi provided several vegetable seeds, such as kale, pak choi vegetables, and caysim vegetables which the activity participants would use hydroponically. He also distributed several tools and liquid vitamins for growing vegetables hydroponically so that the vegetables planted can produce good and healthy vegetables. The distribution of tools and liquid vitamins is also carried out by practicing hydroponic planting with the following steps:

1. First step

In hydroponic planting, a place or what is usually called a tray is usually used as a planting container. Participants are required to prepare a tray as a medium for planting. In the tray, there must be water at a height of 5 (five) cm from the bottom of the tray. After the tray is

provided with the required water for hydroponic growing, a cover board made of hard plastic is placed on the tray. This cover must have a hole intended for placing a net pot (a small pot that has a hole at the bottom). The image of the tray described in this first step is as follows:



Figure 3.1
Plastic Tray and Cover

2. Second step

This step is intended to prepare a net pot (a pot that has a small hole in the bottom). This net pot is filled with a piece of flannel cloth that can absorb water. Flannel cloth is used as a capillary (water absorber) for hydroponic planting that will be carried out. After the net pot is prepared along with the flannel cloth, the net pot is placed in the hole of the plastic board with the flannel cloth hanging down. The net pot image in question is as follows:



Figure 3.2
Net Pots

3. Third Step

Rockwool must be prepared in this third step because this rockwool will be used as a container for placing vegetable seeds for hydroponic planting. Only one vegetable seed is placed in the rockwool hole. After making holes in the rockwool and placing vegetable seeds, the rockwool is thoroughly wetted and placed in a net pot. Rockwool must be cut into pieces first before making a hole and placing the seeds and watering it. The appearance of the rockwool in question is as follows:



Figure 3.3
Rockwool

4. Fourth Step

Nutrients are needed to help the growth of vegetables grown hydroponically. The nutrition in question is liquid vitamins in the form of fertilizer in liquid form. These nutrients are placed when hydroponic planting has been going on for one week. The goal is that the vegetables produced grow well and are healthy.

The hydroponic socialization that was carried out in the community service activity carried out on March 16, 2023, in the South Kembangan, Urban Village Hall has helped participants (PKK women) in carrying out the practice of growing vegetables hydroponically directly. Monitoring of hydroponic

practices carried out by PKK women is carried out by leader of the activity by dividing the group into five groups in the following WhatsApp group (WAG):



Figure 3.4
Hydroponics Practice Group WAG View

D. CONCLUSION

The community service, which was carried out on March 16, 2023, in the South Kembangan Urban Village Hall concluded that socialization is still valid and very effective in announcing and informing the public about scientific developments that the public needs to know. In carrying out correct hydroponic practices and increasing knowledge about hydroponics, this outreach is very appropriate to carry out. The Community Service Activity entitled "Utilization of Hydroponic Vegetable Cultivation to Increase Community Income in the South Kembangan Region" is an effective activity in helping the South Kembangan community gain more knowledge about hydroponics. This evidence can be seen through monitoring carried out directly through WAG which is divided into five groups. The result is that each group member has succeeded in carrying out hydroponics independently and in groups using the correct and appropriate methods and techniques. The results of this community activity resulted in a new understanding for the participants and team from the community activity

that hydroponic vegetable planting has techniques that need to be considered in detail by the grower so that the vegetables to be harvested can develop well and have a nice & large shape.

E. COVER

This community service activity has suggestions that the author wants to convey regarding the theme of hydroponics itself and society, such as:

- a. Hydroponics that is done correctly and appropriately actually not only produces profits for people's daily needs, but also produces financial benefits for the community because the results of plants done hydroponically can become products that can be sold on the market. So, there are many ways that can be done to deal with the pandemic period and economic conditions that are still uncertain whether they will be stable or not after the pandemic continues to disappear. The most important thing for people is to always try to do many things in all situations because there are always opportunities for new things to be done.
- b. Hydroponics can be an activity that indirectly becomes a new hobby that people can do when spending time at home while also making use of items that are no longer used. Because, when the pandemic is happening, many people feel confused about what activities to do next so that they do not feel bored of always being at home.

This community service activities prepared by writer which is entitled "Utilization of Hydroponic Vegetable Cultivation In Order To Increase Community Income in the South Kembangan Region".

This activity is held to fulfill one of the lecturers' Tri Dharma duties or obligations, namely service.

The writer would like to express his deepest gratitude to various parties, such as Mrs. Dr. Nurul Hidayah, SE., Ak., M.Si. as Dean of the Faculty of Economics and Business of Mercu Buana University, Mr. Dafit Feriyanto, M.Eng., Ph. D as Chair of the Institute for Research and

Community Service of Mercu Buana University, Mr. Dr. Deden Tarmidi, M.Ak., BKP as Chair of the Research and PPM Group (KRPPM) of Mercu Buana University, Mr. Yananto Mihadi Putra SE., M.Si. and sister Rika Ristiani & sister Dhea Enggi Mey Wulandari as a team member and assistant of the writer for the community service activity.

F. REFERENCE

- Ariati, Putu Eka Pasmidi dan I Dewa Nyoman Raka. (2019). Sosialisasi hidroponik sebagai basis peningkatan perekonomian masyarakat merupakan pendongkrak nilai tambah pendapatan keluarga. *Jurnal Agrimeta*, 9(17), 53-57
- Kurniaty, Irna, Sukmawati, Afra Nurul Ramadhani, Nurul Fatimah, Aldi Renata, Riang Egi Saputra. (2021). Pembuatan hidroponik untuk budidaya tanaman sayur-sayuran sebagai upaya meningkatkan kesehatan di era pandemi covid-19 di kelurahan balang, kecamatan binamu, kabupaten jeneponto. *Jurnal Lepa-lepa Open*, 1(3), 402-409
- Linda, Johar, Muhammad Nur Syam Qamaria, Andi Firda Hafid, Haswiana Binti Samsuddin, dan Abdu Rahim. (2021). Hidroponik sebagai sarana pemanfaatan lahan kosong di kantor lurah salo, watangsawitto, pinrang. *Jurnal Lepa-lepa Open*, 1(3), 503-510
- Waliyanti, Nur Indah, Jusni, Pipi Diansari. (2022). Analisis strategi usaha sayuran hidroponik pada masa pandemic covid-19 (studi kasus di green top farm). *Jurnal Sosial Ekonomi Pertanian*, 18(3), 201-209
- www.kompas.com (<https://www.kompas.com/skola/read/2022/09/01/090000869/sosialisasi--pengertian-tujuan-fungsi-dan-jenisnya?page=all>) tanggal akses : 11 Juli 2023