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Application Of Organic Vegetable Cultivation With The Utilisation Of The Yard

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Abstract

Organic vegetable cultivation helps provide safe and nutritious food production. The increased consumption of quality vegetables as Food necessitates an increase in production; one endeavour to address these needs is to transform yards into agricultural land for organic vegetable gardening by empowering homemakers. This study aimed to investigate the level of organic vegetable cultivation application and the parameters related to organic vegetable cultivation application in the usage of yards. The study was conducted in October 2021 at the Merpati Asri Women Farmers Group in Pengajaran Sub-village, Bandar Lampung City, with 30 participants. A census with a purposeful procedure and a quantitative approach with non-parametric statistical analysis, especially Spearman rank correlation, are applied. The findings revealed that respondents could implement production, maintenance, and harvest activities under recommended organic farming practises, such as using compost from household waste and making vegetable pesticides from plants, at a high level of application of organic vegetable cultivation on yard land. Drug. The amount of application of organic vegetable growing is strongly related to the experience of homemakers in managing the yard, government support, and the level of suitability of cultivation.

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INTRODUCTION

The Sustainable Food Farming Program (P2L) is one of the Women Farmers Group (KWT) empowerment projects, and it plays an essential role in generating superior vegetable products from the yard. The benefits derived from these activities contribute to the family's consumption and income quality (Atmadja et al., 2020). This yard prioritises organic cultivation procedures to ensure that the agricultural goods produced are high-quality and safe to consume.

Food availability is measured not only by the quantity of Food available but also by the quality of Food, which is related to the health of those who consume it. This is under Law No. 18 of the Republic of Indonesia on Food, which demands food safety, namely the circumstances and efforts required to prevent Food from being contaminated with biological, chemical, and other things that might interfere, harm, and threaten human health. It does not contradict the community's religion, values, or culture, making it safe for consumption; however, generating Food through organic agricultural operations is complex; many farmers continue to rely on chemical production components (Charina et al., 2018).

Organic vegetable farming could be one of the measures to achieve food security. Applying anything new will be more acceptable if someone has undergone a lengthy learning process with supporting documentation (Euriga, 2018). Organic vegetable farming involves chemical-free production inputs such as fertilisers and upkeep (controlling pests and diseases). Organic vegetable products still need to be popular among the general public due to their scarcity and higher prices than conventional alternatives. However, in this study, organic vegetables were grown within the household using a simple approach involving the use of the yard to increase food security at the household level. The goals of this study are to 1) determine the level of application of organic vegetable cultivation and 2) determine the factors associated with the application of organic vegetable cultivation through the use of yards at KWT Merpati Asri Bandar Lampung City.

RESEARCH METHODS

This study was carried out in the Pengajaran Sub-village, Bandar Lampung City, Lampung, Indonesia from October to November 2021. Pengajaran Sub-village is one neighbourhood in Bandar Lampung City that implements the P2L Program through the Merpati Asri Women Farmers Group (KWT), which utilised the yard as land with the potential to be a farm, generated family food items, and enhanced family income. The study's sample population consisted of all Merpati Asri KWT members who served as the P2L Program's executor in the Teaching District. The census method using a quantitative research methodology was employed in this study, which utilised numerical data on an ordinal scale of 30 respondents. Primary data and secondary data were the two types of data collected. Primary data was obtained through direct interviews with respondents using structured questions in questionnaires. On the other hand, the secondary data was obtained from previously recorded and available data, such as the findings of previous studies, journals, books, articles, newspapers, and other supporting documents.

The first objective examination employed descriptive statistical methods, specifically determining the most likely values to arise (mode) in the categories of very high (score 4), high (score 3), low (score 2), and very low (score 1). The second objective analysis employed a non-parametric statistical test, the Spearman Rank test, to determine the correlation or relationship between two variables, the dependent variable (X) covering the respondent's age, education level, length of experience managing the yard, government support, and level of cultivation suitability, and independent variables. (Y) denotes the extent to which organic vegetable production in the yard is practised.

RESULTS AND DISCUSSION

Level of Application of Organic Vegetable Cultivation with Yard Utilization

Organic vegetable cultivation is an agricultural approach that does not employ chemical elements in its production components, such as fertilisers, irrigation of land use, and pest and disease management. Chemical components can have an impact on the quality of vegetable products that humans consume. Chemical residue can degrade the health of the human body and even be fatal if taken over an extended period of time. In terms of the environment, applying chemical elements in agricultural production reduces soil fertility and kills beneficial microbes (Marwantika, 2020). Table 1 demonstrates the level of application of organic vegetable cultivation with the use of the yard.

Table 1. The level of application of organic vegetable cultivation by using the yard

Classification	Score	KWT Member	
		Amount	(%)
Very low	1	0	00.00
Low	2	0	00.00
High	3	21	70.00
Very High	4	9	30.00

Source: Processed from primary data (2021)

According to the field research findings, the application level of organic vegetable production with the use of yard land is in the high category, with a percentage of 70%. Fertilisers, land, seeds, and pesticides are examples of production factors that influence the amount of organic vegetable farming. Organics utilised in cultivation by respondents include chicken manure and compost made from domestic vegetable waste. Because the location is incorporated into the home and residential environment, the use of polluted land is the yard safe from dangerous contamination. The seeds utilised in cultivation by respondents are certified seeds. Maintaining organic vegetable plants in the yard includes utilising mulch to prevent evaporation, watering with unpolluted water such as rice effluent and well water, and applying natural insecticides such as processed garlic and soursop leaves to control pests and illnesses. Organic vegetable farming goods are harvested using environmentally friendly equipment that does not

harm the environment, such as garden shears and knives; the harvest is collected in uncontaminated receptacles, such as vegetable baskets that may be reused.

Respondents can use organic vegetable cultivation in yards with a high category because the benefit of this cultivation technique is the convenience of managing cultivation; land use features that are not too broad can make it easier for respondents to maintain plants independently and carefully. Seasonal vegetable crops have a short planting period, allowing respondents to quickly feel the harvest time and production outcomes. This is consistent with the findings of Kusmiati and Solikhah (2015). They discovered that using organic vegetable production in a small yard might provide convenience in maintaining and profiting from the product for consumption. Tando (2018) claims that using yard land for agricultural purposes can encourage using current and practical organic vegetable production techniques by creating terraced shelves. Extension staff serve as facilitators in the learning process, providing direct help and supervision to those carrying out various activities in the growing of organic vegetables. According to Suyadi and Nugroho (2017), extension workers' aid will speed the transmission of the application of innovation in organic farming.

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Factors Related to the Application of Organic Vegetable Cultivation with Yard Utilization

The age of the respondent (X1), the respondent's education level (X2), the level of experience in managing the yard (X3), government support (X4), and the level of suitability of cultivation (X5) are thought to be related to the level of application of organic vegetable cultivation through the use of yards. Table 2 demonstrates how respondents manage their yards according to age, education level, and farming experience.

Table 2. Age of respondents, level of education and experience of respondents in managing the yard

Aspects	Classification	Interval/Score (year)	Member of KWT	
			Amount	(%)
Age	Youngest	29-35	6	20.00
	Young	36-41	2	06.67
	Old	42-48	12	40.00
	Oldest	49-55	10	33.33
Average			44,53	
Education Level	Very Low	1	3	10.00
	Low	2	12	40.003
	High	3	13	43.33
	Very High	4	2	06.67
Average			3	
	Latest	5-8	5	16.67
	New	9-12	6	20.00

Recent farming experience	Old	13-16	10	33.33
	Oldest	17-22	9	30.00
Average			13.23	

Source: Processed from primary data (2021)

Age can influence how long a person is active and how they experience life experiences. Age or age can also influence a person's physical condition and mental state. Table 1 reveals that homemakers in KWT Merpati Asri are dominated by the old age category, ranging from 42 to 48 years. The use of backyard land for organic vegetable cultivation. According to Yulida (2012), age is one factor that farmers evaluate when selecting whether to absorb and adopt a new invention or activity in yard management.

Education level refers to the formal education level attained by KWT members. Table 1 demonstrates that the average respondent has a high level of education, as shown by a score of 3, which equals up to high school (SMA). The learning and knowledge gained from the learning process, as well as interaction with school residents, will have a positive impact on a person's educational experience. According to Silviyanti et al. (2016), a person's formal education degree influences how they seek information, learn, and process resources.

One of the features of the respondent about the length of time the respondent spends in farming activities by utilising the yard of each KWT member's house is the respondent's experience in managing the yard. According to table 1, most respondents have a long experience of 13-16 years. The findings revealed that homemakers in the Merpati Asri KWT have a long history of farming in the yard, either in the form of ornamental plants or vegetables and other commodities. Respondents with farming experience can be deemed to have fundamental knowledge and abilities, individually and through others. Learning from the experiences of others is regarded as crucial for improving farmers' knowledge and capacity to improve their farming practises (Maramba, 2018 & Listiana et al., 2020).

The government support variable (X4) in the usage of yards has a good impact both as a source of Food and as a means of improving family income by empowering homemakers who are members of the KWT through the P2L Program. This institution's creation will support various learning processes aimed at increasing respondents' understanding through extension initiatives (Yanfika et al., 2019). Using yard land is inextricably linked to fostering sustainable agricultural development, one of which is by practising organic farming. Table 3 demonstrates the government assistance received by members of KWT Merpati Asri.

Table 3: Government support for the establishment of yard-based vegetable growing

Classification	Score	KWT Member	
		Amount	(%)
Very low	1	0	00.00
Low	2	2	6.67
High	3	23	76.67
Very High	4	5	16.66

Source: Processed from primary data (2021)

Table 3 demonstrates that the classification of government support is in the high group, with a median score of 3, accounting for up to 76.67%. Government assistance is provided in the form of learning, coaching, or counselling facilities, as well as financial assistance to establish the infrastructure required in vegetable cultivation activities, such as seed houses and demonstration lands, in the implementation of organic vegetable cultivation by utilising yard land. This assistance is provided through the P2L Program.

According to Viriantina et al. (2019), government support is a kind of encouragement and motivation for respondent farmers to apply sustainable agriculture practices. As a result, all Merpati Asri KWT members bear a great deal of responsibility for managing and optimising the government's facilities for supporting the implementation of yard land use, mainly organic vegetable cultivation, so that they can provide significant benefits to each member and the wider community. Who can appreciate vegetable items that are both high in quality and safe? The sustainability of this government assistance is highly contingent on KWT's response and participation in managing the assistance so that it can continue to expand.

Another essential aspect influencing the level of application of organic vegetable culture in the yard is the level of cultivation appropriateness (X5). Organic vegetable cultivation in yards is one form of innovation in sustainable agriculture methods with relatively restricted land and proximity to the living environment; it can even be an aesthetic value for people's homes. The use of yard land contributes to efforts to improve farmer capacity strategies for organic vegetable cultivation (Murdayanti et al., 2021). The form of innovation implementation is heavily influenced by assessing the innovation's fit with the environment, norms, and community needs. According to Rogers (2005), the level of conformance is one of the qualities of the invention that determines the level of application and sustainability of an innovation that someone implements. Table 4 demonstrates the adaptability of organic vegetable cultivation on yard land.

Table 4 demonstrates the compatibility of organic vegetable cultivation with yard use.

Classification	Score	KWT Member	
		Amount	(%)
Very low	1	0	00.00
Low	2	0	00.00
High	3	20	66.67
Very High	4	10	33.33

Source: Processed from primary data (202

According to the table above, the suitability of organic vegetable cultivation with the use of the yard is in the high category, with 66.67%. The findings revealed that organic vegetable farming followed the prescribed procedures expected by the surrounding community in response to market demand. Better than non-organic products. Organic vegetable commodities are simple to market because regular consumers already trust organic items of proven quality.

Organic vegetable cultivation on yard land is one of the ideal developments since it does not require a vast area of land and allows farmers to carry out manual control efforts properly. Pest management and maintenance can also be done naturally, such as fertilising and irrigation with organic components such as manure, compost, and water from home waste such as rice washing water. This is consistent with the remark of Ashari et al. (2016). They indicate that community members easily cultivate crops by utilising this yard because of its easy access during spare time. Table 5 demonstrates the results of the Spearman rank correlation test for each variable.

Table 5 demonstrates the Spearman rank test of parameters associated with the amount of application of organic vegetable cultivation using yards.

Variable	Significance Value	Correlation Value
Age	0.323	0.187
Education Level	0.149	-0.270
Experience	0.000	0.660**
Government support	0.007	0.480**
Conformity Rate	0.000	0.926**

Source: Processed from primary data (2021)

According to the statistical test findings in the table above, the respondents' age has no significant link with the level of application of organic vegetable production in the use of yard land (sig > 0.05, Rs = 0.187). This occurred because their age did not influence respondents' excitement and awareness of organic vegetable farming. Furthermore, the typical responder at KWT Merpati Asri has a high level of education, namely a high school diploma (SMA), but has no genuine association with the use of

organic vegetable production in the use of yard land, as evidenced by (sig > 0.05, Rs = 0.149). Knowledge and skills for organic vegetable growth on yard land are learned through non-formal education activities, namely counselling activities obtained from executing the P2L Program rather than regular schools. These findings are consistent with the findings of Putri et al. (2017). They found that farmers' age and degree of formal education did not affect the amount of lowland rice fertilisation applied.

Most responders had 13-16 years of experience converting their yards into simple agricultural land. Before the P2L Program, the respondents' only agricultural hobbies were growing family medicinal plants (toga) and ornamental plants. The findings of this study's statistical tests demonstrated that respondents' experience had a significant link with the use of organic vegetable production in the yard (sig 0.000, 0.05 Rs = 0.660). This is encouraged since, with experience, individuals can use things that are thought to be good and avoid making the same mistakes in the future. For example, manure and watering plants with rice-washing water can improve soil fertility. Respondents learnt about this activity and received experience managing plants in their former yards, which coincides with the current P2L Program's application of organic vegetable gardening. This is consistent with Anisah and Hayati's (2017) study, which found that farming experience influences farmers' decision to continue farming chilli herbs.

Government support, which includes learning facilities, extension activities, and financial infrastructure support, has an essential positive link with the degree of organic vegetable cultivation in the yard, as demonstrated by a significance value of 0.007 0.05. This demonstrates that government support significantly contributes to the use of organic vegetable cultivation, consistent with Listiana et al. (2020), who found that extension activities can help farmers increase their understanding of environmentally friendly agricultural cultivation innovations.

The level of culture appropriateness is significantly linked with the use of organic vegetable cultivation in the yard (sig 0.05, rs = 0.926). Field data demonstrate that organic vegetable farming practices are acceptable and do not vary from community needs. Organic vegetable cultivation has numerous advantages, particularly for farmers and their families, the primary actors in cultivation activities, and the larger community who consume these organic vegetable cultivation goods. According to Amala et al. (2013), the suitability of innovation has a significant association with the level of application/adoption of organic rice farming techniques.

CONCLUSION

Suggestions that can be provided through this research include the usage of yards in KWT Merpati Asri in Pengajaran Sub-village to maintain environmental quality and vegetable products that are safe for eating by KWT family members and consumers in the broader community. The government is also anticipated to continue advising and supervising KWT Merpati Asri in the Pengajaran Sub-village to ensure sustainability and expand development efforts to other community groups interested in implementing organic vegetable cultivation. Other researchers are encouraged to investigate and investigate other aspects of organic vegetable cultivation with the use of yards that have

not been included in this research model, such as determining the contribution of income in the household through organic vegetable cultivation efforts using the yard..

RECOMMENDATION

The implementation of organic vegetable production with the use of yards at KWT Merpati Asri in Pengajaran Sub-village must be maintained to maintain environmental quality and safe vegetable products for consumption by KWT family members and consumers in the broader community, as suggested by this research. It is also anticipated that the government will continue to provide advice and oversight to KWT Merpati Asri in the Pengajaran Sub-village to promote sustainability and expand development efforts to other community groups implementing organic vegetable cultivation. It is recommended that future researchers explore and examine other attributes related to the application of organic vegetable cultivation with the use of yards that have not been included in this research model, such as identifying the contribution of organic vegetable cultivation efforts to the household's income

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