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# Family Food Security through Urban Farming in Housing Complexes

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**ABSTRACT**

This community service program aims to improve family food security in housing complexes through urban farming. The program involves training and mentoring for residents, specifically residents of RT 13 in the Bumi Candi Asri housing complex, Sidoarjo. Activities include utilizing limited land to grow vegetables and other productive plants. The objectives of this activity are to increase access to healthy and nutritious food, strengthen family food self-sufficiency, and raise awareness of the importance of a sustainable lifestyle. The expected outcome of this activity is to have a positive impact on food security, the economy, and the environment in the housing complex.

***Keywords:*** *food security, urban farming, family food self-sufficiency*



## INTRODUCTION

Family food security is a crucial issue, especially in urban areas with limited land and high dependence on external food supplies (Giyarsih et al., 2024; Nontu et al., 2024). Urban farming is a promising solution to address this problem (Sashika et al., 2024). By utilizing limited land in housing complexes, such as yards, balconies, or other open spaces, communities can produce their own food sustainably. This is also the case in the Bumi Candi Asri housing complex, Sidoarjo. The housing typology here is similar to that of most housing complexes, with houses located close together, sharing walls, and lacking space for growing vegetables. Although waste remains a problem in the housing complex environment (Jumali & Kristina, 2023; Widyastuti et al., 2023), the need for a green environment is also a priority.

Limited land in urban areas is often a major obstacle for families in accessing sufficient and nutritious food (Shafiee et al., 2024). Dependence on food supplies from outside the city makes food prices fluctuate and vulnerable to supply disruptions. This can cause difficulties for

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families, especially those with low incomes (Gwacela et al., 2024). This condition is exacerbated by transportation and distribution costs, which increase the economic burden on families (Espeland & Rowangould, 2024), and reduce the freshness and nutritional value of food products reaching consumers (Zhang et al., 2024). This food security problem is increasingly urgent in urban housing complexes, where population density is high and access to green open spaces is limited. Many families in urban housing complexes rely on purchasing food from markets or supermarkets, making them vulnerable to price fluctuations and food availability.

Urban farming offers a solution to overcome this problem by enabling families to produce their own food in their living environment (Nesheli & Salaj, 2024). By utilizing the limited land available, families can grow various types of vegetables, fruits, and other productive plants to meet their daily food needs. In addition, urban farming can also be a means to improve the quality of the urban environment (Haloui et al., 2025). With more greenery in housing complexes, the air becomes cleaner, the temperature cooler, and the environment more beautiful (Jumali & Kristina, 2024). Urban farming can also reduce household organic waste because it can be processed into compost for plants. Thus, urban farming not only increases access to healthy and nutritious food but also strengthens family food self-sufficiency.

This community service activity is part of an effort to raise awareness among housing complex residents about the importance of a sustainable and environmentally friendly lifestyle. An urban farming program in a housing complex has the potential to create a positive impact to improve family food security; this program can also strengthen social relations among residents, create a greener and more beautiful environment, and increase the economic value of housing complex land.

## METHODOLOGY

This program will be implemented through a participatory approach that actively involves residents of RT 13, Bumi Candi Asri Housing Complex, Sidoarjo. The implementation method will consist of several stages, including: (1) socialization and education about the concept of urban farming, its benefits, and implementation techniques; (2) preparation of implementation, including land preparation, preparation of plants/vegetables, composting, and organic pest and disease management in empty land areas and residents' homes; (3) technical assistance in the implementation of urban farming/gardens in the RT 13 environment and individual homes; (4) regular monitoring and evaluation to ensure program sustainability and identify further development needs.

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## RESULT AND DISCUSSION

This activity includes 1). Socialization and education regarding the concept of urban farming, its benefits, and implementation techniques. This activity was carried out through meetings with residents of RT 13, while also holding discussions regarding the program work plan. This stage discussed which land would be used, agreement on what plants would be used, the budget, and who would be responsible. At this stage, it was agreed that all activities would be carried out jointly and be a shared responsibility. The PKK women's group would be responsible for plant care and selling the crops, while the men would be responsible for providing empty land and land to be cultivated. The following are images from the socialization and education stage related to urban farming:

**Figure 1**. socialization of urban farming program

**Figure 2**. Education and discussion of implementation

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Next, stage 2). Preparation. This stage included the preparation of land to be used, provision of vegetable and plant seeds, compost, and management of pests and other related matters. The following are images from the preparation stage.

**Figure 3.** Land Preparation

**Figure 4.** Provision of Vegetable Seeds

The next stage is 3). Implementation/technical assistance for planting vegetables and managing gardens on empty land and in residents' homes. At this stage, the women of RT 13 worked together to care for and water the gardens. Scheduling was arranged, and it was done in groups. The following are images of the implementation/technical assistance:

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**Figure 5**. Vegetable plants are grown in media next to residents' houses

**Figure 6**. Vegetable plants are planted in media in front of residents' houses

**Figure 7.** Residents maintain the garden

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Next, stage 4). Program evaluation. At this stage, an evaluation of the implementation of activities was carried out, namely looking at the success of the harvest, the costs of care, and calculating profits. The following are images from this stage:

**Figure 8**. The women of RT 13 enjoy the results of the garden

**Figure 9.** Discussion and Evaluation

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This urban farming program has shown encouraging results in improving family food security in the housing complex environment. The active participation of residents in training and assistance has resulted in a significant increase in their knowledge and skills in farming. Many families have successfully utilized their limited land to produce various types of vegetables and fruits, which not only meet daily food needs but also reduce household expenses. In addition, this program has also strengthened the sense of community and mutual cooperation among residents, as well as increased awareness of the importance of a sustainable lifestyle. However, challenges such as land limitations and climate change still need to be addressed to ensure the sustainability and expansion of this program in the future. The activities can be carried out at Table 1.

**Table 1**. Community Service Program Activities

| No | Aktivities | Residents' Understanding |
|---|---|---|
| 1 | Discussion and socialization | the residents agreed to the program of providing gardens on empty land and in residents' homes. It can be next to or in front of the house. |
| 2 | Provision of land, seeds, and others | The provision of empty land is in the neighborhood near the final waste disposal site and is in the RT 13 environment. The provision of plant seeds was agreed upon for vegetables and fruits |
| 3 | Garden care | Carried out collaboratively and according to schedule |
| 4 | Sustainability and program evaluation efforts | The harvest is carried out by residents and managed by the PKK women of RT 13. Further efforts for sustainability are being discussed as they are highly dependent on the weather and the enthusiasm of the residents |

Source : Discussion and Deliberation of RT 13 Residents

Based on the results of the activities carried out, this urban farming program is an effective intervention to increase family food security and empower the community. Therefore, support and sustainability of this program need to be continuously pursued.

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## CONCLUSIONS

In the implementation of this activity, it can be concluded that urban farming through the creation of gardens in empty fields and around residents' homes is an effort to utilize empty land and provide green space. This activity is based on community participation, and residents are involved in managing their gardens. The stages carried out include the stages of preparation, implementation, and evaluation. A participatory approach is used to facilitate the implementation of the program. Residents are very enthusiastic about running this program; it is hoped that this activity will take place continuously.

Suggestions for this activity are related to the sustainability of the program, so that other partners are needed who can help in the development process. For example, certain agencies that can provide education on managing this urban farming effort so that it has economic selling power and is based on a green environment.

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