

COMMUNITY VOICES ON THE URBAN FARMING MOVEMENT DURING THE COVID-19 PANDEMIC: A REFLECTIVE STUDIES

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Abstract: Urban farming activities in Malang City have increased during the COVID-19 pandemic. This study responds to the threat of a food crisis due to the continued impact of the COVID-19 pandemic. Massive implementation of urban farming can provide different perceptions and goals depending on the characteristics of each individual, including differences in occupation, gender, and age. This research aimed to investigate the perspective on the implementation of urban farming during the COVID-19 pandemic. It is a critical reflection study to determine what factors affected the implementation of urban farming in supporting food security in Malang City. The study was conducted in Lowokwaru District, Sukun District, and Blimbing District, with 30 participants. The findings indicated that the success of urban farming in Malang City was affected by various factors. For instance, the growing interest in urban farming, urban farming contests, and social activities. It also could support food security in urban areas during the COVID-19 pandemic. In addition, the existence of farmer group communities and the role of the government and the wider community can contribute to the success of urban farming.

Keywords: *urban farming, COVID-19 pandemic, food security, reflective study*

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INTRODUCTION

The recent trend of Urban farming responds to the impact of the COVID-19 pandemic, which is a food crisis. Many factors cause the food crisis threat, starting from implementing government policies to quarantine the area and restricting trade routes by supplying countries that act as exporters to importers (Mawadah et al., 2020). The Food and Agriculture Organization (FAO) also stated that the pandemic significantly impacted world food availability fluctuations. It could cause a “domino effect” in the world food supply chain (Schmidhuber, 2020). It disrupted producers in the

food and agriculture sectors (Food and Agriculture Organization, 2020).

One of the government responses in dealing with the COVID-19 pandemic is by launching a food estate program. Alfin & Sulaeman (2020) define the implementation of food estate as the government national food security strategy that could support the economy of an agrarian society, the realization of socio-economic justice, and increase the government policy choices in dealing with various situations. Moreover, urban communities also play an essential role in supporting national food security through the urban

farming movement during the COVID-19 pandemic. The presence of the pandemic changed the mindset and habits of the Indonesian people regarding the trend of urban farming programs (Andini et al., 2021).

The growing interest in urban farming in Malang City is increasing due to the regional social restrictions imposed by the government. People spend their productive time farming. They believe it could relieve stress caused by the pandemic, save the cost of shopping for vegetables and fruit, and may give additional income. Nasikhah (2020) found that several locations in Malang City had implemented urban farming by developing vegetables and herbal plant cultivation.

The high implementation of urban farming provides different perspectives and goals depending on the characteristics of each individual, including differences in occupation, gender, and age. These characteristics will affect the timing of the implementation of urban farming, whether conducted during or before the pandemic. The first objective of this research is to explore the perspective on the implementation of urban farming during the COVID-19 pandemic. Furthermore, the results from the perspective of the urban farming community in Malang will be linked to the intensity of urban farming in supporting food security in urban areas. Reflective studies were employed to evaluate the optimization of the urban farming movement in urban areas. The second objective of this research is to determine what factors determine the success of implementing urban farming in supporting food security in Malang City during the COVID-19 pandemic.

RESEARCH METHOD

This research was conducted in three sub-districts in Malang City, namely Lowokwaru District, Sukun District, and Blimbing District, from June to July 2021. Those three districts fulfilled the research criteria as they implemented a massive urban farming program, especially during the COVID-19 pandemic.

The research participants were 30 households consisted of ten participants from each sub-district. They were purposively chosen based on the research criteria: they implemented urban farming in their homes on a small, medium, or large scale. This research also involved the Woman Communities (PKK), which initiated urban farming

in each sub-district. Therefore, the data obtained was more accurate and considered representative of the existing population of urban farming activists.

The data collection employed an observation method and in-depth interviews with the participants. The interview aimed to explore the respondents' perspectives on the success of urban farming during the COVID-19 pandemic in supporting food security in urban areas. Data obtained from the observations and interviews were recorded and transcribed verbatim, then classified by topic to be analyzed. Then the data obtained will be filtered based on the topic to make it easier to group the data.

RESULTS AND DISCUSSION

Malang City Community Perspective About Urban Farming

Urban farming is a new alternative in meeting the needs of people in urban areas. The occurrence of regional restrictions led to reduced mobilization by the community. They were required to work from home. The research was conducted on 30 respondents with various occupational backgrounds. In contrast, the distribution of respondents' professions can be seen in Table 1.

Table 1. Respondents' Occupation

Sub-districts	Occupation				Number of respondents
	Hw*	Retiree	Labor	Others	
Lowokwaru	-	3	3	4	10
Sukun	3	4	2	1	10
Blimbing	4	1	1	4	10
Total	7	8	6	9	30

*)Housewives

Based on Table 1, the occupation background of respondents who did urban farming in the three sub-districts are 23% housewives, 27% retirees, 20% labourers, and 30% works in various work. The type of work influent the respondents' knowledge and reasons for doing urban farming. Housewife did urban farming to spend their spare time and were associated with farmer groups or PKK women to introduce urban farming to the broader population through the community. Prasetyo *et al.* (2016) asserted that mixing various types of people with different backgrounds in a community in gardening can positively impact soft skills and increase their experience.

The retired respondents stated that they wanted to be productive by doing urban farming to make their bodies healthier as they were getting older. Magfirah & Alifariki (2018) supports that gardening

can be therapy as an effective alternative method in dealing with the elderly, especially those with hypertension. Furthermore, Silitonga et al. (2017) reported that the elderly who engage in gardening therapy could increase self-efficacy through social experiences and happiness when they see the growth of plants they care for. The labour respondents practised urban farming in their spare time. They were also concerned about food security by sharing their garden products with their neighbours. Gardening activities can promote the nature of environmental stewardship (Marietta & Darmawani, 2019). The other 30 per cent of respondents also shared similar perspectives as mentioned.

Table 2. Respondent's Gender

Sub-districts	gender		Number of respondents
	Male	Female	
Lowokwaru	2	8	10
Sukun	6	4	10
Blimbing	4	6	10
Total	12	18	30

Table 2 showed the respondents' perspectives on urban farming based on gender. The respondents consisted of 12 male and 18 female respondents in the three sub-districts. It can be concluded that 60% of urban farming activists were women. The contribution of women was prominent compared to men in urban farming. It is in line with Ha (2019), who accounted that in household-scale farming activities, such as cultivating, processing agricultural products, and marketing, women tend to contribute more working hours than men.

Moreover, in the application of household-scale urban farming, men and women have complementary roles. The respondents asserted that men played a significant role in providing the necessary facilities and infrastructure from planting to harvesting. At the same time, care until women carry out post-harvest. Kruijswijk et al. (2014) articulated men are less intensive in caring for plants and focus on "manly" jobs such as repairing houses and gardening, which consume much energy. With the roles of men and women, urban farming can run more effectively. However, all activities can be carried out simultaneously, especially during the COVID-19 pandemic. In addition to gender, data from research on respondents are also linked by age. The perspective of the people of Malang City on urban farming based on the age range is presented in Table 3.

Table 3. Respondent's Age

Sub-district	Age range					Number of respondents
	20-30	31-40	41-50	51-60	>60	
Lowokwaru	1	1	5	1	2	10
Sukun	-	-	4	2	4	10
Blimbing	-	3	4	2	1	10
Total	1	4	13	5	7	30

Table 3 showed that urban farming activists from the three sub-districts are dominated by people with an age range of 40-50 years, 13 respondents, and age >60 years, seven respondents. According to the interviews conducted, age could affect a person's perspective in responding to something new. It could be seen from the respondents aged 20-30 years and 31-40 years who had implemented urban farming with a combination of digital technology. It showed that the productive age category makes it easier to understand innovations and be more open to technological developments (Prasetyo et al., 2019). Respondents aged 41-50 years had not done many activities, making urban farming a fun hobby and relieving stress during a pandemic. Additionally, it can be used as a lucrative activity, mainly when the work-from-home policy is implemented.

Some respondents said that doing urban farming can increase kinship with neighbours by sharing agricultural products. Many of them make urban farming a new business opportunity and cooperate with their network. Gardening activities in urban areas can be profitable if they meet the quality of existing market criteria. They are also strengthened by physical assets and human capital such as knowledge, abilities, experience, and assets in social relationships such as organizations or networks (Adenegan et al., 2015). Meanwhile, people with an age range of more than 60 years did urban farming to fill their free time at home to keep them healthy and productive.

According to Wang & Glicksman (2013), applying urban farming for the elderly improves physical health. Growing crops and consuming their crops will also have a positive effect on mental health. Many of them also said that by doing urban farming, they could make their living environment beautiful by using plastic waste as a medium for plants to grow, make organic fertilizers, and implement pest control using biological materials. Urban farming has a very positive impact on the environment because recycling organic waste and utilizing plastic waste will help increase soil fertility and reduce soil and

water pollution caused by the often excessive use of chemicals (Clintock, 2010).

Urban Farming in Malang City during the COVID-19 Pandemic

Urban farming activities in the Malang City area have increased during the COVID-19 pandemic. Azwar & Ghani (2009) studied the urban farming movement by utilizing limited yards and land during a pandemic to make humans close to nature. The presence of green open spaces has been proven to reduce stress levels and the pressures of living in urban areas. The enthusiasm of the urban farming community in Malang City based on the implementation time was presented in Table 4.

Table 4. Implementation of Urban Farming

District	Implementation of Urban Farming		Total Respondents
	Before the Pandemic	During the Pandemic	
Lowokwaru	4	6	10
Sukun	9	1	10
Blimbing	5	5	10
Total	18	12	30

Based on **Table 4**, 18 out of 30 respondents in the three sub-districts had started doing urban farming before the pandemic. Meanwhile, 12 people had started a new routine through urban farming since the pandemic. It was concluded that 60% of respondents had done urban farming before the pandemic, assuming they had understood the practice of planting and the enthusiasm for urban farming is relatively high. A total of 40% of respondents have done urban farming since the pandemic to fill their spare time and saving expenses. Following the statement of Hagey *et al.* (2012), the importance of the involvement of independent production in each family by participating through urban farming can help 30-40 per cent of food needs in one family.

More than 90% of respondents felt that the advent of a pandemic inevitably boosted their excitement for doing more intensive urban farming. The interest in urban farming also grew due to the Malang City level urban farming competition. More and more individuals are active in urban agriculture. Based on the responses, more than 50% of respondents said that the pandemic gave them much free time at home with their families and could be used for farming. This view is supported by Pratama

(2020), who writes that urban farming would be intensively carried out during the pandemic to fill spare time. Then the rest said that they were doing urban farming on an ongoing basis without or with a pandemic because they had been interested in doing urban farming. The pandemic and the urban farming competition held by the Malang City Government greatly encouraged the community's enthusiasm for implementing urban agriculture programs.

Urban Farming Program to Support Food Security in Malang City

A large number of vacant or unused land in the Malang City community's home environment is one of the reasons for doing urban farming. The average vacant land that has not been used is in the form of yards, walls, and rooftops. Mukhlis *et al.* (2020) state that the yard and its components are a unity of life in a symbiotic mutualism, one of which is farming.

The majority of the interviewees had not used the land and had abandoned it. It brought ideas or inventions to make the land into productive land. The land is used for urban agriculture, which can yield vegetables or fruit consumed regularly. Ashari *et al.* (2012) point out the yardland is very effective and efficient for urban farming. The results of urban farming in the yard are more efficient, environmentally friendly, and not easy to damage the soil. Atik & Jones (2017) also suggested that urban farming is one of the solutions to overcome the limitations of agricultural land in urban areas due to the rate of population growth.

The food needs of the community during the COVID-19 pandemic are essential to maintain health and the economy. Therefore, urban farming can support the fulfilment of family needs for vegetables or fruit and can also be used as additional income. With the additional household income, the probability of household food security also increases (Abu & Soom, 2016). In line with Babatunde *et al.* (2007), the higher the income, the greater the possibility of family food security. It draws a positive correlation between urban farming, household income, and food security (Arene & Anyaeji, 2010).

Based on the research findings, plant production in urban farming could be consumed and fill the family's needs—the difficult food access from villages, prompting urban people to cultivate vegetables in their yards to survive.

Rinihapsari (2020) agreed that the satisfaction of human dietary needs is dependent on the food's distribution method. Most of the respondents said they were worried and afraid to shop at the market because of the increase of the COVID-19 cases in Malang City. Some respondents experienced fear and difficulty in meeting their daily needs for food during the pandemic. It was not easy to get fresh vegetables, so urban farming or home gardening is a solution to fulfil their need for fresh and healthy food. Rachmawati (2020) claimed that if a household could fill their own needs, they will not be too dependent on farmers' agricultural products and will not depend on the length of the distribution chain.

This study showed that people tend to grow horticultural crops, such as vegetables and fruit. The reason for selecting these commodities is to growing vegetables like kale, mustard greens, and lettuce since they have a short harvest time. In addition to short-lived plants, from the results of research in Lowokwaru District, Sukun District, and Blimbing District, plants that are often cultivated are chilli, tomato, and eggplant. These commodities were selected because they are included in plants that can bear fruit throughout the year so that harvesting can be done more than once. Sholikhah (2019) points out that vegetable cultivation does not require a large area, so it is suitable to be planted on land that has a limited area. Hodgson (2010) affirmed that urban agriculture produces crops for personal consumption or uses appropriately and reliably. They are grown and cared for independently to produce food security and sustainable urban agriculture. Therefore, urban agriculture is closely related to sustainable agriculture or resilient cities (Azunre et al.,2019).

Reflective Study on Urban Farming in Malang City

Based on the research results, it was found that many factors affecting the success of urban farming. One of them was the various efforts done by urban communities in implementing urban agriculture, especially in supporting food security. Nasution (2015) delineates that the phenomenon of urban farming is in line with the food sovereignty movement.

Many respondents claimed that urban farming in their area resulted from the agriculture

community's passion. The women community (PKK) and the sub-district head's initiative to plant crops even in a tiny space motivates the locals. For urban farming to succeed, the role of farming communities is crucial. The development of urban agriculture initiatives can be developed with technical, organizational, policy, and institutional support (Sastro, 2013). Farming communities make it easier to start urban farming in cities, particularly socialization and connecting newbies to urban farming with the government or local agricultural centres. In general, urban farming is still not implemented professionally, and it is still based on the enjoyment of planting (Amir & Saidin, 2020). Therefore, farming communities must contribute to agricultural education and training.

The education includes the use of limited land for farming, unused vacant land, waste as facilities and infrastructure for urban farming, and waste as organic fertilizer and vegetable pesticides. The respondents confirmed that their areas could cooperate by using the vacant land as a joint farming location. The most important thing is to utilize unused items to support farming and learn autonomously from experience. Therefore, they need to be equipped through socialization and education provided by the local government. The role of the government is pivotal to overcome various agricultural problems encountered by the farming community.

The government's participation in enacting the agricultural vision and mission is crucial. Several respondents stated that the government had held a city-level urban farming competition in recent years, particularly in Malang City. Urban farming activists in each sub-district enthusiastically received it. One of the government's measures may be the procurement of urban farming competitions to pique the community's interest in cultivating crops. Respondents also stated that the government gave some support, such as plant seeds, polybags, and simple composting tools. Unfortunately, this is only done to implement the urban farming competition. The government's material aid is discontinuous.

In the future, government and stakeholder intervention should pursue and overcome the dimensions of agriculture in urban settings to develop sustainable agriculture from the ecological, economic, and social perspectives (Cahya, 2016).

Furthermore, government-led urban farming initiatives can help cities provide the open green spaces they require (Indraprahasta, 2013).

Another way to optimize the implementation of urban farming is to provide socialization to the community regarding urban farming through relevant agencies that can bridge the community's needs. According to several respondents' statements, they had never received counselling from the government, so the implementation of urban farming did not run optimally. Krisnawati & Ma'ruf (2016) suggested that the government further increase urban farming socialization in urban communities. In line with that, providing sufficient agricultural facilities and infrastructure to the community will support the implementation of urban farming. Yulianti (2018) points out that increasing urban farming practices requires the cooperation of the local community and avoid negative interventions on its implementation.

CONCLUSION

The perspective of urban farming communities in Malang City can be influenced by several factors, including occupation, gender, and age. The urban farming movement is a new alternative in meeting the food needs of the Malang citizens to support food security.

Urban farming activities in Malang City, East Java, Indonesia, have increased during the COVID-19 pandemic. Fulfilling the community's food needs during the COVID-19 pandemic is essential to maintain their health and economy. The government and the farming community influenced the success of urban farming in Malang, such as facilitating agricultural education and socialization to the urban farmer community regularly, establishing the locals' solidarity, and initiating to utilize vacant lots or even tiny spaces for gardening in every home.

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