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Irawan et al., 2023.pdf

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Promoting Sustainable Urban Farming Through Plant Clinic Consultations on Car Free Days

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ABSTRACT

In the face of rapid urban growth, this community service activity addresses the problem of decreasing green open land and the lack of awareness of sustainable agriculture. Activities carried out during the car-free day on Jalan Slamet Riyadi, Surakarta, involved a plant clinic, demonstrations of sustainable maintenance and distribution of seeds. The aim is to increase the understanding of urban communities about the importance of sustainable agriculture and provide practical guidance. Through direct interaction with experts and hands-on practice, these activities increase people's understanding and confidence in caring for plants. The distribution of seedlings also stimulates interest in gardening and an increase in greenery. The results of this dedication encourage active participation in urban farming, providing benefits to the environment and the community's quality of life. This activity confirmed that direct approaches with communities, through clinics, demonstrations, and active participation, effectively address urban environmental challenges and raise awareness of sustainable agriculture.

Keywords: *Environmental Innovation, Plant Clinic, Social Change, Sustainability, Urban Farming*

1. INTRODUCTION

The reduction of green open land and the number of crops in urban areas seriously impact the environment and human well-being (Kolimenakis et al., 2021). Loss of open land contributes to air and water pollution, rising urban temperatures, and reduced habitat for biodiversity (Liu & Russo, 2021). In addition, the reduced number of plants reduces oxygen production and worsens air quality (Laumbach & Cromar, 2022). These impacts are detrimental to human physical and mental health and disrupt the balance of urban ecosystems.

Urban farming has a crucial role in addressing the challenges outlined earlier. By integrating green open land and crop planting in urban areas, urban farming can provide local food sources, reduce air pollution, and improve air quality and the overall environment (van Delden et al., 2021). In addition, urban farming also provides environmental education opportunities, employment, and strengthens people's connection with nature (Sartison & Artmann, 2020). Thus, developing urban farming is essential to create more sustainable and balanced cities.

The incomprehension of some city residents about urban farming practices and sustainable cultivation is the next challenge. Lack of education on agricultural techniques in urban environments, efficient use of resources, and organic waste management can hinder the broader potential of urban farming. Efforts are needed to increase citizens' understanding of sustainable practices through training, educational campaigns, and collaboration with communities and urban farming experts. In this way, better knowledge

can be accumulated and implemented effectively, overcoming obstacles in developing sustainable urban farming.

Holding plant clinic consultation activities during the "car-free day" event can effectively help overcome the problems. This activity can provide urban residents with practical information and advice on urban farming and sustainable cultivation. Urban farming experts can guide how to grow crops in confined spaces, manage organic waste, and efficiently use resources. By taking advantage of the "car-free day" moment that attracts many residents, plant clinic consultations can provide direct education to the community, increase their understanding, and encourage active participation in developing sustainable urban farming.

2. METHODOLOGY

The activity will be held on the sidelines of the car-free day Jalan Slamet Riyadi in Surakarta City on June 18, 2023. This activity included various initiatives such as plant clinics, continuous maintenance demonstrations, and distribution of plant seeds. This method aims to take the opportunity for public attention to be involved in efforts to increase understanding of urban farming and contribute to a greener and more sustainable environment.

The method used in plant clinic activities at the "car-free day" event involves an interactive and educational approach. Special stands or areas are erected with displays of various types of urban plants that attract visitors. Urban farming experts who are representatives of lecturers, student executive bodies, and student activity units of plant clinics at Universitas Tunas Pembangunan Surakarta provided consultation sessions containing explanations on plant selection, planting techniques in limited spaces, plant management, and the use of organic compost. Visitors are invited to participate in planting, maintenance, and composting demonstrations. Open discussions are also organized to answer questions and solve residents' problems in urban gardening, creating an educative environment that facilitates understanding and active involvement.

The second method used in the "car-free day" event is distributing plant seeds to visitors. In this approach, participants can take plant seeds prepared in advance. Urban farming experts or skilled officers provide brief information on growing and caring for such seedlings at home. By providing seedlings, this method encourages direct participation and adoption of urban farming practices, encouraging citizens to start or improve their gardening ventures in urban environments actively.

3. RESULTS AND DISCUSSION

Implementing the first method, namely plant clinic activities in the "car-free day" event, creates public awareness and increases public understanding of sustainable urban farming practices. Visitors can directly learn about crop selection, confined indoor planting techniques, organic waste management, and composting through interaction with urban farming experts. Open discussions also allow visitors to ask questions, share experiences, and solve problems. These results contribute to adopting more efficient and

environmentally friendly agricultural practices in urban environments and building more ecologically sound societies.

3.1. Sustainable Urban Plant Clinic Consultation

The results of community activities participating in "car-free day" activities and consulting through crop clinics facilitated by urban farming experts, represented by lecturers interested in agronomic concentration, plant pest and disease control, and urban agroecological socioeconomics, are diverse and have a positive impact. Participants acquire in-depth knowledge of the principles of sustainable urban farming, including proper crop selection, efficient planting techniques, organic control of pests and plant diseases, and socioeconomic strategies in urban agroecology. With the involvement of lecturers and experts, participants get hands-on guidance, overcome obstacles in their agricultural practices, and feel inspired to apply the methods learned. The results of these activities are expected to positively impact better plant growth, increased urban biodiversity, and a better quality of life for urban communities.



Figure 1. Plant clinic consultation session

According to research by Mabon et al. (2022), consultation sessions with agricultural experts have proven to have significant benefits. The results of this study support that direct interaction with experts in agriculture, such as agronomy, plant pests and diseases, as well as socioeconomic aspects of urban agroecology, allows participants to gain in-depth insights, specific solutions, and practical guidance. By discussing and asking experts directly, participants can overcome difficulties and get appropriate direction, contributing to improving more effective and sustainable urban farming practices.

3.2. *Planting Demonstration*

During the "car-free day" event, a hands-on demonstration about sustainable planting took place, and this helped participants grasp the core ideas of sustainable urban farming. This activity made things clearer for them. The experts in urban farming showed them practical steps like picking the right crops, planting in small spaces effectively, and looking after plants and organic waste. By seeing and doing these things directly, participants felt more sure of themselves and even got motivated to use these techniques in their surroundings. This way, they can make cities more green and sustainable, which is beneficial for everyone's well-being.

The "car-free day" event did not just stop at raising awareness about sustainable planting; it went beyond that. The interactive demonstration went a long way in helping participants truly understand what sustainable urban farming is all about. By watching urban farming experts in action, participants learned about the right crops to choose from and how to plant them in small spaces efficiently. They also gained insights into managing plants and organic waste properly. The most important part is that this experience left participants feeling confident and inspired to practice these methods in their surroundings. This ripple effect will contribute to a healthier urban environment and a stronger commitment to sustainability overall.



Figure 2. Planting demonstration

According to research by Mitchell et al. (2021), Live demonstrations significantly benefit the learning process and apply specific practices. The results indicate that direct interaction with experts or practitioners in a field, such as urban farming, can increase

participants' understanding by providing real examples, interactive explanations, and opportunities to ask questions. By involving practical experience, these demonstrations tend to increase deeper understanding, trigger motivation to adopt the methods taught and ensure more successful implementation in the real world.

3.3. Sustainable Plant Maintenance

Sustainable crop maintenance demonstration activities result in a stronger understanding of the principles of plant care in urban environments. Participants can see firsthand how agricultural experts perform pruning, efficient watering, use of organic fertilizers, and plant pest control. By practising these measures in a controlled environment, people passing through the "car-free day" can better understand their impact on plant growth and the balance of urban ecosystems. This practising activity encourages participants to adopt sustainable care methods within their gardens, increasing plant growth success and maintaining a healthier environment.



Figure 3. Demonstration of sustainable crop maintenance

According to research by Dona et al. (2021), demonstrations of sustainable crop rearing are proven to provide meaningful benefits to urban communities. The results of this study show that through direct demonstrations, urban communities can understand effective practices in caring for plants, including pruning techniques, proper watering, organic fertilizers, and natural pest control. This practical experience increases understanding and gives participants the confidence to apply these methods in their environment. Thus, demonstrations of sustainable crop maintenance contribute to improving the quality of the urban environment and the well-being of society.

3.4. *Plants Seeds Distribution*

The distribution of plant seeds during the car-free day event has opened up new chances for city dwellers to begin or enhance their gardening endeavours. By providing participants with ready-to-plant seeds, they can readily engage in planting and nurturing plants within the confines of their own homes. This initiative holds the power to significantly enhance the green landscape of urban areas, leading to better air quality and a reduction in the carbon footprint. Alongside the seed distribution, participants were equipped with concise planting instructions, offering practical insights into planting techniques and proper care methods. These outcomes spur active engagement in urban farming and foster an increased commitment to upholding the urban environment, ultimately positively influencing the overall quality of life for people.

The impact of distributing plant seeds during the car-free day activity reverberates beyond just the act of seed dispersal. This endeavour creates a valuable opportunity for urban communities to delve into gardening, whether newcomers or seasoned gardeners looking to expand their green spaces. Providing pre-packaged plant seeds empowers participants to initiate the cultivation process at their residences promptly. As a direct result, the urban landscape gains a refreshing surge of greenery, pivotal in enhancing air quality and diminishing the city's carbon footprint. Alongside the seed distribution, concise planting instructions accompany each seedling, equipping participants with practical knowledge regarding effective planting techniques and meticulous plant care. These collective outcomes work synergistically to galvanize active involvement in urban farming, thereby fostering a stronger commitment to preserving the urban environment and contributing positively to the overall well-being and livelihoods of the city's inhabitants.



Figure 4. Division of Plant Seeds

According to research by Jahrl et al. (2021), the distribution of plant seeds benefits the community. The results of this study show that the provision of plant seeds encourages active participation in urban farming, stimulates interest in gardening, and raises awareness of the importance of a green environment. By facilitating easy access to seedlings, communities are inspired to safeguard the urban environment by planting individual greenery, which positively impacts environmental health and overall quality of life.

4. CONCLUSION

Community service through "car-free day" activities with plant clinics, demonstrations of sustainable plant maintenance, and distribution of plant seeds have resulted in significant positive impacts. Through direct interaction with urban farming experts, communities gain a deeper understanding of sustainable agricultural practices. Plant maintenance demonstrations provide concrete insights into techniques for caring for plants effectively, sparking interest and confidence in applying the method. The distribution of plant seeds provides opportunities for communities to start or increase gardening activities, increase the number of greenery in urban areas, and raise awareness of the importance of a healthy environment. The results of this dedication stimulate active participation in urban farming, create deeper connections between people and the environment, and improve air quality and the sustainability of the urban environment as a whole. Thus, this dedication shows that involving communities in urban farming practices can create sustainable positive changes in the environment and the quality of life of communities.

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