

Strategy for Fulfilling Family Vegetable Needs with Urban Farming

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Abstract—Urban farming is one of the efforts that can be done in filling activities at home that have the potential to meet people's nutritional needs for vegetables and generate income in the era of the Covid-19 pandemic. The purpose of this devotion is to make use of the empty yard of the house owned by the community in Kampung Dalam to be planted with vegetables using urban farming methods that aim to meet the consumption of family vegetables, especially during the Covid-19 pandemic era. This method of empowerment activity is PRA (Participatory Rural Appraisal). Participants in this empowerment are 25 mothers who are members of KWT (Farmer Women's Group) Mawar Kampung Dalam who actively cultivates on land owned by farmer groups and produce vegetables for their groups at certain times. The result of this activity 1) 25 mothers who have participated in the Urban Farming program have utilized their empty yard for vegetable cultivation with urban farming method 2) The yard of the house is arranged to be more beautiful, beautiful, and comfortable than before 3) People began to innovate to make use of used goods and creativity of arranging their homes 4) Already able to meet the needs of vegetable consumption for families every day. It is expected that this activity can further have a positive impact not only on the target community but also to be felt by all Kampung Dalam communities. and comfortable than before 3) People began to innovate to make use of used goods and creativity of arranging their homes 4) Already able to meet the needs of vegetable consumption for families every day. It is expected that this activity can further have a positive impact not only on the target community but also to be felt by all Kampung Dalam communities. and comfortable than before 3) People began to innovate to make use of used goods and creativity of arranging their homes 4) Already able to meet the needs of vegetable consumption for families every day. It is expected that this activity can further have a positive impact not only on the target community but also to be felt by all Kampung Dalam communities.

Keywords—urban farming, vegetables, Covid-19, environment

I. INTRODUCTION

Vegetables are important for maintaining a healthy body that should be available in a healthy diet. Vegetables have the benefit of preventing and reducing excess stress, facilitating bowel movements, preventing heart disease and cancer, maintaining balanced body weight, the body's energy source, cleaning toxins in the body (detoxification), preventing birth defects, maintaining eye health, making healthy skin, and strengthen bones [1]. Vegetables can maintain and increase the body's immunity to protect themselves from infection with the covid-19 virus [2]. An economical solution that can reach the smallest area, namely households, is urban farming as an effort to maintain daily vegetable intake [3]. The role and function of urban farming have developed. At this time, besides being used as a food source, it is also used to beautify homes and meet the needs of a healthier lifestyle [4]. Malaysia has developed urban farming for a sustainable food supply [5].

Kampung Dalam is a village located on the outskirts of Kuala Simpang City, most of the people's income comes from buying and selling businesses and services. The Covid-19 pandemic has had a major impact on the reduced income of traders due to the declining purchasing power of consumers. Women in Kampung Dalam who are members of the Mawar Women Farmers Group (KWT) participated in urban farming activities as LDK-Assalam partners at Samudra University in the PHP2D Program organized by the Ministry of Education and Culture as part of the MBKM Program (Merdeka Belajar Merdeka Campus). The PHP2D program has a mission, among others, to discover or develop village potential for community development and empowerment as well as to build community independence and sustainability [6].

Kampung Dalam was chosen as a partner because it has potential, namely KWT Mawar who is willing to be actively involved as a partner, each member has a yard that will be used for urban farming, as well as the village government.

vegetables independently and the excess for additional income. Urban farming products have a higher selling price than the standard price [7].

II. IMPLEMENTATION METHODS

The method used in the activity is Participatory Rural Appraisal (PRA), namely techniques and approaches that involve the community in every series of thought processes, planning, implementation, mentoring, and evaluation of community development programs. This community empowerment program was carried out in Kampung Dalam, Karang Baru District, Aceh Tamiang Regency from September to November 2020. The target community in this activity was KWT Mawar, which consisted of 25 families.

The service activity procedures include field surveys, FGD (Focus Group Discussion) with stakeholders, socialization, counseling, training, regular assistance as well as monitoring and evaluation. All activities are combined online and offline in the field according to health protocols, this is done to comply with social restrictions regulations during the Covid-19 pandemic. The following is the flow of community service activities in the urban farming program (Figure 1):

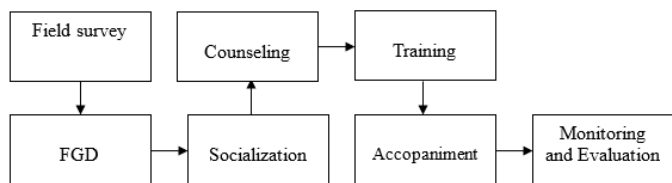


Fig. 1. Activity flow.

Initial activity What is done in this service is a field survey to determine the location of the target village. At this stage of activity, the village government and related agencies also influence the determination of target villages by providing input. After the target villages are determined, the team conducts FGD (Focus Group Discussion) with stakeholders to identify problems, analyze needs, define target audiences, develop programs and formulate and formulate indicators of success to be achieved in the urban farming program. Stakeholder involvement aims to gain broad support. Research conducted in the United States concluded that the success of implementing urban farming is also determined by the positive perception of the people in the surrounding environment [8]. Stakeholders who participated in the FGD implementation included village community representatives, village heads, representatives of the Agriculture Service, student teams, and accompanying lecturers.

The next stage is to socialize the program to the target audience, by explaining in detail each stage of activity, schedule, and achievements in the program. Then at the counseling stage, the target audience was provided with knowledge of planting techniques using the urban farming method from the district agricultural instructor as a representative of the Aceh Tamiang District Agriculture

Service. At the training stage, the target community immediately went to the field to practice urban farming techniques on a group-owned land based on the direction and assistance of the student team, and the target community was also provided with training on creativity in the use of used goods as plant containers. At the mentoring stage, the team was divided into several groups to assist each target community's house from the arrangement, maintenance to post-harvest. The companion process is carried out by combining offline and online activities. Furthermore, the monitoring and evaluation program is carried out jointly with stakeholders, namely representatives of the student team and accompanying lecturers, the university team, the Village Head, and the Aceh Tamiang District Agriculture Office. At the end of the activity, a joint harvesting activity was carried out as well as giving certificates as an appreciation to the target community who had actively participated and were fully responsible for participating in the urban farming program to completion, this activity was attended by representatives of Samudra University, Kampung Dalam Government, Aceh Tamiang District Government, and the Department of Aceh Tamiang District Agriculture.

III. RESULTS AND DISCUSSION

The PHP2D program was implemented for 7 months by LDK-Assalam together with a partner, KWT Mawar. This program begins with conducting FGDs with stakeholders, followed by the implementation of activities.

- The results of the initial survey obtained 25 families who were eligible to be partners and their homes as locations for the implementation of urban farming activities. The area of land owned by partners is quite diverse. Partners who have narrow land then the planting model is modified with a vertical model. Sweden implements a vertical farming system as a potential solution for urban farming [9]. They reported that planting media, pots, electricity needs, transportation of raw materials and product delivery are important aspects of a vertical hydroponic system.
- The implementing team from universities distributed materials and equipment consisting of 7 kinds of vegetable seeds, organic fertilizer, paranet, plant pots, gloves, and others.
- The socialization of the program was carried out at the house of the Village Head, which was attended by all partners and the implementing team. Socialization is needed to obtain the same vision and mission regarding activities as well as provide an understanding of the importance of urban farming activities in meeting the family's vegetable needs to increase body immunity to prevent the spread of the Covid-19 virus and as a source of family income. Urban farming program socialization can be seen in Figure 2.

- Extension or training on planting skills is carried out in the village hall. Learning partners as well as doing urban farming practices, based on books [10]. Training on how to cultivate the urban farming model at the nursery can be seen in Figure 3.



Fig. 2. Urban farming program socialization.



Fig. 3. Training on how to cultivate the urban farming model at the nursery.

- Assistance is provided so that activities can run smoothly according to the plan. The implementation team provides advice, accommodates obstacles, and finds solutions to partners. Mentoring is done online to limit face-to-face meetings during the pandemic.
- Monitoring and evaluation of activity results are carried out every week by coordinating with the KWT Mawar team leader. The final evaluation is carried out with all stakeholders aimed at assessing the achievement of the success of the activity as measured by the following indicators:
 - The target community already understands Urban Farming
 - The target community has used the land for productive activities
 - The target community already knows how to cultivate the Urban Farming model
 - The target community already knows about innovation and creativity in farming
 - The family produces vegetables independently.

Based on the final result evaluation on these 5 indicators, it was concluded that the entire implementation of urban farming program activities in Kampung Dalam was going well. Partners become more empowered, where vegetables are not only to meet family needs but also to improve the family's economy. Research in Sulawesi shows that urban farming has a positive effect on improving people's welfare, further stated that the factors that have a significant effect on economic empowerment are business motivation, human resource capacity, community participation, and economic business management [11]. The enthusiasm and participation of the target community as partners, namely KWT Mawar is quite high because they get a positive impact from these activities. Similar results were obtained from a study in Japan that showed a significant improvement in self-health and mental health in research participants regarding the benefits of urban farming they did [12].

IV. CONCLUSION

The PHP2D program in Kampung Dalam is running well. KWT Mawar as a Partner is very enthusiastic and actively participates, as well as stakeholders who provide full support for the smooth running of activities.

THANK-YOU NOTE

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