



Optimization of Yard Land Through the Lumbung Mataraman Program to Support Urban Food Security During the Pandemic Covid 19

Siti Astuti^(✉)

Agricultural Development Polytechnic of Yogyakarta Magelang, Yogyakarta, Indonesia
stastuti12@gmail.com

Abstract. The COVID-19 crisis has had a lasting impact around the world, including Indonesia. Indonesia as an agricultural country that makes farmers has an important role in the national economy. Farmers hope in this pandemic outbreak they can still carry out farming activities as usual. The method of this research is a review of the innovation of the yard land use program in the local wisdom of the Javanese people, especially in Yogyakarta city. The local government continues to contribute to ensuring that agriculture runs smoothly and safely during the pandemic, especially through breakthroughs in new technological innovations, one of which is Lumbung Mataraman Program. Lumbung Mataraman is a program to use yard land to provide food needs by using the principles of food self-sufficiency, food diversification, conservation of food, and nursery. This program is in accordance with the local wisdom of the Javanese community which applies the agricultural tradition of “Nandur Opo Sing Dipangan, Mangan Opo Sing Ditandur”. This Program uses a touch of psychological approach for the community with the hope that the community can improve their mindset and using the owned resources by considering the conditions and potential of the environment.

Keywords: Lumbung mataraman program · Optimilization of yard land · Urban farming

1 Introduction

The Coronavirus Disease 2019 (COVID-19) health crisis has had a lasting impact around the world. Indonesia is an agricultural country, meaning that farmers play a very important role in the Indonesian national economy, both before the pandemic or during the current pandemic. Farmers and Agriculture are a large base of the Indonesian economy. Agriculture is also affected by Covid 19. According to Nursaiti [1], some of the impacts of Covid 19 on the agricultural sector include rising market prices and decreasing food production. Some hopes that the Corona virus outbreak, they can still carry out farming activities as usual and always receive education from various agencies regarding the corona virus outbreak and handling in reducing the spread of this corona virus.

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The habits of city person who prefer to buy rather than work on their own are increasingly changing along with the current COVID-19 pandemic, which tends to force people to work at home. One of the productive activities that can be done is by utilizing urban yard land (urban farming). Utilization of this yard, apart from being a place to hobbies, can also make people more independent in their family's food needs and reducing household expenses. One of the efforts to diversify food is by optimizing the yard.

One of the technological innovations currently being implemented by the government is related to the use of yard land. The yard is an open area around the house. Utilization of yard land for the development of home industries is one alternative to realize household economic independence. Optimization of yard land is the management of yard land which is carried out by cultivating various types of plants, livestock and fish in the availability of food sources of carbohydrates, protein, vitamins and minerals for the family, saving family expenses and can also provide additional family income if the results obtained has exceeded the family's food needs, as well as the occurrence of diversification of food consumption in member households [2].

Optimalization of yard land has been implemented in districts and cities in all provinces in Indonesia. One of them is the Province of Yogyakarta and since 2012 it has been developed in 4 districts and cities of Yogyakarta. This activity produced to the Lumbung Mataraman program in 2017 which was only attended by 5 groups of Women Farmers. But now it has been followed by 52 groups spread over 4 districts and 1 city in Yogyakarta. The Lumbung Mataraman in the city of Yogyakarta is located in the Kemantren Kotagede, Tegalrejo and Mantrijeron. The Lumbung Mataraman is carried out as an effort to fulfill food needs from the results of agricultural cultivation independently.

Lumbung Mataraman is one of the programs from the Yogyakarta City Government that utilizes the yard to provide food needs with the principles of food self-sufficiency, food diversification based on local food sources, preservation of food genetic resources, and nursery gardens. Through this Lumbung Mataraman activity, farmers are provided with facilities such as agricultural training, seed garden assistance, and the creation of demonstration plots. The Lumbung Mataraman is to create a household-level sustainable food agriculture that is oriented towards the ultimate goal of reducing poverty levels [3].

Therefore, the benefits of the Lumbung Mataraman program in the form of providing food through the yard and increasing family income need to be conveyed so that the wider community understands the advantages of the Lumbung Mataraman Program in the Yogyakarta City, Indonesia.

2 Methods and Material

The method of this paper is a review of the innovation of the yard land use program in the local wisdom of the Javanese people, especially in Yogyakarta city, the Special Region of Yogyakarta.

3 Results and Discussion

According to the World Health Organization (WHO) report as of Nov 15, 2021, the number of confirmed COVID-19 cases is approximately 254 million people. Positive confirmation of covid in Indonesia reached 4 million people and 5260 people of them in the city of Yogyakarta. This has forced many countries to impose partial or total lockdown policies. Currently, Indonesia is implementing an Restriction Activity (PPKM) for Java and Bali as an effort to reduce the level of the virus' spread.

The local government continues to contribute to ensuring that agriculture runs smoothly and safely during the pandemic, especially through breakthroughs in new technological innovations, one of which is Lumbung Mataraman Program. Lumbung Mataraman is not a physical building. Rather, it is a living food barn based on households that are united in farmer groups [4]. Lumbung Mataraman activity is under the work unit of the Agriculture and Food Service. This Program uses a touch of psychological approach for the community with the hope that the community can improve their mindset and using the owned resources by considering the conditions and potential of the environment. The main objective of this program is to eradicate poverty, so that the impact of the program can increase people's income. Lumbung Mataraman Program has inspired the tradition of using limited land in the household yard as a provider of food needs.

The Yogyakarta City Government launched the Lumbung Mataram Programm for the three target areas of development until the end of 2020. Through the local Agriculture and Food Services, the Lumbung Mataram is the first program for the city government to source from the Privileges Fund (Danais). Lumbung Mataraman program using the Privilege Fund of around Rp. 600 million, was held by Technical Guidance for the management of the Lumbung Mataraman. There are 3 location Lumbung Mataraman Program: Pugeran at Suryodiningratan, Purbayan at Kotagede and Markisa Group at Karangwaru.

The Lumbung Mataraman is a business in the local context of food independence with the local wisdom of the Javanese people. The people of Yogyakarta have implemented the agricultural tradition of "nandur opo sing dipangan and mangan opo sing ditandur" which is commensurate with the global tagline "grow what you eat and eat what you plant". This is done to prepare food availability starting from the household level including the use of yard land. There are 4 (four) principles: of Lumbung Mataraman Programm: food self-sufficiency, food diversification based on local food sources, preservation of food genetic resources, and nursery.

There are three components in the optimization of the yard: a) establishment and management of nursery. Nursery is an area/garden belonging to a group that is used as/functioned as a place for nurseries for groups. Seed garden was built with the aim of producing plant seeds to meet the seed needs of members and other communities so that there are sustainability of the cultivation of the cultivated commodities, as well as obtaining economic benefits. The management and maintenance of the nursery is the responsibility of the group. b) demonstration plots are areas/areas contained in areas that

are serves as a pilot location, field meeting, a place to study and a place to practice the use of yards that are arranged and applied together by the group, as well as acting as a yard pilot (food sources of carbohydrates, proteins, vitamins, minerals, and fat). c). Yard Arrangement. In the yard, various sources can be developed carbohydrates, proteins, vitamins and minerals that can be obtained from vegetable and fruit crops, poultry/small ruminants and/or fish. Plant cultivation techniques can be carried out using land media, polybags, vertical and hydroponic, according to the potential of the land available yards, both in area and characteristics of the land.

The Lumbung Mataraman started with the goal of implementing sustainable agriculture. That sustainable agriculture has not been implemented is a major problem in Indonesia, which is the main reason for implementing the Lumbung Mataraman program. As is the case in most areas on the island of Java, agricultural cultivation in Yogyakarta applies a system that is not compatible with sustainable farming systems. The characteristics of this cultivation are tillage with tractors, monoculture system, no rotation of varieties, and preferring chemical fertilizers and pesticides.

The utilization for the use of yard is generally carried out to family needs. The results of a study on the Mataraman Lumbung program show that urban farmers cultivate solely for their own use by their families or relatives. Some urban farmers manage their yards well and earn an additional income of more than IDR 200,000 per month.

The farmers are provided with facilities such as agricultural training, seed garden assistance, and demonstration plots. Several of successful of The Lumbung Mataraman are 1) To be able to grow and improve the community's economy 2) To fulfil the nutritional needs of the community and 3). To develop into urban farming tourism.

Although in general the group members have felt the benefits of the program and stated that the Lumbung Mataraman program has been running well, the results of this evaluation should be viewed more objectively. Based on the evaluation results, there are at least two things that are a concern for the improvement of the Mataraman Lumbung program. The first is the need for improvement and field practice that can be done through farmer women's group field studies to the right site as part of the learning process. The second is the diversification of the types of technical guidance, namely in the fisheries and livestock sub-sectors, especially for narrow or small land.

4 Conclusion

The Lumbung Mataraman Program can be able to grow and improve the community's economy, to fulfil the nutritional needs of the community, to develop into urban farming tourism.

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