

Community Perceptions of the Implementation of Urban Farming in Realizing Household Food Security

Doni Sahat Tua Manalu ^{1*}, Henny Rusmiyati ², Ulil Azmi Nurlaili Afifah ²,
Harries Marithasari ³

¹ Agribusiness Management Study Program, Vocational School, IPB University, Indonesia

² Seed Industry Technology Study Program, Vocational School, IPB University, Indonesia

³ Communication Study Program, Vocational School, IPB University, Indonesia

*Corresponding Author: donisahat @apps.ipb.ac.id



Abstract – One of the areas where the growth rate is increasing is the city of Bogor, specifically in Katulampa Village, East Bogor, West Java, experiencing many changes, including the conversion of agricultural land into buildings such as housing, schools, and shops, which is a severe obstacle to food security in the area. In the future, this will become a particular problem that must be found for a solution. The development of urban agriculture (urban farming) is one strategy to provide food for urban communities. Based on this description, this research aims to analyze community perceptions regarding implementing urban farming in realizing household food security. The analytical methods used are descriptive statistics and inferential statistics. This research was conducted from July to September 2023 in Bogor. Based on the research results, the middle age group is more supportive of urban farming as a solution to food security, especially with a higher level of education. Most respondents work outside the agricultural sector, indicating that non-agricultural communities can use urban farming as an alternative. Most understand urban farming but need further educational approaches to broaden public acceptance. Hydroponics is more popular as a cultivation method, and the potential for reducing household expenses is considered a significant benefit. Vegetable crops are the main focus of cultivation, reflecting health and sustainability awareness.

Keywords – Food Security, Urban Farming, Perceptions, Household.

I. INTRODUCTION

The Population Research Center (LIPI) noted that since 2007, the number of city residents worldwide has been more significant than that of rural residents. In 2014, 54% of the world's population lived in cities. Likewise with Indonesia, the results of the 2010 population census showed that the proportion of the city population was 49.7 per cent, an increase of 27.3 per cent compared to the results of the population census thirty years previously (1980).

One of the areas where the growth rate is increasing is the city of Bogor, specifically in Katulampa Village, East Bogor, West Java, experiencing many changes, including the conversion of agricultural land into buildings such as housing, schools, and shops, which is a severe obstacle to food security in the area. In the future, this will become a particular problem that must be found for a solution.

In order to realize community productivity in Bogor City, it is necessary to have a platform as a form of community institution so that food security can be realized starting from the minor environment. One of the institutional forms is the MBR Berkah Berkah Women's Farmers Group in Katulampa Village, East Bogor. The institutional form of this community is the

Women's Farmers Group, which operates in the agribusiness sector and was established in 2020. The products and commodities cultivated are Horticultural Vegetables, Shallots, and several potted plants being cultivated.

The development of urban agriculture (urban farming) is one strategy to provide food for urban communities. The trend of healthy living for city residents has also made the development of urban agriculture increasingly dynamic. One of the appropriate technologies to be developed in urban areas is farming technology in narrow and open areas. The MBR Berkah Farmers Group was founded in 2020 based on a decree in East Bogor District, Katulampa sub-district.

Based on this description, this research aims to analyze community perceptions regarding implementing urban farming in realizing household food security.

II. RESEARCH METHODS

Time and Place of Research

This research was conducted from July to September 2023. The research was conducted at the Berkah MBR Women's Farmers Group and residents in Katulampa Village, East Bogor, with 30 female respondents.

Data and Data Sources

The analytical methods used are descriptive statistics and inferential statistics. Descriptive statistics describe the perceptions of the Women Farming Group and residents in Katulampa Subdistrict, East Bogor, regarding implementing Urban Farming in Realizing Household Food Security in Bogor City. More in-depth analysis is used by linking research results with literature studies to strengthen research results.

Analysis Method

The data type used is primary data obtained through a questionnaire instrument implemented via Google Forms (online). The results from the Google form are then entered and processed using MS Excel to describe the respondent's data accurately. Furthermore, secondary data was obtained through literature studies from various sources.

III. RESULTS AND DISCUSSION

Respondent Characteristics

Analyzing respondents by age can provide valuable insights in various contexts, such as market research, customer satisfaction surveys, or social research. The following are the characteristics of respondents based on higher education who may be more likely to understand environmental and sustainability issues better. A higher level of education may help someone understand the technical aspects of urban farming, such as crop maintenance and the use of technology. A higher level of education often correlates with critical thinking abilities. However, it does not rule out the possibility that people with low levels of education also have strong views towards urban farming. Furthermore, data based on the type of work can be seen in Figure 1.

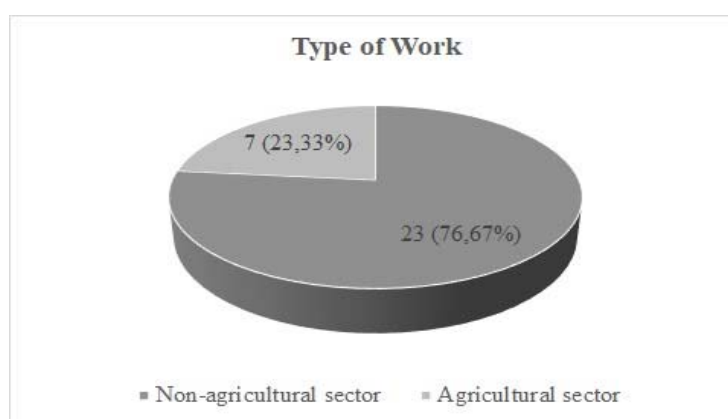


Figure 1. Types of work

City residents tend to have non-agricultural jobs. Some individuals who live in cities may see Urban Farming as a way to utilize limited land and reduce dependence on food supplies from outside the city. According to Puriandi & Indrajati (2013), 97% of the food needs of big cities in Indonesia are met by areas outside the city or rural areas. Food conflict and poverty occur when limited food availability and access arise due to unequal population income.

Furthermore, respondent data based on understanding and knowledge about urban farming can be seen in Figure 2 and Figure 3.

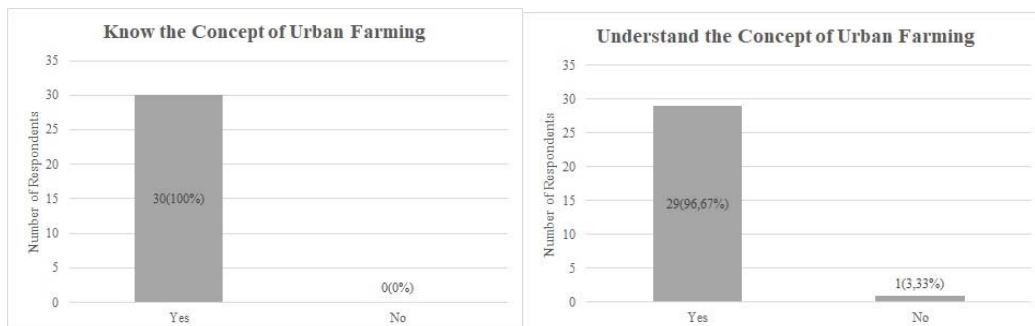


Figure 2. Know the Urban Farming Concept Figure 3. Understanding the Urban Farming concept

Based on Figure 2, it is known that out of a total of 30 respondents, 30 respondents (100%) of them know the concept of *Urban Farming*. *Urban Farming* is increasingly popular among city residents of various ages, including the people of Bogor City. The increasing population every year is accompanied by an increase in residential areas. It causes population density in an area, so the *Urban Farming concept* is often a solution. Meanwhile, Figure 3 shows the percentage of people who understand the concept of *Urban Farming*. Twenty-nine respondents (96.67%) understand the concept of *Urban Farming*, and one respondent (3.33%) needs help understanding the concept of *Urban Farming*.

The important thing in the agricultural sector today is farmer renewal, and one solution is to implement a youth empowerment program which aims to motivate them to participate proactively in developing agricultural businesses (Polan, T. S. et al. 2021). Beside that, urban farming practitioners, apart from having knowledge of agricultural technology, must also have knowledge of climate variability in order to achieve maximum results (Primaningrum, R. A. W. et al. 2021).

Urban farming is becoming increasingly popular due to growing urban populations and the desire for local and sustainable food. Analyzing respondents regarding cultivation methods based on urban farming can provide valuable insights. The following are several cultivation methods based on respondents' responses, as seen in Figure 4.

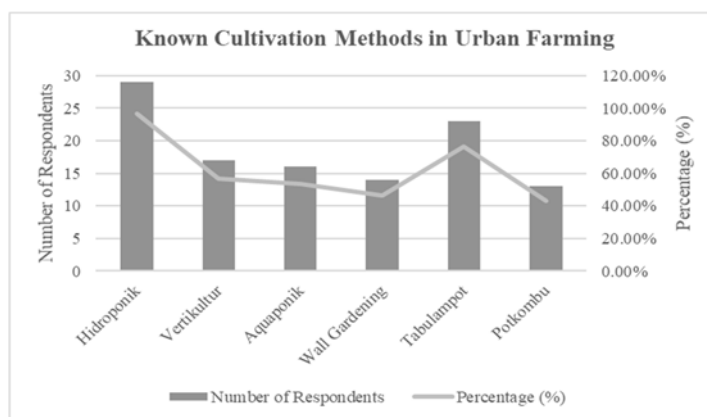


Figure 4. Cultivation methods in *Urban Farming* that are known to the people of Bogor City

Based on Figure 4, 29 respondents (96.67%) knew the hydroponic cultivation method, 17 respondents (56.56%) knew the verticulture method and 16 respondents (53.33%) knew the aquaponic method. Fourteen respondents (46.67%) knew the wall gardening method, 23 respondents (76.67%) knew the tabulampot method, and 13 respondents (43.33%) knew the kombu pot method. It can be seen that the majority of respondents know more about hydroponic cultivation methods than other types of

cultivation methods, with a total of 29 respondents out of 30 respondents (96.67%). Based on the research results Priyanti, *et al* (2021) explained that teenagers tend to be enthusiastic about the hydroponic application method. This shows that hydroponics is familiar to various age groups.

The choice of cultivation method in *Urban Farming* is based on several factors. The following are several factors that can influence farmers' decisions in choosing plant cultivation methods, some of which are:

1. **Available Space:** How much space is available for farming in the city can influence the choice of cultivation method. Some methods, such as verticulture or indoor hydroponics, may be better suited to limited spaces.
2. **Land Availability:** Land availability is an essential factor. Urban farming is often done in limited space, and methods such as potkombu or tabulampot can be a good choice if the land is limited.
3. **Water Use Efficiency:** Water availability tends to be the main problem for urban communities. Therefore, water use efficiency in cultivation methods, such as hydroponics or aquaponics, can be a significant consideration.
4. **Environmental Control:** *Urban Farming* is often faced with environmental challenges, such as air pollution or weather uncertainty. Cultivation methods that provide greater environmental control, such as hydroponics or indoor verticulture systems, may be more desirable.
5. **Sustainability, Concern for sustainability and carbon footprint** can influence the choice of cultivation method. Methods that reduce water, energy, and chemical use may be more attractive to those concerned about environmental impact.
6. **Yield and Consistency:** Maximum yield and consistency in crop production are essential considerations. Some methods, such as hydroponics or aquaponic systems, can provide better control over nutrients and other growth factors.
7. **Availability of Resources.** The availability of resources such as seeds, nutrients and agricultural equipment can influence the choice of cultivation method. Methods that require resources that are easier to find or access may be more desirable.
8. **Ease of Management:** Ease of managing the agricultural system is also a consideration. Cultivation methods that are easy to understand, manage and maintain will be more attractive to those new to agriculture.
9. **Economic Aspects:** Economic factors can influence decisions, including initial and operational costs. Cultivation methods with lower costs or the potential for a quick return on investment may be more desirable.
10. **Agricultural Goals:** Finally, the goals of urban farming must also be considered. Whether for personal consumption, commercial, or social purposes, it can influence the choice of cultivation method. These factors can vary depending on each individual or group's needs, preferences and goals in developing their urban farming (Simbolon, M. F. *et al.* 2021).

Furthermore, an overview of the percentage of urban farming utilization, which can reduce costs for household consumption, can be seen in Figure 5.

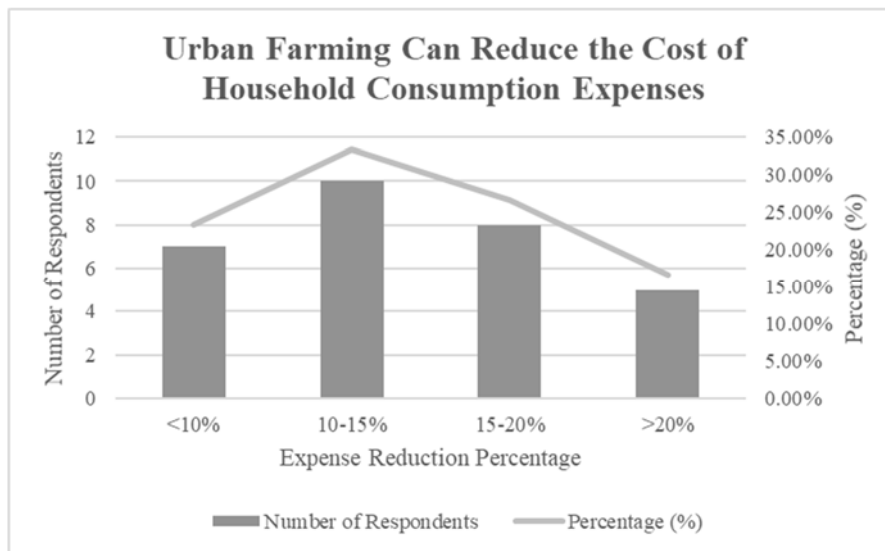


Figure 5. Household Consumption Expenditure Costs with Urban Farming

Based on Figure 5, 7 respondents chose <10% (23.33%), ten respondents chose 10-15% (33.33%), eight respondents chose 15-20% (26.67%) and those who chose >20%, five respondents (16.67%). The use of urban farming can have a positive impact on household consumption costs in several ways. However, the percentage of cost reduction can vary depending on several factors, including the scale of urban farming, types of crops grown, cultivation methods used, and geographic location.

Analyzing respondents regarding the types of plants cultivated using urban farming techniques can determine the potential of each plant commodity. The following are several plants that can be cultivated using urban farming techniques based on respondents' responses, as seen in Figure 6.

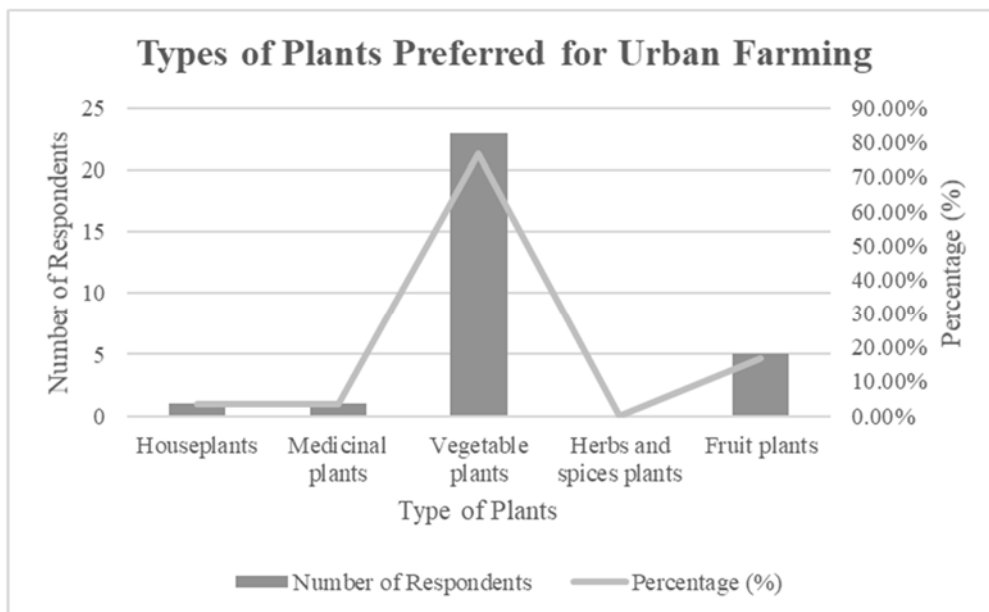


Figure 6. Types of plants preferred for *Urban Farming*

Based on Figure 6, respondents tend to prefer vegetable plants as plant material for *Urban Farming cultivation*; apart from being consumed for daily food, vegetables are also rich in vitamins and fibre. So that people are more aware of health and the supply of fresh and nutritious food. Most vegetable plants can be grown relatively quickly and require more uncomplicated care than fruit plants or trees. It makes a good choice for beginners or those with limited time. This is in line with the findings Gunawan, D. S. S. *et al* (2023) that community consider hydroponic vegetables to be more expensive than conventional

vegetables and availability is not always continuous. So that vegetables are the plants most often chosen to be cultivated in order to save costs on consuming hydroponic vegetables.

Furthermore, an overview of the percentage of urban farming using the kombu pot method that can supply households' daily spice needs can be seen in Figure 7.

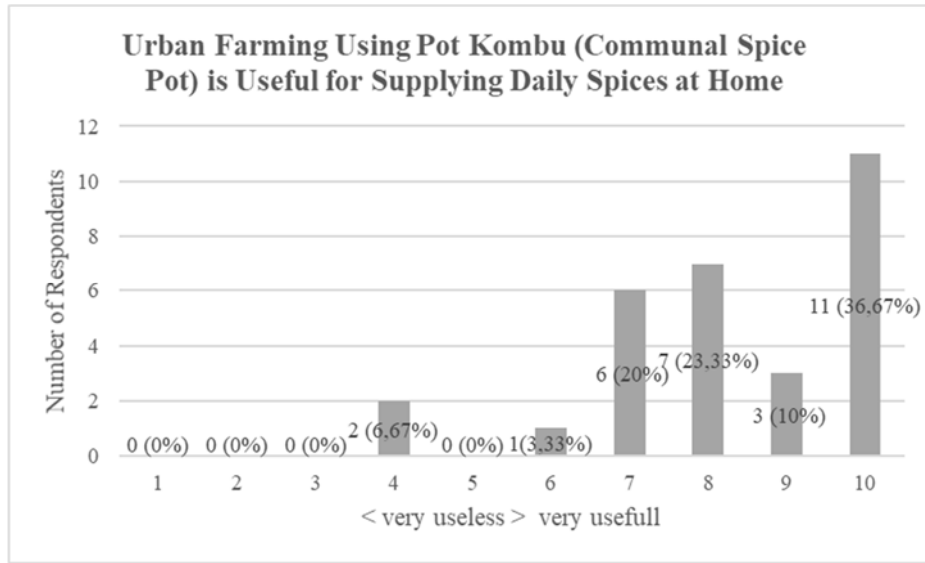


Figure 7. Urban Farming using potkombus is useful for supplying daily spices at home.

Based on Figure 7, it is known that out of a total of 30 respondents, 0 respondents (0%) chose 1, 0 respondents (0%) chose 2, 0 respondents (0%) chose 3, 2 respondents (6.67%) chose 4, 0 respondents (0%) chose 5, 1 respondent (3.33%) chose 6, 6 respondents (20%) chose 7, 7 respondents (23.33%) chose 8, 3 respondents (10%) of them chose 9, and 11 respondents (36.67%) of them chose 10. It can be seen that the majority of respondents chose the number 10 more than other numbers, with a total of 11 respondents out of 30 respondents (36.67%).

The level of difficulty in implementing urban farming using the kombu pot (communal spice pot) method based on respondent data can be seen in Figure 8.

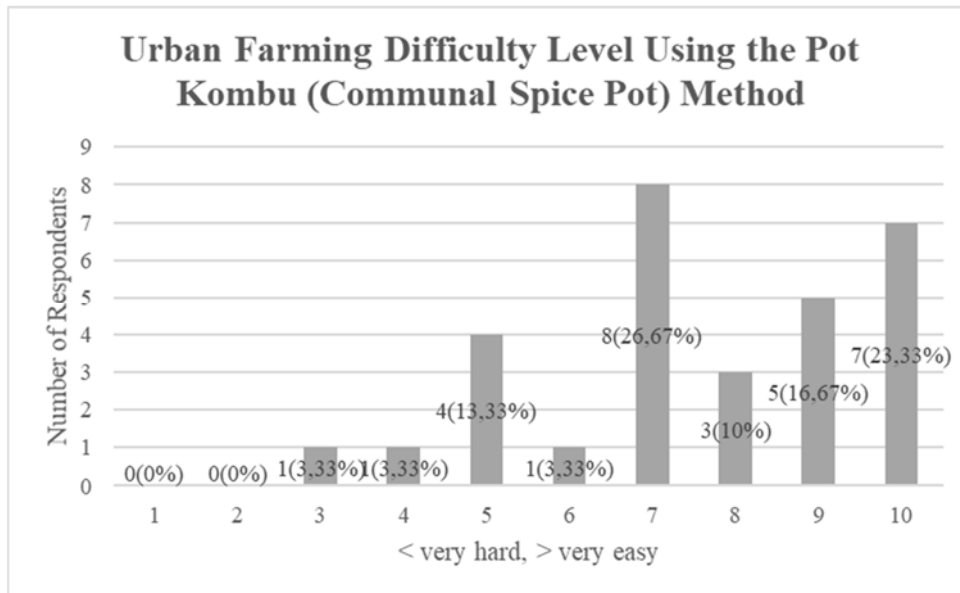


Figure 8. Level of difficulty of Urban Farming using the potkombu method

Based on Figure 8, it is known that out of a total of 30 respondents, 0 respondents (0%) chose 1, 0 respondents (0%) chose 2, 1 respondent (3.33%) chose 3, 1 respondent (3.33%) chose 4, 4 respondents (13.33%) chose 5, 1 respondent (3.33%) chose 6, 8 respondents (26.67%) chose 7, 3 respondents (10%) chose 8, 3 respondents (10%) chose 9, and 7 respondents (23.33%) chose 10. It can be seen that the majority of respondents chose the number 7 more than other numbers, with a total of 8 respondents out of 30 respondents (26.67%).

For some people, urban farming is also a fun hobby. Planting and caring for plants in a yard can provide personal satisfaction and mental well-being. City residents tend to use their yards at home for urban farming. An overview of the percentage of homeyard land used for urban farming based on respondent data is presented in Figure 9.

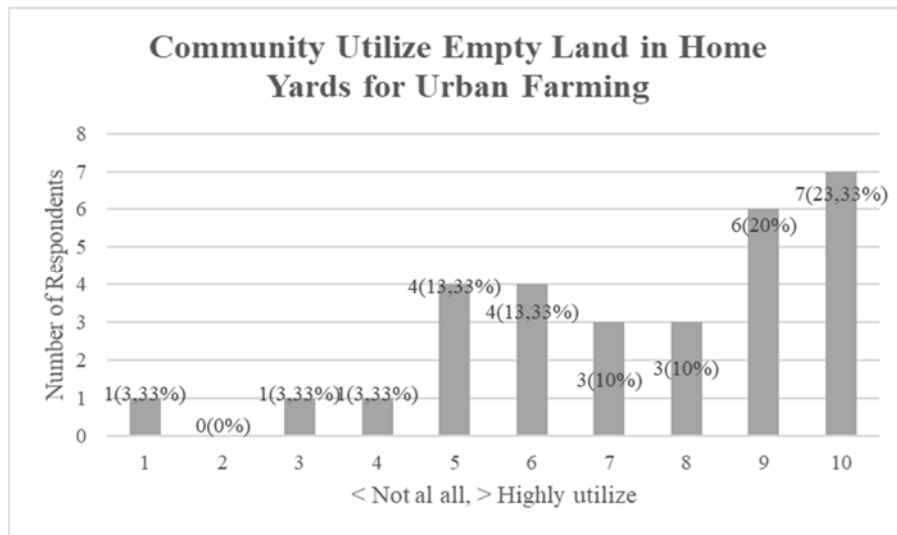


Figure 9. People utilize empty land in their yard for urban farming

Based on Figure 9, it is known that out of a total of 30 respondents, one respondent (3.33%) chose 1, 0 respondents (0%) chose 2, 1 respondent (3.33%) chose 3, 1 respondent (3.33%) chose 4, 4 respondents (13.33%) chose 5, 4 respondents (13.33%) chose 6, 3 respondents (10%) chose 7, 3 respondents (10%) chose 8, 6 respondents (20%) chose 9, and 7 respondents (23.33%) chose 10. It can be seen that the majority of respondents chose the number 10 more than other numbers, with a total of 7 respondents out of 30 respondents (23.33%).

Implementing or implementing urban farming techniques can be expensive, depending on the cultivation method used. An overview of the percentage of expenditure for implementing urban farming based on respondent data can be seen in Figure 10.

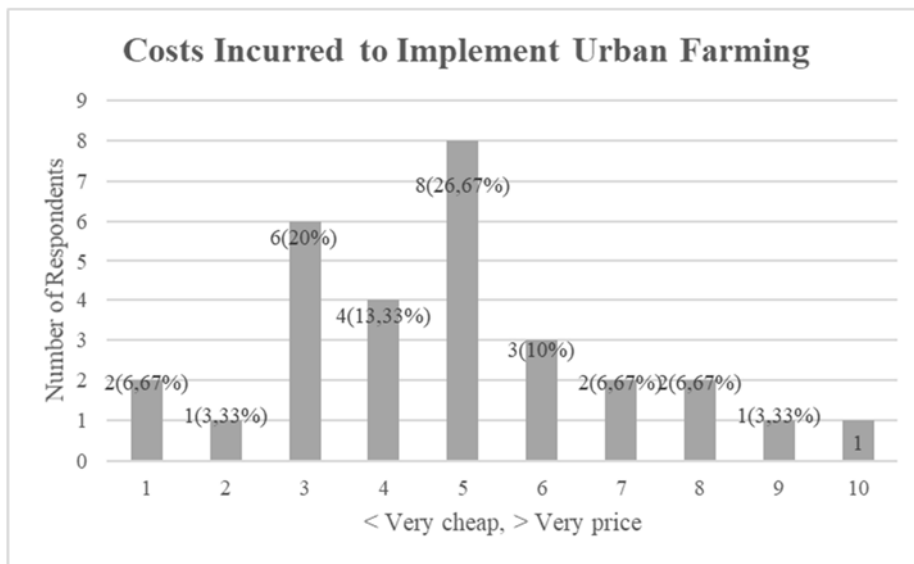


Figure 10. Costs incurred for implementing urban farming

Based on Figure 10, it is known that out of a total of 30 respondents, one respondent (3.33%) chose 1, 0 respondents (0%) chose 2, 1 respondent (3.33%) chose 3, 1 respondent (3.33%) chose 4, 4 respondents (13.33%) chose 5, 4 respondents (13.33%) chose 6, 3 respondents (10%) chose 7, 3 respondents (10%) chose 8, 6 respondents (20%) chose 9, and 7 respondents (23.33%) chose 10. It can be seen that the majority of respondents chose the number 10 more than other numbers, with a total of 7 respondents out of 30 respondents (23.33%).

Furthermore, an illustration of the percentage reduction in daily household costs from urban farming based on respondent data can be seen in Figure 11.

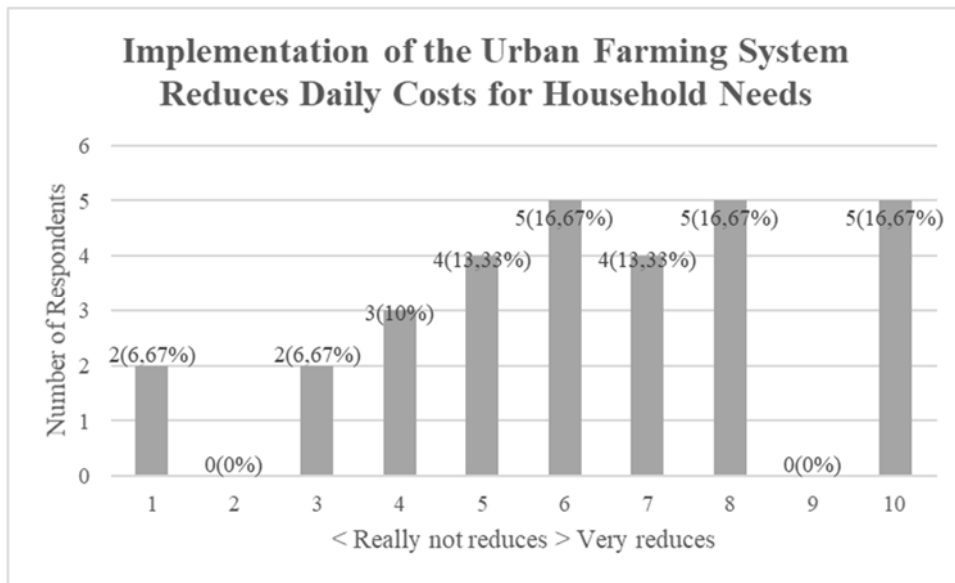


Figure 11. Implementing the Urban Farming system can reduce daily household costs

Based on Figure 11, it is known that out of a total of 30 respondents, two respondents (6.67%) of them chose 1, 0 respondents (0%) chose 2, 2 respondents (6.67%) chose 3, 3 respondents (10%) chose 4, 4 respondents (13.33%) chose 5, 5 respondents (16.67%) chose 6, 4 respondents (13.33%) chose 7, 5 respondents (16.67%) chose 8, 0 respondents (0%) chose 9, and 5 respondents (16.67%) chose 10.

Community knowledge and understanding of urban farming are essential for the sustainability of urban farming implementation. Analyzing respondents based on knowledge and understanding of urban farming can be seen in Figure 12.

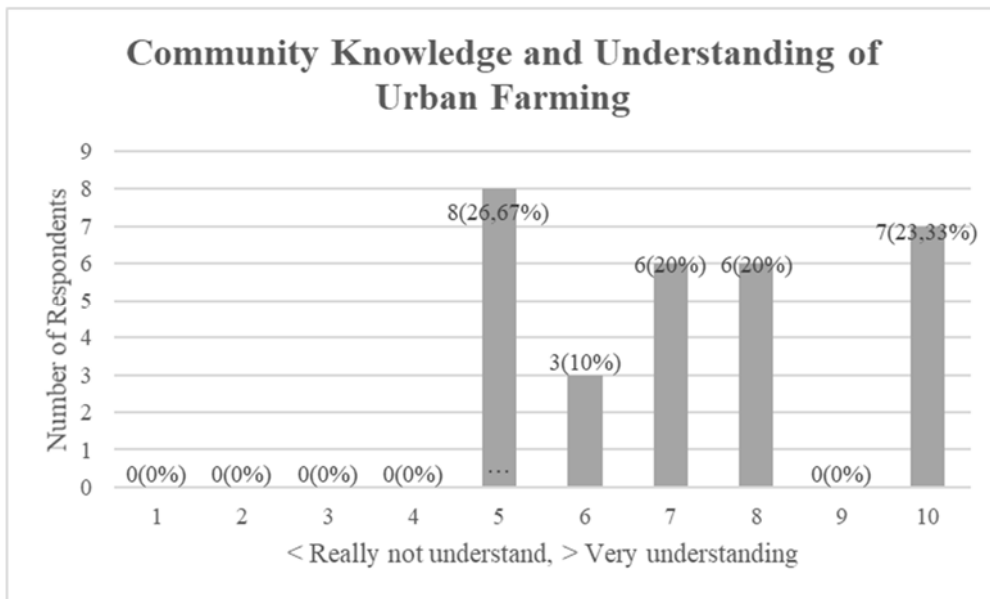


Figure 12. Community knowledge and understanding of Urban Farming

Based on Figure 12, it is known that out of a total of 30 respondents, 0 respondents (0%) chose 1.0 respondents (0%), 2.0 respondents (0%) chose 3.0 respondents (0%) chose 4.8 respondents (26.67%) chose 5, 3 respondents (10%) chose 6, 6 respondents (20%) chose 7, 6 respondents (20%) chose 8, 0 respondents (0%) chose 9, and 7 respondents (23.33%) chose 10. It can be seen that the majority of respondents chose the number 5 more than other numbers, with a total of 8 respondents out of 30 respondents (26.67%).

Urban Farming was created due to adaptation to an increasingly densely populated urban environment. So, limited land does not limit agricultural activities. An illustration of the percentage of community responses to urban farming, which can be carried out on limited land, can be seen in Figure 13.

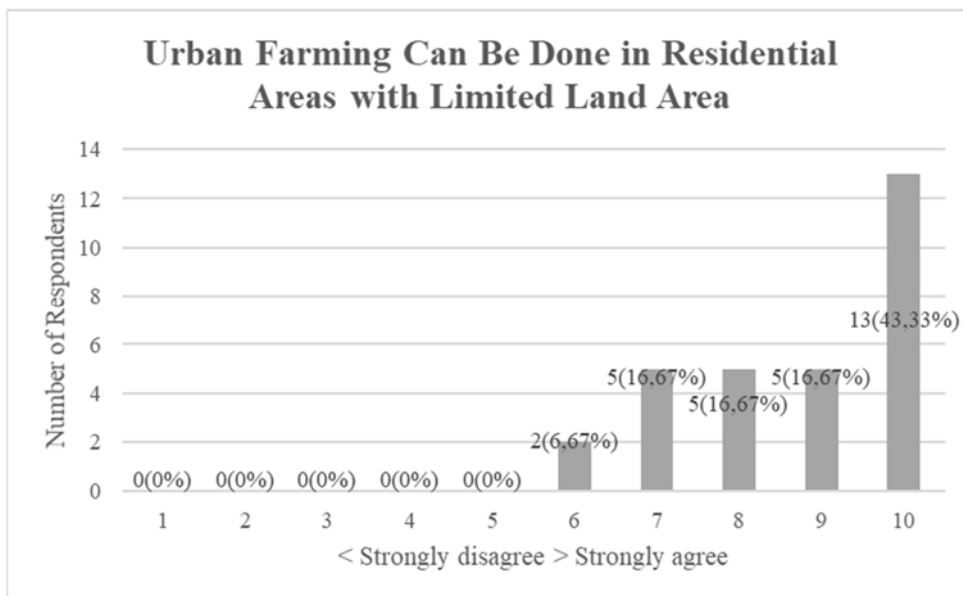


Figure 13. Urban Farming can be done in settlements with limited land

Based on Figure 13, it is known that out of a total of 30 respondents, 0 respondents (0%) chose 1, 0 respondents (0%) chose 2, 0 respondents (0%) chose 3, 0 respondents (0%) chose 4, 0 respondents (0%) chose 5, 2 respondents (6.67%) chose 6, 5 respondents (16.67%) chose 7, 5 respondents (16.67%) chose 8, 5 respondents (16.67%) chose 9, and 13 respondents (43.33%) chose 10. It can be seen that the majority of respondents chose the number 10 more than other numbers, with a total of 13 respondents out of 30 respondents (43.44%). Urban farming in dense areas can be done by utilizing private land, especially vertically and/or utilizing the roofs of buildings, as well as utilizing abandoned land into communal gardens (Podung, G. C. D. *et al.* 2022).

With a smaller scale and more centralized management, urban farming can control the use of fertilizers and pesticides. It helps prevent the accumulation of unwanted chemicals in agricultural produce. Thus, it allows agricultural products from urban farming to be more nutritious. Respondent analysis of responses regarding how urban farming can produce more nutritious agricultural products can be seen in Figure 14.

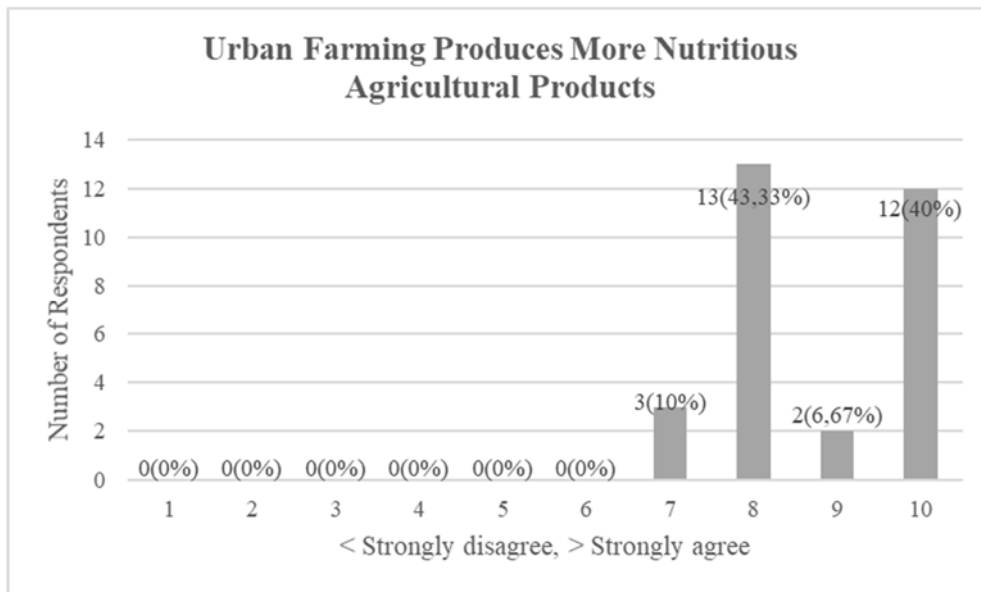


Figure 14. Urban Farming produces more nutritious agricultural products

Based on Figure 14, it is known that out of a total of 30 respondents, 0 respondents (0%) chose 1, 0 respondents (0%) chose 2, 0 respondents (0%) chose 3, 0 respondents (0%) chose 4, 0 respondents (0%) chose 5, 0 respondents (0%) chose 6, 3 respondents (10%) chose 7, 13 respondents (43.44%) chose 8, 2 respondents (6.67%) chose 9, and 12 respondents (40%) chose 10. It can be seen that the majority of respondents chose the number 8 more than other numbers, with a total of 13 respondents out of 30 respondents (43.44%).

Using compost from kitchen scraps helps in recycling organic waste. It is a sustainable and environmentally friendly step to reduce the amount of kitchen waste that ends up in landfills. The following is the percentage of respondents' responses regarding using organic fertilizer in the urban farming system, presented in Figure 15.

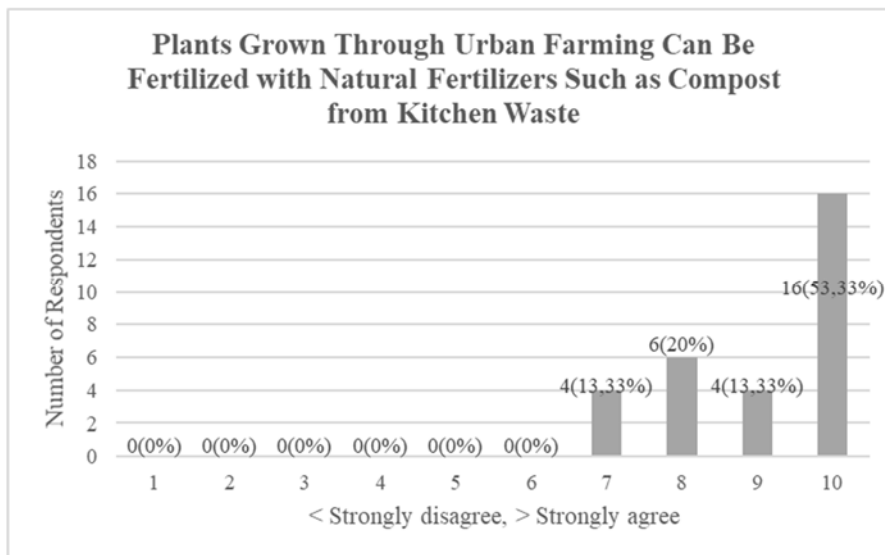


Figure 15. Plants planted using Urban Farming can be fertilized with natural fertilizer such as kitchen waste compost

Based on Figure 15, it is known that out of a total of 30 respondents, 0 respondents (0%) chose 1, 0 respondents (0%) chose 2, 0 respondents (0%) chose 3, 0 respondents (0%) chose 4, 0 respondents (0%) chose 5, 0 respondents (0%) chose 6, 4 respondents (13.33%) chose 7, 6 respondents (20%) chose 8, 4 respondents (13.33%) chose 9, and 16 respondents (53.33%) chose 10. It can be seen that the majority of respondents chose the number 10 more than other numbers, with a total of 16 respondents out of 30 respondents (53.33%).

Organic farming is a farming method that prioritizes using natural ingredients, minimizes synthetic chemical fertilizers and pesticides, and increases the sustainability of the ecosystem. Urban Farming often applies organic farming because it is intensive and small-scale. An overview of the percentage of urban farming that can be applied to organic farming based on respondents' responses can be seen in Figure 16.

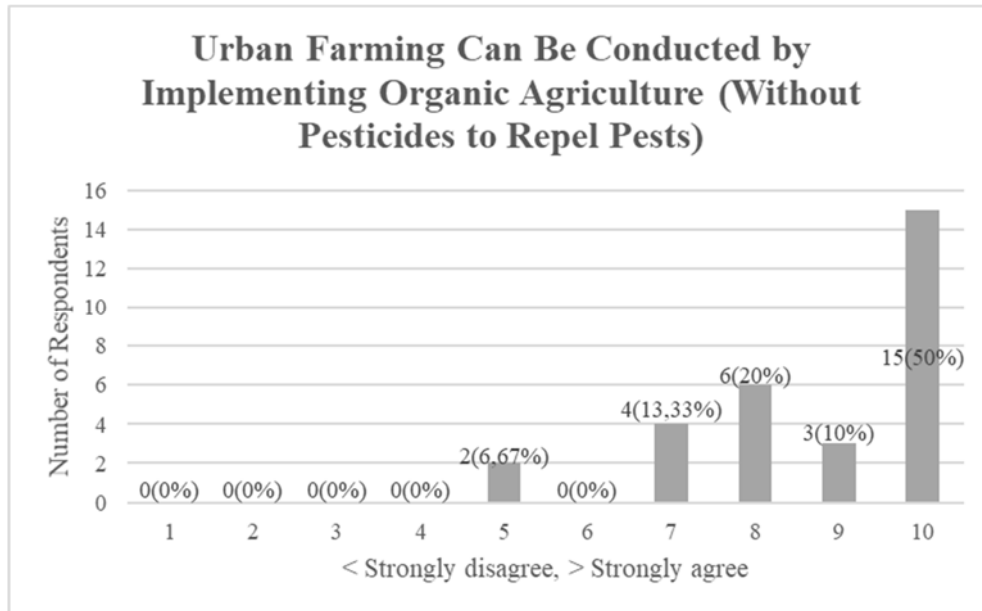


Figure 16. Urban Farming can be done by implementing organic farming

Based on Figure 16, it is known that out of a total of 30 respondents, 0 respondents (0%) chose 1, 0 respondents (0%) chose 2, 0 respondents (0%) chose 3, 0 respondents (0%) chose 4, 2 respondents (6.67%) chose 5, 0 respondents (0%) chose 6, 4 respondents (13.33%) chose 7, 6 respondents (20%) chose 8, 3 respondents (10%) chose 9, and 15 respondents (50%) chose 10. It can be seen that the majority of respondents chose the number 10 more than other numbers, with a total of 15 respondents out of 30 respondents (50%).

Furthermore, an overview of the percentage of respondents' responses to urban farming that can be done using used goods at home can be seen in Figure 17.

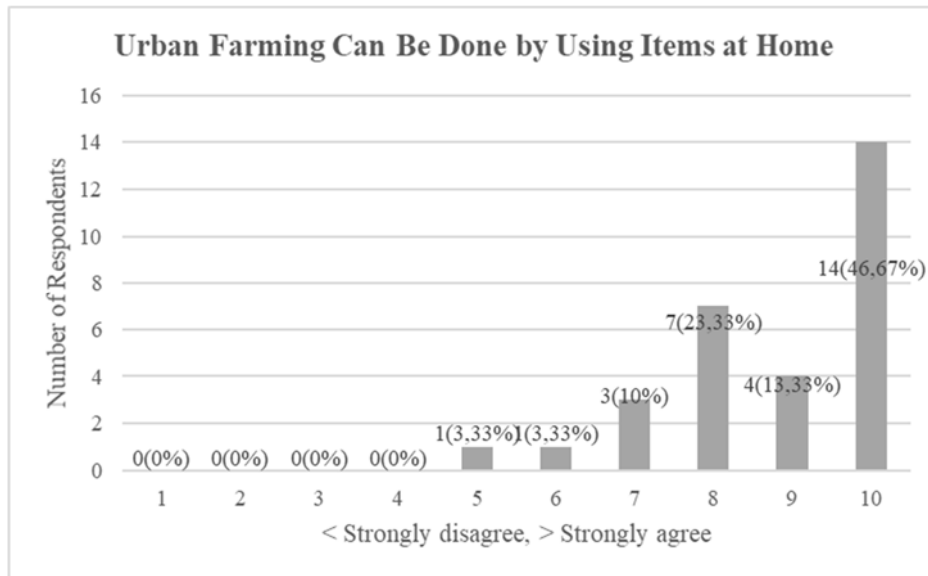


Figure 17. Utilization of used goods at home for urban farming

Based on Figure 17, it is known that out of a total of 30 respondents, 0 respondents (0%) chose 1, 0 respondents (0%) chose 2, 0 respondents (0%) chose 3, 0 respondents (0%) chose 4, 1 respondent (3.33%) chose 5, 1 respondent (3.33%) chose 6, 3 respondents (10%) chose 7, 7 respondents (23.33%) chose 8, 4 respondents (13.33%) chose 9, and 14 respondents (46.67%) chose 10. It can be seen that the majority of respondents chose the number 10 more than other numbers, with a total of 14 respondents out of 30 respondents (46.67%).

The community is aware of health and food security efforts through the implementation of urban farming. The public's view of urban farming as an alternative food substitute can be seen in Figure 18.

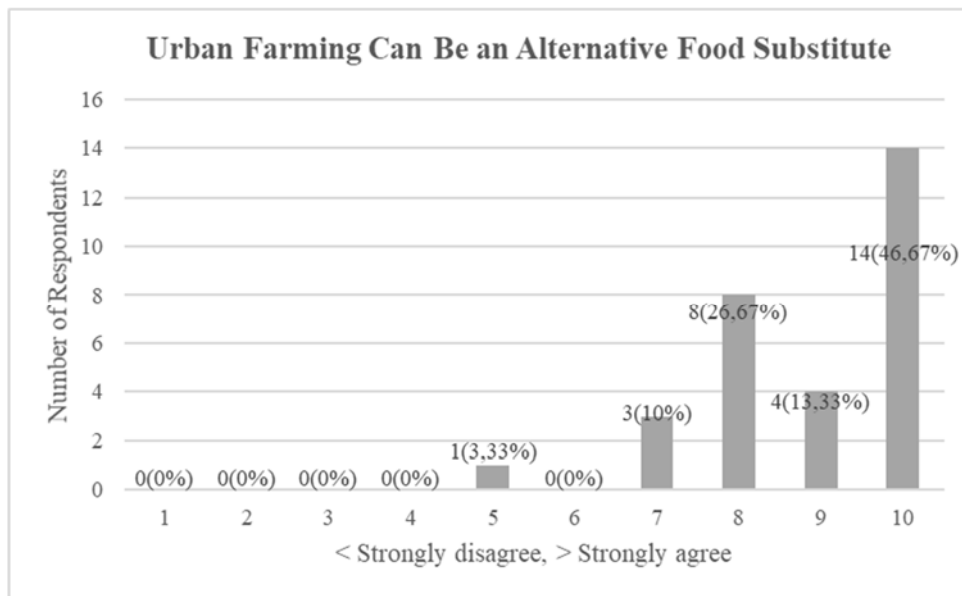


Figure 18. Urban Farming as an alternative food substitute

Based on Figure 18, it is known that out of a total of 30 respondents, 0 respondents (0%) chose 1, 0 respondents (0%) chose 2, 0 respondents (0%) chose 3, 0 respondents (0%) chose 4, 1 respondent (3.33%) chose 5, 0 respondents (0%) chose 6, 3 respondents (10%) chose 7, 8 respondents (26.67%) chose 8, 4 respondents (13.33%) chose 9, and 14 respondents (46.67%) chose 10. It can be seen that the majority of respondents chose the number 10 more than other numbers, with a total of 14 respondents out of 30 respondents (46.67%).

Furthermore, an illustration of the percentage of urban farming helping people to produce their food can be seen in Figure 19.

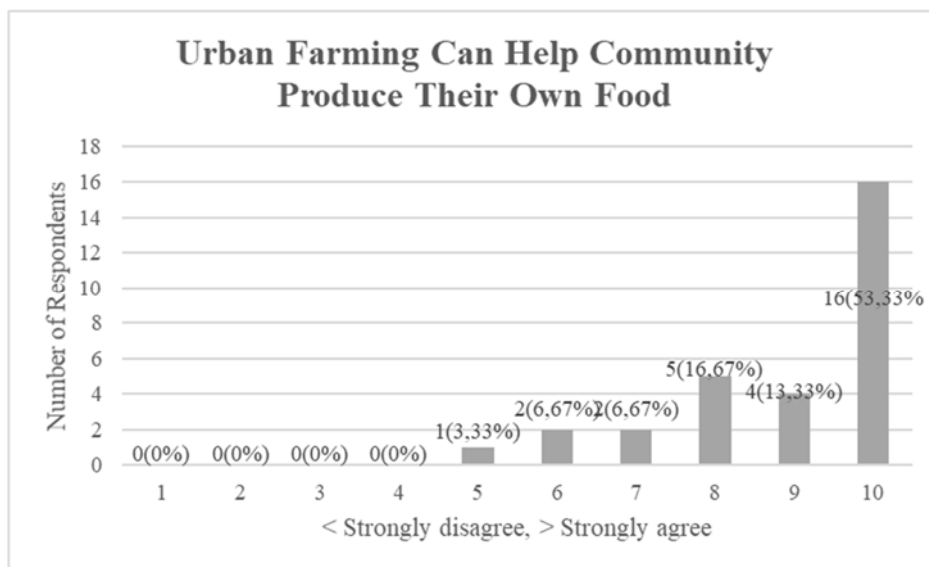


Figure 19. Urban Farming helps people to produce their own food

Based on Figure 19, it is known that out of a total of 30 respondents, 0 respondents (0%) chose 1, 0 respondents (0%) chose 2, 0 respondents (0%) chose 3, 0 respondents (0%) chose 4, 1 respondent (3.33%) chose 5, 2 respondents (6.67%) chose 6, 2 respondents (6.67%) chose 7, 5 respondents (16.67%) chose 8, 4 respondents (13.33%) chose 9, and 16 respondents (53.33%) chose 10. It can be seen that the majority of respondents chose the number 10 more than other numbers, with a total of 16 respondents out of 30 respondents (53.33%). According to the community, it turns out that growing vegetables in this way is

easier and can help meet their daily vegetable needs, although not all needs can be covered by the plants they plant (Qomariyah, L. *et al.* 2022).

Urban farming provides benefits in terms of agriculture and the environment and can also improve social relations and a sense of togetherness among its practitioners. The following is data from respondents regarding urban farming, which can improve social relations and a sense of togetherness between its activists, as seen in Figure 20.

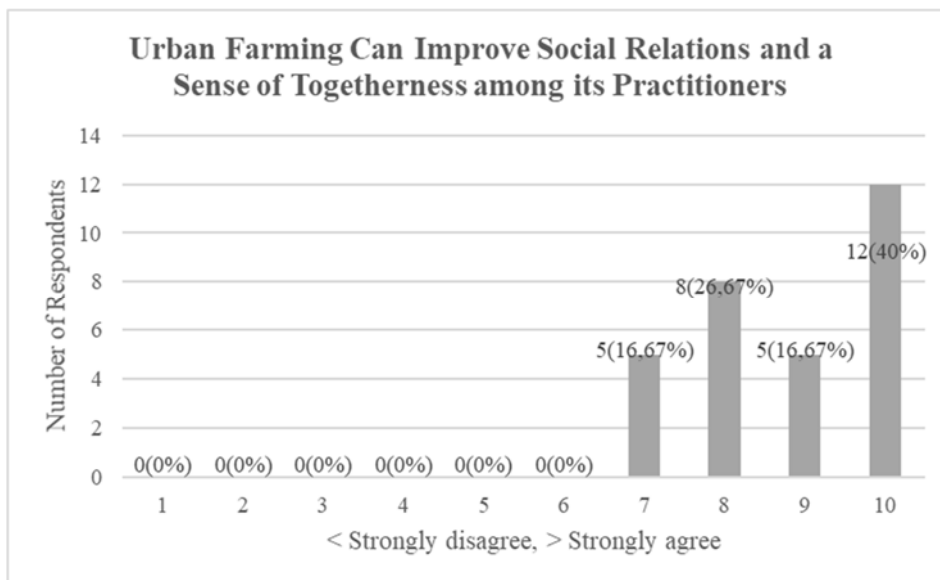


Figure 20. Urban Farming can improve social relations and a sense of togetherness among its practitioners

Based on Figure 20, it is known that out of a total of 30 respondents, 0 respondents (0%) chose 1, 0 respondents (0%) chose 2, 0 respondents (0%) chose 3, 0 respondents (0%) chose 4, 0 respondents (0%) chose 5, 0 respondents (0%) chose 6, 5 respondents (16.67%) chose 7, 8 respondents (26.67%) chose 8, 5 respondents (16.67%) chose 9, and 12 respondents (40%) chose 10. It can be seen that the majority of respondents chose the number 10 more than other numbers, with a total of 12 respondents out of 30 respondents (40%).

Community enthusiasm for urban farming can create a positive environment. Urban farming can create a culture of cooperation in the community. Respondents' responses regarding how urban farming can create a community cooperation culture are presented in Figure 21.

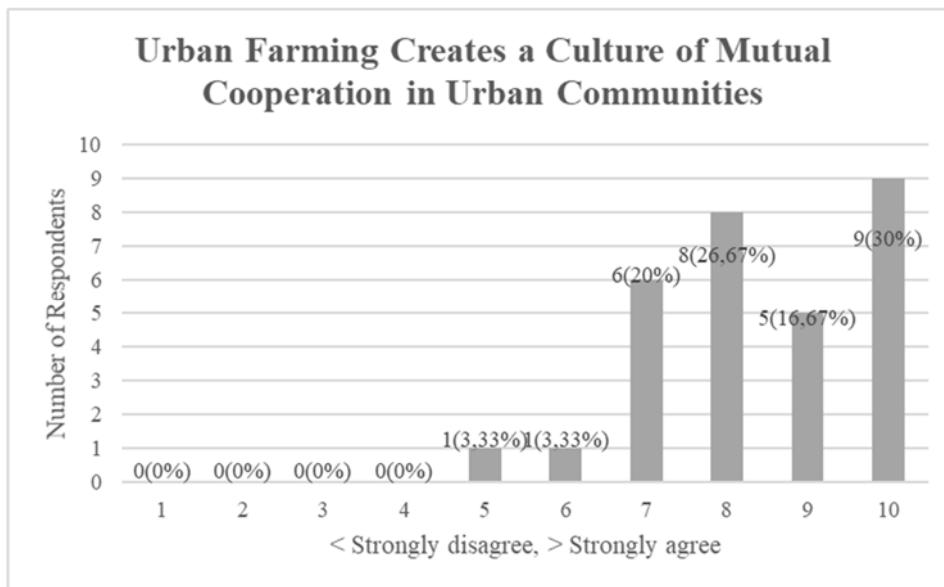


Figure 21. Urban Farming can create a culture of mutual cooperation in the community

Based on Figure 21, it is known that out of a total of 30 respondents, 0 respondents (0%) chose 1, 0 respondents (0%) chose 2, 0 respondents (0%) chose 3, 0 respondents (0%) chose 4, 1 respondent (3.33%) chose 5, 1 respondent (3.33%) chose 6, 6 respondents (20%) chose 7, 8 respondents (26.67%) chose 8, 5 respondents (16.67%) chose 9, and 9 respondents (30%) chose 10. It can be seen that most respondents chose the number 10 more than other numbers, with a total of 9 out of 30 respondents (30%).

The community's desire to apply urban farming techniques is based on knowledge and understanding. Analyzing respondents' willingness to implement urban farming can be seen in Figure 22.

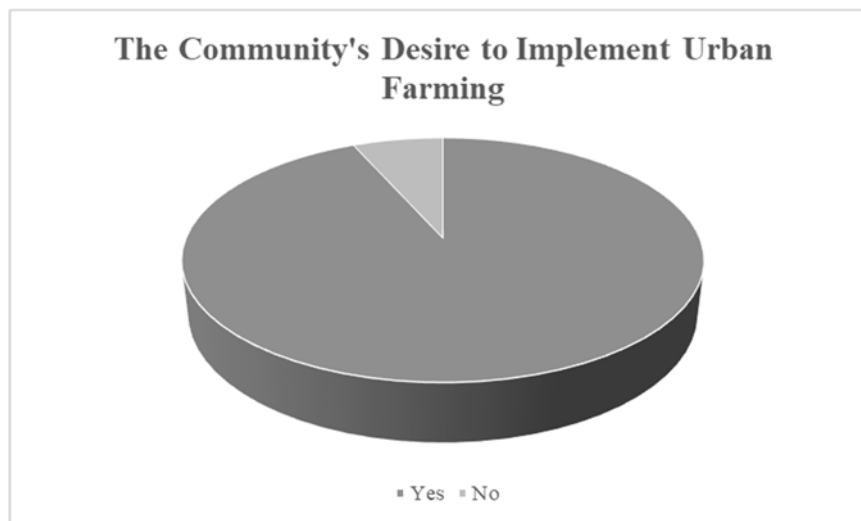


Figure 22. Community desire to implement urban farming

Based on Figure 22, it is known that out of a total of 30 respondents, 28 respondents (93.33%) were willing to implement Urban Farming, and two respondents (6.67%) were not willing to implement Urban Farming. Respondents view urban agriculture positively. The positive perception of respondents towards urban agriculture is attributed to the benefits they experience from gardening activities. The benefits of urban gardening include reducing household expenses, increasing income, and alleviating stress (Komalawati. *et al.* 2022).

Urban farming can be done using various methods, so the costs incurred also vary depending on needs. The research results on people's willingness to pay to implement urban farming can be seen in Figure 23.

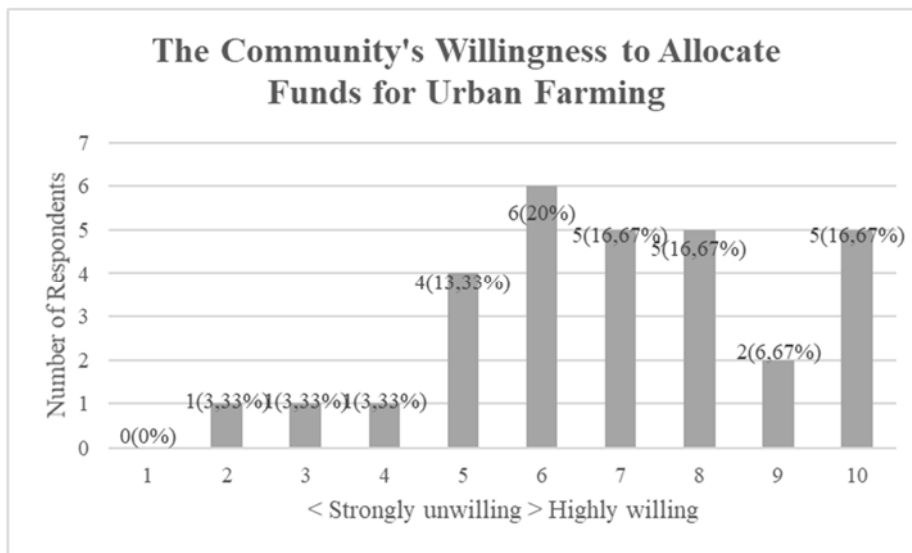


Figure 23. People's willingness to pay for Urban Farming

Based on Figure 23, it is known that out of a total of 30 respondents, 0 respondents (0%) chose 1, 1 respondent (3.33%) chose 2, 1 respondent (3.33%) chose 3, 1 respondent (3.33%) chose 4, 4 respondents (13.33%) chose 5, 6 respondents (20%) chose 6, 5 respondents (16.67%) chose 7, 5 respondents (16.67%) chose 8, 2 respondents (6.67%) chose 9, and 5 respondents (16.67%) chose 10.

Furthermore, an illustration of the percentage of people's willingness to use used tools and materials in their surroundings in order to implement urban farming can be seen in Figure 24.

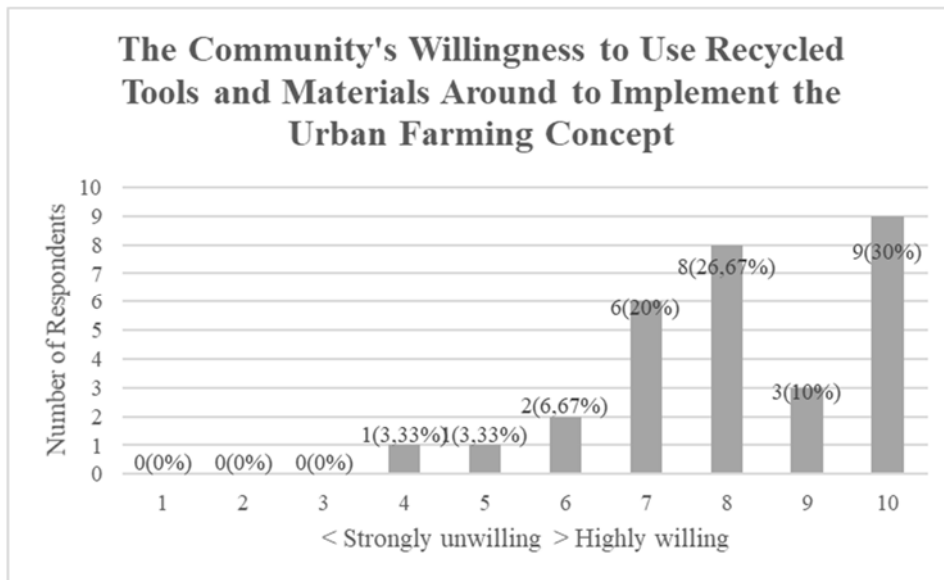


Figure 24. People's willingness to use used tools and materials around them in order to implement the urban farming concept

Based on Figure 24, it is known that out of a total of 30 respondents, 0 respondents (0%) chose 1, 0 respondents (0%) chose 2, 0 respondents (0%) chose 3, 1 respondent (3.33%) chose 4, 1 respondent (3.33%) chose 5, 2 respondents (6.67%) chose 6, 6 respondents (20%) chose 7, 8 respondents (26.67%) chose 8, 3 respondents (10%) chose 9, and 9 respondents (30%) chose 10. It can be seen that most respondents chose the number 10 more than other numbers, with a total of 9 out of 30 respondents (30%). Utilizing used goods is more economical, efficient and easy to obtain. Utilization of used goods can be in the form of: used water gutters, used water bottles, oil and detergent packaging. Oil and detergent packaging that has been thoroughly washed

can be used as an alternative to polybags in growing vegetables. Apart from that, used mineral water bottles and glasses can also be used as planting media for ornamental plants which can be hung along the walls (Oktarina, S. *et al.* 2020).

Furthermore, an overview of the percentage of respondents who are aware of the Berkah Mutiara Bogor Raya (MBR) Women's Farming Group (KWT) can be seen in Figure 25.

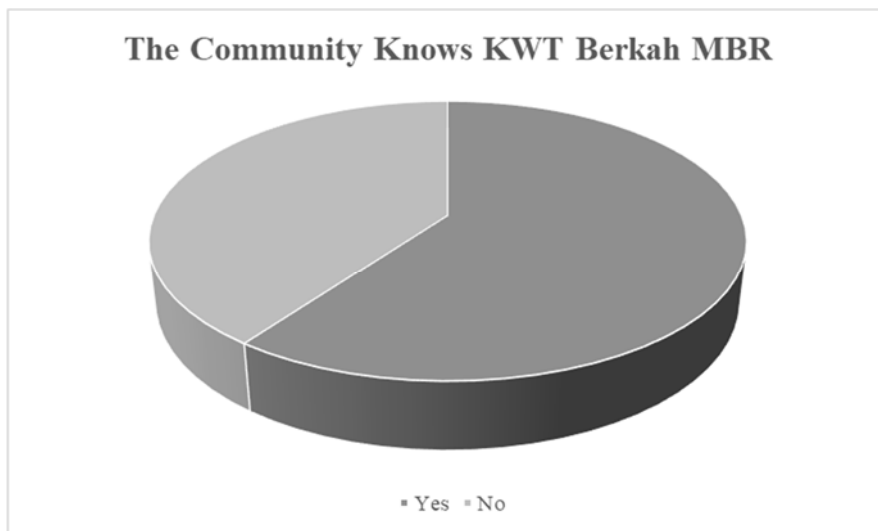


Figure 25. People who know about KWT (Women's Farming Group) MBR

Based on Figure 25, it is known that out of a total of 30 respondents, 18 respondents (60%) of them had heard of the Berkah Mutiara Bogor Raya (MBR) Women's Farmers Group (KWT), and 12 respondents (40%) had never heard of the Women's Farmers' Group (KWT).) Berkah Mutiara Bogor Raya (MBR).

Furthermore, an overview of the percentage of respondents who have visited the Berkah Mutiara Bogor Raya (MBR) Women's Farming Group (KWT) can be seen in Figure 26.

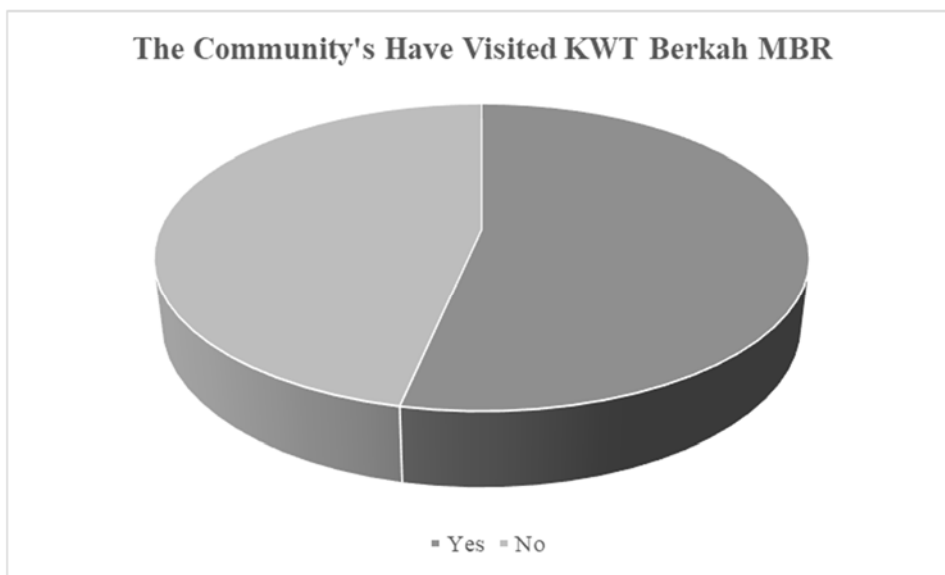


Figure 26. People who have visited KWT Berkah MBR

Based on Figure 26, it is known that out of a total of 30 respondents, 18 respondents (60%) of them had heard of the Berkah Mutiara Bogor Raya (MBR) Women's Farming Group (KWT), and 12 respondents (40%) had never heard of the Women's Farming Group (KWT) Berkah MBR.

IV. CONCLUSION

Based on the research results, the analysis of respondents shows variations in views towards urban farming in KWT MBR based on age, education and employment characteristics. Younger age groups tend to be less interested in urban farming due to a lack of experience and knowledge. Meanwhile, the middle age group is more supportive of urban farming as a solution to food security, especially with a higher level of education. Most respondents work outside the agricultural sector, indicating that non-agricultural communities can use urban farming as an alternative. Most understand urban farming but need further educational approaches to broaden public acceptance. Hydroponics is more popular as a cultivation method, and the potential for reducing household expenses is considered a significant benefit. Vegetable crops are the main focus of cultivation, reflecting health and sustainability awareness.

REFERENCES

- [1] Puriandi. dan Indrajati. (2013). Proses Perencanaan Kegiatan Pertanian Kota yang Dilakukan oleh Komunitas Berkebun di Kota Bandung sebagai Masukan Pengembangan Pertanian Kota di Kawasan Perkotaan. *Jurnal Perencanaan Wilayah Dan Kota*, vol. 1 (2).
- [2] Simbolon, M. F., Kaunang, R. dan Sondakh, M. F. L. 2021. Persepsi Masyarakat Terhadap Tanaman Sayuran Hidroponik Pada Urban Hydrofarm di Kelurahan Batukota Kecamatan Malalayang Kota Manado. *Jurnal Transdisiplin Pertanian, Sosial dan Ekonomi*. vol. 17 (3) : 833 - 842.
- [3] Qomariyah, L., Febriyanti M. N., Wibowo, E. N., Risqiyani A. K., Suluki, M. H. dan Faridah, F. N. 2022. Realizing family food independence through the urban farming concept. *Journal of Community Empowerment*. vol. 7 (3) : 474-482.
- [4] Gunawan, D. S. S., Polan, T. S., Manuhutu, E. A. 2023. Persepsi Masyarakat Terhadap Budidaya Hidroponik di Kelurahan Sarongsoang Dua Minahasa Utara. *Jurnal Altifani*. vol. 3 (2) : 328-339.
- [5] Podung, G. C. D., Rondonuwu, D. M., dan Kumurur, V. A. 2022. Persepsi dan Preferensi Masyarakat dalam Kegiatan Pertanian Perkotaan (*Urban Farming*) Di Kota Manado. *Jurnal Lingkungan dan Binaan (SABUA)*. vol. 11 (1) : 52-60.
- [6] Priyanti, Hardiana, M. I. dan Hutasuhut, D. A. S. 2021. The role of agroedu-tourism program in enhancing young generation's knowledge on urban farming: Hydroponics technique. *Journal of Physics*. vol. 1796 : 1-7. doi:10.1088/1742-6596/1796/1/012088
- [7] Oktarina, S., Sumardjo, Purnaningsih, N. dan Hapsari, D. R. 2020. Activities of Farmer Women Groups in Utilizing Digital Communication Media in Urban Farming Activities in Bogor City. *International Journal of Progressive Sciences and Technologies (IJPSAT)*. vol. 19 (1) : 241-249.
- [8] Komalawati, Sarjan, Romdon, A. S., Hartono, F. R., Murtiati, S., Arianti, F. D., Hariyanto, W. dan Oelviani R. 2022. Urban Farming as a Resilient Strategy During COVID-19 Pandemic. *Journal of Resilient Economies*. vol. 2 (1) : 39-48.
- [9] Primaningrum, R. A. W., Irham, dan Perwitasari, H. 2021. The Impact of Climate Variability on Economic Sustainability on Urban Agriculture: A Case Study in Yogyakarta City, Indonesia. *Proceedings of 1st International Conference on Sustainable Agricultural Socio-economics, Agribusiness, and Rural Development*. vol. 199 : 250-256.
- [10] Polan, T. S., Pontoan, K.A., dan Merung, Y. A. 2021. Pemberdayaan Kaum Muda Untuk Mendorong Regenerasi Di Sektor Pertanian. *Jurnal Penelitian dan Pengabdian Masyarakat*. vol. 1 (1) : 26-34.