

BUDIKDAMBER AND AQUAPONICS AS A STRATEGY FOR STRENGTHENING FOOD SECURITY IN THE MIDDLE OF THE COVID-19 PANDEMIC IN KARASAN, PALBAPANG, BANTUL

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Abstract - COVID-19, which was declared a global pandemic by WHO, is a virus that attacks humans, by attacking the human respiratory tract. In March, in Indonesia was shocked by COVID-19. Therefore, the Indonesian government enforces rules for the community to implement Work From Home (WFH) which is part of the Large-Scale Social Restrictions (PSBB) in order to suppress the increasing growth rate of COVID-19 cases. The impact of this policy is that it can lead to a food crisis. One of the efforts that can be done to prevent a food crisis is the Budikdamber (Fish in Bucket) Plus Aquaponics activities with the discovery of simple agricultural and fishery techniques, namely budikdamber plus aquaponics, which are expected to help deal with current problems. This activity has many benefits, including fulfilling household needs and increasing the family economy. People who are successful with the budikdamber technique are able to create business opportunities and increase income in the midst of the COVID-19 pandemic like now.

Keywords: Budikdamber; Food security; Covid-19

1. INTRODUCTION

A. Background

In early March, the government announced 2 patients affected by the corona virus in Indonesia. In mid-March, Indonesia was shocked by the news of COVID-19. COVID-19 is an infectious disease caused by a virus from the coronavirus group, namely SARS-CoV-2 which is often referred to as the Corona virus. This new virus and disease was unknown to humans before the outbreak began in Wuhan, China in December 2019. Work From Home (WFH), which is part of the Large-Scale Social Restrictions (PSBB) and was imposed by the Indonesian Government so that people would implement it. As a result of this virus, all activities that are usually carried out are hampered.

According to data from BPS, the average poverty line per poor household is IDR 2,118,678,-/poor household/month. The need for basic food with balanced nutrition must be met. In order to realize food security for the residents of Karasan Hamlet who are affluent in the midst of the Covid-19 pandemic, an effort can be made in free time spent at home to be useful and profitable, namely fish farming to meet protein and vegetable needs for adequate vitamins and minerals. The technique of cultivating fish in a bucket can be used because it can be done anywhere, even in a narrow area. Bukdidamber (Fish Cultivation in Bucket) Plus Aquaponics is cultivating fish and vegetables in one bucket which is an aquaponics system (polyculture of fish and vegetables).

B. Goal

- 1) Support training from the government to achieve sufficient food security in the midst of the Covid-19 pandemic.
- 2) Implementation of the Real Work Lecture (KKN) UIN SUKA 105- KARASAN work program.

C. Benefits

The expected benefits of this community service are:

- 1) Benefits for target groups:
 - a) Provide innovations and solutions to make use of narrow house yards and land to be more efficient for the people of Dusun Karasan.
 - b) Develop community interest in the Karasan Hamlet for fish and vegetable cultivation.
 - c) Broaden the horizons of the people of Dusun Karasan through the "budikdamber" socialization.
 - d) Minimizing expenses for food shopping.
- 2) Benefits for devotees
As a reference material in the implementation of service or research that will be carried out next.
- 3) Benefits for the general public

Can add insight and general knowledge to the wider community about fish and vegetable cultivation to meet nutritional needs in these difficult times and can be used as a long-term business.

2. METHOD

Budikdamber (Fish Cultivation in Buckets) and Aquaponics is cultivating fish and vegetables in one bucket which is an Aquaponics system (Polyculture of Fish and vegetables). (Saputri & Rachmawatie, 2020) This activity program is very appropriate and can be carried out without having to have a large budget or capital considering that there is currently an outbreak of the COVID-19 virus and the majority of people do not have jobs whose economy is certain to be limited. Furthermore, it does not require large land, it can be placed on the side and in the yard of the house.

The target of this budikdamber can be a fish cultivation system for family food consumption purposes and is very suitable and environmentally friendly for the community, and becomes a business opportunity for the community. The purpose of holding this activity is so that the community can be independent in strengthening food security during the pandemic and improving the community's economy. The materials we use are also very easy and cheap to find and do not require a large area of land. By holding this activity, we hope that the results will be beneficial to the community, especially to strengthen food security and the economy.

The Budikdamber training was carried out by providing material on fish farming in buckets with tools and materials used in the form of a 50L capacity bucket, pliers, wire, plastic cups, solder, kale seeds, water, catfish seeds, charcoal, and fish feed. The process of making and recording was carried out at Aisah's house (one of the KKN members who is a native of the Karasan hamlet) on Sunday, July 28, 2021. The training was carried out by recording the activities of making fish farming assemblies in buckets (Budikdamber) practiced by group 94 KKN students. How to Budikdamber practical work as follows:

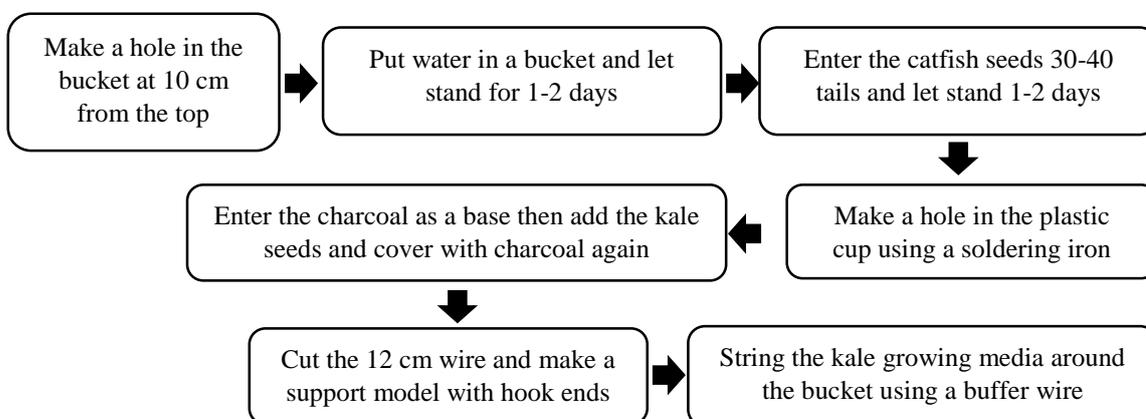


Figure 1. Practice of Budikdamber

For further tutorials, we made a video about Budikdamber on our YouTube channel which can be accessed via the following link: <https://youtu.be/P89bB7fZEe4>.

3. RESULTS AND DISCUSSION

The "Budikdamber" technique (Cultivating Fish in Buckets) is one of the innovations in the food sector in an effort to overcome the food crisis due to the ongoing COVID-19 pandemic. The "Budikdamber" technique (Fish Cultivation in a Bucket) was first discovered by a lecturer from the Faculty of Fisheries Cultivation from the Lampung State Polytechnic, Juli Nursandi. Through this technique, it can be done by people who live in rural areas as well as in urban areas by utilizing a yard that is not too wide (Susetya and Harahap, 2018). Through this kind of cultivation technique, it is also able to strengthen family food security, this is because the community does not only cultivate catfish but also cultivates aquaponically (Perwitasari and Amani, 2019). The stages of this activity are:

1) Preparation phase

This preparatory stage was preceded by observation activities conducted by members of KKN 105 UIN SUKA-KARASAN. From the observations of Karasan Hamlet, we found potential in the development of aquaculture because there is irrigation in Karasan Hamlet. Members of KKN 105 UIN SUKA-KARASAN then informed as well as studied and coordinated with the community regarding education and training activities for food security empowerment.

2) Education Stage

Educational activities regarding food security and "Budikdamber" (Fish Cultivation in Buckets) are carried out using the lecture method with leaflets and animated videos as media. The use of the media aims to make it easier for the public to understand the material presented.

3) Training Stage

In this stage, members of KKN 105 UIN SUKA-KARASAN directly practice "Budikdamber" (Cultivation of Fish in a Bucket) and Aquaponics with the people of Dusun Karasan. The tools and materials that have been prepared are a 50L capacity bucket, pliers, wire, plastic cups, solder, kale seeds, water, catfish seeds, charcoal, and fish feed. After training on making "Budikdamber" (Cultivating Fish in Buckets) and aquaponics, members of KKN 105 UIN SUKA-KARASAN provided information about maintaining "Budikdamber" (Cultivating Fish in Buckets) and Aquaponics. One indicator of the success of this activity is the target of knowing and being able to receive materials and methods of making "Budikdamber" (Fish Cultivation in Buckets) and Aquaponics. In addition, the enthusiasm of the people who are participants in the food security program.

4. CONCLUSION

The COVID-19 pandemic has caused many people to be affected in the financial sector, such as termination of employment (PHK) and a decrease in family income. With this in mind, one good solution to strengthen food security is to seek the availability of food from homes for daily consumption. So that with this strategy, the community can continue to meet the nutritional needs of their families and reduce spending. Budikdamber (Cultivation of Fish in Buckets) is a strategy that is suitable to be applied in the current pandemic situation, because this technique does not take up large areas of land and can be used on narrow areas. In addition, catfish has good nutrition to maintain body immunity.

Budikdamber and aquaponics training is expected not only to be implemented in Tanjungsari Village, but can be applied in other areas. This strategy is a solution for the community in maintaining food security in the midst of the COVID-19 pandemic.

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