

IMPLEMENTATION OF URBAN FARMING PROGRAM IN SURABAYA INDONESIA FOR DECREASE POVERTY AND EFFORT TO CREATE GREEN AREA

Endang Yektiningsih and Sigit Dwi Nugroho¹

Abstract

Almost all countries in the world have same problem of how to manage urban areas that have a lot of people, including the poor people. Urban Farming is one solution of this problem, but not simple in implementation. The aim of this research is to determine the impact of urban farming program implementation on environment, economic, social and cultural of poor households, and also to analyze factors affecting the motivation of poor peoples to follow urban farming program. Through random sampling method we determined the amount of samples, as many as 99 poor households. While the method of analysis used in this study is descriptive, correlation, and multiple regression model. The result showed that urban farming program has multiple benefits, creating a green area, which means maintaining a healthy living environment, improve the social relations of society, but no relationship with culture of the poor peoples. By the multiple regression analysis showed result that only leisure time factor affected to the motivation of poor households in Surabaya's urban farming program.

Keywords: *Urban Farming, Poverty, Green Area*

Introduction

Urban Farming is an agricultural activity within or around the city that involves skill, expertise and innovation in agriculture. The main thrust of this activity is an efforts to contribute to food security, increase income communities, and also to create green area. Twenty years ago Java island is dominated by the rural (about 70%) and the urban area only 30%. But now the condition has shifted, urban area dominant than rural areas, rural area only about 40% (Surabaya Agriculture Office, 2009). These condition will have impact on the reduction agricultural land, and also disturbing for food security in the future.

Urban peoples need a healthy environment, free of pollution and comfort in their life, it will make the concept of urban farming accepted by the urban peoples faster. This phenomenon inspired the Surabaya government to launched a urban farming program through using idle land into productive land, so that restoring the function of the green line on the actual function. In this time, green space in Surabaya only reached 20%. Geographically the area of the Surabaya city is 33306.30 km², part of them is agricultural

¹ Agribusiness Department - Faculty of Agriculture, University of Pembangunan Nasional "Veteran" Jawa Timur, Surabaya, Indonesia, Email: endangyn@yahoo.com

land (about 1200 ha) and land around the house (yard area) about 13000 ha. This area is apparently considerable potential if developed in cities such as Surabaya city, because is very difficult to find land in Surabaya city. As an alternative for Surabaya people's, especially farmers and poor families to survive in their life is to use the agricultural land or yard land with productive enterprises such as growing vegetables in pots and so on.

The amount of poor households in Surabaya as many as 31.461 households (BPS Jawa Timur, 2010). Generally, the poor people condition has a weak ability to seek and access to economic opportunities are limited, so the potential to widen the gap with other communities. Poverty reduction efforts must be intended to empowering poor families, which is done by themselves through learning process continuously with the principle of self-help.

In order to reduce poverty people, Surabaya City Government through the Agriculture Office to facilitate activities of Urban Farming, such as planting in pots. The government has two plans that associated with Urban Farming Program, there are to improve the nutrition of poor family and also increasing the family income. To achieve the optimum results in the implementation, the poor households that willing to follow Urban Farming program, will be accompanied by the mentor in the field expert.

Implementation of urban farming program in Surabaya conducted in two years since 2009 until 2011 in North and Centers of Surabaya, there are Semampir District, Kenjeran District and Bubutan District.

Research Objectives

This study aims to determine the impact of urban farming program implementation on environment, economic, social and cultural of poor households, and also to analyze factors affecting the motivation of poor peoples to follow urban farming program.

Research Method

This research survey conducted in Surabaya city, Indonesia that has 31 districts. District samples is determined by purposive method, with consider sum of poor households and the district implementation urban farming program. We choose three districts, there are Semampir District, Kenjeran District and Bubutan District. Sample of poor households were randomly determined by the number of each district 33 families, totally is 99

households. To analyze the data we use descriptive, correlation and multiple regression linear model with formula as below :

$$\hat{Y} = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + e$$

Where :

\hat{Y} is the motivation to follow urban farming program; X_1 is a leisure time, X_2 is age of head family; X_3 is the education of head family; and X_4 is the household income.

Result and Discussion

1. Environmental impact

One of the goals of urban farming is using idle land to the cultivation of several types of horticultural crops that will create a green area. The government provided subsidies such as polybags, planting media, seed, and fertilizer with the amount depend on land wide of each family. The analysis showed that there is significant correlation between the implementation of urban farming program with the sum of poor households willing to carry out planting until harvest although weak relationship ($p = 0.034$ with $r = 0.214$). Implementation of this program may change the area that was dirty before and becomes more clean, green and beautiful. If the Urban Farming program was developed, the Surabaya city will be a city with a clean and healthy environment.

2. Social impact

The definition of social impact is occurring or whether changes in the relationship between one households with another in the same area as a result of the implementation of Urban Farming Program. The analysis showed that there was no significant correlation between the implementation of urban farming program with the social relations among poor households at a level of significance 5%, but there is a significant correlation at 10% confidence level ($p = 0.067$). Urban Farming Program in Surabaya city is still ongoing for two years since 2009, while research conducted in 2011. Generally, the social changes caused by an external factors need a long time because the peoples want to convinced that the inovation is really useful.

3. Culture impact

Culture is all of human creativity that resulting to fulfill life needed. The results of this study indicate that there is no significant relationship between the implementation of the Urban Farming with the cultural of household members with a significance level of $p = 0.149$. It meant, if there is a cultural change in community is not caused by the Urban Farming program but by other factors. As a metropolis city, the external factors influences of culture is very strong that comes from a many kind of media. To change the culture of the community needed a strong appeal and convincing and touching necessities of life. Urban Farming Program is a new activity for poor households were considered less attractive because it requires a long time to be able to enjoy the results. Though the primary needs of poor families are meeting the needs of food quickly and easily, so if there are influences from outside the inovation is still requires a long time, it will not be encouraging a cultural change.

The following table presents the relationship between urban farming with the successful implementation of urban farming program, the implementation of urban farming program with the social relations among poor households, as well as the implementation of urban farming program with the culture of poor households in the city of Surabaya.

Table 1. The relationship between urban farming program implementation with the success of the program, social relationships, and culture of poor household in Surabaya city.

Impact of Urban Farming Program Implementation	Signif.	Correlation
1. Environment	0,034	0,214
2. Social	0,067	0,185
3. Culture	0,149	0,146

4. The economic impact

Urban Farming program in Surabaya is also intended to reduce poverty through increased income. In calculating the economy is assumed that all inputs are purchased, with the intent of the subsidy program has been completed if the economics not change. The results of economic analysis indicates that urban farming program could increase the income of poor households with a value of R/C greater than 1 (3.92) obtained from the calculation as follows.

Table 2. Analysis result of Revenue and Cost ratios of Urban Farming program in Surabaya city

No.	Descriptions	Value Per Hectar (Rp)
1	Revenue	30.848.329,05
2	Fixed Cost	160.668,38
3	Variable Cost	7.712.082,26
4	Total Cost	7.872.750.643
	R/C ratio	3.92

Table 2 shows that the value of R/C ratio greater than 1, it meant that Urban Farming Program in Surabaya city is feasible to be implemented. It is an pull factors and also a challenge to develop a urban farming program with the reasons :

- a. Vegetables harvest is a daily requirement so easy to sell, though the fact that the crop is distributed to families living in the same area.
- b. Cultivation techniques is still not settled, in one area has several types of crops planted, so that the sales volume is only slightly
- c. Not all seeds are planted will to grow
- d. Some of poor people lack of technological capability so the production will low.

5. Factors affecting the motivation of poor households to follow urban farming program.

The research results showed that the leisure time factor, age of head family, education of head family, and income of poor households doesn't significantly affect the motivation of urban farming program with a significance value is 0.253 and $F = 1.362$. The partial test showed that the leisure time factor is significantly affect to the motivation of urban farming program with the level $p = 0.083$. The following table illustrates this relationship.

Table 3. The results of the analysis of factors affecting the motivation of poor households in urban farming program.

	B	t	Sig.	Correlations Partial
(Constant)	2.180	3.907	.000	
Age	-.149	-1.202	.232	-.123
Education	-.006	-.052	.959	-.005
Leisure Time	-.132	-1.750	.083	-.178
Income	.094	.805	.423	.083
Sig. F = 0,253; R2 = 0,055; F = 1,362				

Dependent Variable: Motivation

Based on the above table it is concluded that the independent variables had no effect on the dependent variable, but partially contained one variable (leisure time) that affect with level significancy at 10% and regression coefficient = -0.132. This means that the larger the household leisure time decreases motivation to participate in urban farming program. In general, individuals who have much leisure time as individuals are said to be lazy, so even a touch of subsidized employment does not change his habits. Instead of individuals who are diligent (like work) will first receive a government program that will improve their lives. If viewed from a small coefficient of determination value ($R^2 = 0.055$), most likely outside of the model variables that affect the motivation of poor households to participate in urban farming program.

Conclusions

Implementation of urban farming research program which is a government program in order to alleviate poverty is to give the conclusion that urban farming program has multiple benefits, creating a green area, which means maintaining a healthy living environment, improve the social relations of society, improving the household economy, and improve the ability to work community through farming activities. Therefore, it is recommended that urban farming program in the city of Surabaya in Surabaya continued so that the more green and healthy and reducing poverty.

References

- Arifin, Bustanul. 2006. Refleksi Strategi Pengentasan Kemiskinan. *Bisnis & Ekonomi Politik*, Vol.7 (4). Jakarta.
- Becker, Gary S. A Theory of the Allocation of Time. *Economic Journal*, Vol. 75, No. 299, (September 1965), 493-517. (Reprinted in Becker [1976]).
- Datt, G. and D. Jolliffe. 2005. *Poverty in Egypt : Modeling and Policy Simulations. Economic Development and Cultural Change*. TheUniversityofChicago. Chicago.
- de Janvry, A. Sadoulet, E and Zhu, N. 2005. *The Role of Non-Farm Income s in Reducing Rural Poverty and Inequality in China*. CUDARE Working Papers. DepaRTPMent of Agricultural & Resource Economics. California.
- Dinas Tenaga Kerja, Transmigrasi dan Kependudukan Provinsi Jawa Timur. *Setiap Hari Penduduk Surabaya Tambah 203 Jiwa*. [Http://disnakertransduk.jatimprov.go.id](http://disnakertransduk.jatimprov.go.id). Jawa Pos, 18 Juli 2011

Wongdesmiwati. 2009. Pertumbuhan Ekonomi dan Pengentasan Kemiskinan di Indonesia (Analisis Ekonometri). [Http://wongdesmiwati.wordpress.com](http://wongdesmiwati.wordpress.com). October 24, 2009.

Zulkifli, A. 2012. Pengembangan Daya Saing Pertanian Kota. [Http://bangazul.blokspot.com](http://bangazul.blokspot.com). Maret, 2012.