

CONTRIBUTION OF FARMING SUSTAINABLE FOOD HOUSE AREA (KRPL) ON HOUSEHOLD ECONOMICS IN PEKANBARU CITY

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Abstract

Sustainable food house areas an area consisting of a set of sustainable food house to encourage increased use of yard as a source of family food and also increase food consumption and increase the role of women's household based on additional income. The purpose of this research (1) to analyze the income of farming Sustainable Food House Area(KRPL), (2) to analyze the income of farmer household of Sustainable Food House Area (KRPL), (3) farmer income contribution of KRPL to farmer household economy of KRPL in Pekanbaru City. The research used survey method, sampling with disproportional random sampling, the number of samples was 62 samples of KRPL member. The results obtained average farming income of KRPL is Rp 140.089 / month, average household income of farmer KRPL is Rp 3.142.669 / month, consist of husband income Rp 2.210.484, wife income Rp 666.935, and other income Rp 125.161, farmer income contribution of KRPL program to household income is 4.46%.

Keywords: *Sustainable Food House Area, Household Income, Contribution of income*

I. PRELIMINARY

The availability of adequate amounts of food over time is irrefutable, as the need for food continues and continues throughout human life. This is a priority of national agricultural development from time to time that every household is expected to optimize resources owned, including home yard that provides food for family welfare.

There are various programs launched by the government, both the central government and local governments in an effort to prosper the community. One of the programs created by the government in 2012 is the program of Sustainable Food House Area Model (M-KRPL). Ministry of Agriculture program that optimize the utilization of yard through the concept of Sustainable Food House (RPL). If the RPL is developed on a broad scale, based on hamlets (villages), villages, or other possible areas, the implementation of Sustainable Food House (RPL) is called Sustainable Food House Area (KRPL). Besides that, KRPL also includes efforts to intensify the use of living fences, village roads, and other public facilities (schools, houses of worship, and others), green open land, and develop processing and marketing results (Ministry of Agriculture, 2012).

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The government's program with Sustainable Food House Area (KRPL) is a government policy concept that utilizes home yard to be a providers of quality food and diverse in sustainability by involving the community as increasing household income. The basic principles of Sustainable Food Houses Area include utilizing yard for food endurance solution and independence based on environmentally friendly, food diversification based on local resources both natural resources and human resources, conservation of food genetic resources (plant, livestock, fish) and Maintain sustainability through the village seedling garden to increase income and household welfare (Litbang, 2012).

The expected impacts of KRPL development include:

1. Fulfillment of food and nutrition needs of families and communities through the optimization of sustainable use of the yard.
2. Increasing the ability of families and communities in the use of yard in urban and rural areas for the cultivation of food crops, fruits, vegetables and medicinal plants family (toga), livestock and fish, as well as processing of household products and waste into compost.
3. Maintain the sustainability and diversity of local food sources.
4. The development of family productive economy enterprises to sustain family welfare and create a sustainable and healthy environment.

Sustainable Food House Area Program recommends housewives to use their home yard, to conduct horticultural cultivation as well as family medicinal plants. Horticultural crops that have been cultivated are expected to ease the expenditure on basic materials in the kitchen so as to reduce household expenditure. The benefits gained in addition to mitigating household expenditure can also increase household income if cultivated crop production exceeds household consumption.

Sustainable Food House Area (KRPL) Program began to be realized in Pekanbaru City in 2012 which is shaded by Food Security Agency and Agricultural Extension under Ministry of Agriculture. KRPL farmer group in Pekanbaru City is located in five districts, each district there is one village / sub-district with one farmer group.

Sustainable Foods House Area (KRPL) program has had a positive impact on mothers because the program creates a double benefit. These benefits include the fulfillment of food and nutritional needs of families and participate lighten the burden of families with additional income, also active in carrying out agricultural development in the area. Based on the above objectives, the purpose of this research are (1) to analyze the income of farming Sustainable

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Food House Area (KRPL), (2) to analyze the income of farmer household of Sustainable Food House Area (KRPL), (3) farmer income contribution of KRPL to farmer household economy of KRPL in Pekanbaru City.

II. RESEARCH METHODS

Research conducted in Pekanbaru City, there are five districts that implement KRPL program since 2013 are: 1.Rumbai District –Palas Sub-District, 2.Rumbai Pesisir District, 3.Tenayan Raya District, 4.Tampan District, 5. Senapelan District.

The research method used is survey, sampling technique using disproportional random sampling method is random sampling with unequal proportion rate where each group of farmer women KRPL of population have opportunity to be chosen as sample (Sugiyono, 2007). The number of samples was calculated using Slovin formula, from 162 members of KRPL obtained as many as 62 people as respondents with 10% galadic tolerance (Table 1). Data collected includes primary data and secondary data. The data that has been collected is followed by the customized tabulation.

Tabel 1. District, Sub-District, KRPL Farmer Group InPekanbaru City Year 2013

DISTRICT	SUB-DISTRICT	GROUP NAME	MEMBER (PERSON)	RESPONDENT (PERSON)
Rumbai	Palas	Kurnia Harapan	34	13
Rumbai Pesisir	Limbungan	Perdana Limbungan	31	12
Tenayan Raya	Kulim	Bunga Kapas	35	13
Tampan	Tuah Karya	Tuah Bestari	31	12
Senapelan	Sago	Sago Indah	31	12
Amount			162	62

Source: Pekanbaru City Food Security Agency

To know the income of farming of sustainable food house area is result obtained from effort of KRPL, while household income is source of income other than effort of KRPL include income of husband, wife, other additional income.

Knowing the contribution of income from various commodities is calculated in percent according to (Suratiah, 2003) that is as follows:

$$\text{Contribution (\%)} = \frac{P_{di}}{TP_d} \times 100\%$$

Information :

K = farmer income contribution of KRPL program (%)

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Pdi = farmer income of KRPL program (Rp/bulan)

TPD = Total household income(Rp/bulan)

III. RESULTS AND DISCUSSION

3.1. General description of sustainable food house area (KRPL)

Sustainable Food House is a house that utilizes the yard or the rest of the main building intensively through the management of local natural resources wisely that ensures the provision of household food quality continuously and diverse (Badan Litbang, 2012). Sustainable Food House Area (KRPL) is an area consisting of a set of Sustainable Food Houses (RPL) to be able to utilize their yard area through environmentally friendly management conducted for each city /district / districts there is 1 M-KRPL pilot.

Pekanbaru city has a high motivation to get 5 M-KRPL in 5 districts in Pekanbaru City, so it is expected sustainability program and application of program around environment and in other area, besides fulfillment of food expectancy pattern (PPH) in household, realize independence Region and hope contribute income and welfare of the family.

Pekanbaru city is the capital city of Riau Province has an area of 632.26 km² and about 47.82% of the area is agricultural land, although it has a large agricultural potential, but Pekanbaru City is not an agricultural city so that the resulting production has not been sufficient and food crops are still imported from outside the region. Potential landscaping to be developed, whether viewed from a large area or to produce a variety of nutritious food for the family such as fruits, vegetables, medicines, other ornamental plants to meet family needs. So, the utilization of yard land can provide comparative and competitive steps besides the various nutritious food producers for the family is also a learning media in developing agriculture business towards agribusiness, so the sustainable use of yard can create a whole food security in every household.

3.2. Respondents Identity

The success in managing the farming is influenced by several aspects such as age, education level, number of family dependents, length of farming and farming experience, land status, land area and usage, income or family income (Soekartawi, 2002).

Based on the results of research with 62 samples of KRPL program showed that most of the respondents were productive age, with age range between 25 - 61 years old and average

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age 40.23 years. Farmers who are in the productive age group, ranging between 15 - 54 years old (Simanjuntak, 2001) of 95.16% are expected to have physical ability and also as a source of labor so as to contribute more to develop every business, and increase household income.

The level of education can affect in thinking, behave and acting in making decision, respondents education level described here is level of formal education of elementary school graduates are 14.52% junior high school 25.81% senior high school 56.45%, and bachelor 3.23%. The highest formal education level of respondents is senior high school graduate 56.45%. It shows that most of respondent education have taken 9 year compulsory education as government program, because the higher one's education, the more rapid response to absorb new innovations, let alone supported by nonformal education through improving coaching and counseling, knowledge, skills, mindset, and behavior of farmers in doing business.

The number of family dependents is all family members who are dependent of the head of the family / head of household, family members consisting of wife, children, siblings, parents and other family members. Based on the result of the research, the number of dependent respondents 1-3 people is 30.65%, 4-6 people is 61.29% and 7-9 people is 8.06% with the average number of family dependent of 4 people. The number of dependents will affect the family economy and family expenditure to meet the needs of family members. The large number of family members in a farm household indicates the size of the dependent that should be borne by the farmer as the head of the family.

The experience of farming is the length of time farmers conduct various farming activities, experience greatly affect the ability of farmers in achieving the success of farming. Based on the results of research shows Duration of respondent's biggest farming experience ranged 4-7 years that is 61.29% and there are 17, 74% over 12 years. The longer a farming experience of person have then they are accustomed to face the risk, know how to resolve and minimize problem if having difficulty in the farm.

Judging from the area of land that is one of the factors affecting the income level of farming, KRPL Program of Food and Extension Agency endeavors to utilize the yard to help reduce the cost of household expenditure, especially vegetable. With the utilize of the yard so that area of land managed in each house members of the KRPL group is not so wide ranging from 36 to 120 m² with an average land area of the yard is 61 m². The small utilization of yard land and the amount of community motivation so that the Food Security and Extension Agency Pekanbaru still trying to develop a narrow yard can be used well to help

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fulfillment the needs of family vegetables, so the success of the utilization of this yard is expected to other sub districts that have a narrow land can follow the example.

The narrow garden area requires farmers to use vertical cultivation model using planting media such as shelves, pots, and polybags, this is intended to maximize the land of the yard. The ownership status of the respondent's land in the research area is generally private property only a small part of the land status of the loan, the respondent whose land status the loan is the respondent who utilize the yard or land of another person to be utilized without charge of rent.

3.3. KRPL Farm Income and Household Income

3.3.1. KRPL Farming

KRPL farm income is income obtained from the result production of farming area of Sustainable Food House Area (KRPL) either in the form of commodities sold or commodities not sold that is consumed. The commodities cultivated in KRPL program in Pekanbaru City that is cayenne pepper, red chili, mustard, green eggplant / purple, tomato, leek, bean, kale, spinach, lettuce and celery. In Table 2. Can be seen the type of commodity cultivated by KRPL program Pekanbaru City.

Tabel 2. The Type Commodity Of Farmers Farm With KRPL Program In Villages Of Pekanbaru

Commodity Type	Amount Of Polybag					Total	(%)
	Palas	Limbungan	Kulim	Tuah Karya	Sago		
Cayenne Pepper	104	120	130	120	120	594	23,95
Red Chili	52		78			130	5,24
Mustard	52		78	84		214	8,63
Green Eggplant	52	60	78	60	60	310	12,50
Tomato	52	60	78	96	60	346	13,95
Bean		60				60	2,42
Leek	52	60	78			190	7,66
Kale		60			60	120	4,84
Spinach	52	60			60	172	6,94
Lettuce	52					52	2,10
Celery	52			120	120	292	11,77

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Amount	520	480	520	480	480	2480	100
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Table 2. Types of commodities cultivated by farmers respondents KRPL program in Pekanbaru City there are 11 kinds of vegetable commodities with the amount of polybags each farmers as much as 40 pieces, so that the total obtained polybag cultivated farmersrespondents are 2,480 polybag. Seen each of the biggest commodity cultivated by farmer respondent is commodity of cayenne pepperthat is 23,95%, tomato 13,95%, greeneggplant / purple and celeryrespectively 12,50% and 11,77%. While small commodities cultivated by farmers are lettuce and bean respectively 2.10% and 2.42%. Number of cayenne pepper cultivated because of farmers respondents in serving menu of family cuisine more like the use cayenne pepperthan red chili.

The result of the utilization of the yard is mostly used by respondents to meet the daily consumption of vegetables, but there are also farmers who are partly crops consumed and more is sold in shops near their house. For farmers who sell their produce, they sell in shop near house or collectors who come to pick up their land for sale to the market. Landscaped yard farming is a positive activity for housewives such as cultivating environmentally friendly crops to meet the nutritional needs of their families.

Tabel 3. Distribution Of Farmer Income With KRPL Program In Pekanbaru

Income (Rp)	Amount of Farmers (People / %)					Total
	Palas	Limbangan	Kulim	Tuah Karya	Sago	
<106.000	1(7,69)	4 (33,33)	0(0,00)	1(8,33)	8(66,67)	14(22,58)
106.001 – 152.000	0(0,00)	7(58,33)	3(23,08)	8(66,67)	4(33,33)	22(35,48)
152.001- 198.000	8(61,54)	1(8,33)	8(61,54)	3(25,00)	0(0,00)	20(32,26)
198.001 - 244.000	4(30,77)	0(0,00)	2(15,38)	0(0,00)	0(0,00)	6(9,68)
Amount	13	12	13	12	12	62

Table 3 can be seen farmers earn additional income from farming KRPL program the largest is Rp. 106.001 - Rp. 152.000 that is 22 people (35,48%) then followed by income equal to Rp. 152,001 - Rp. 198.000 that is 21 people (32,26%). While the smallest income level of Rp 198,001 - Rp. 244.000 that is 6person (9,68%). Seen from sub district level, Palas district got the highest income level compared to the other 4 sub district the income level of KRPL farming is above Rp 152.000 as much as 92,31%, followed by Kulim subdistrict level that is 76,92%. This means that farmers get the benefit of not cash that is not in the form of

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cash but if the cash will be obtained a nominal amount, KRPL farming results are prioritized to meet the needs of household daily consumption so as to reduce household expenditure, farmers no longer buy vegetables for household daily consumption for the next few days and expenditures that should be spent on expenditure needs can be saved for other farming needs such as school children's needs and other expenses. Another benefit of this yard land use program is that it not only additional income or is commercial but fills positive activities by farming, creating new skills in farming and can beautify home yard and meet family nutrition.

3.3.2. Household Income Of Farmers Respondents Sustainable Food House Area Program In Pekanbaru City

Household income is income derived from the head of the family (husband) and farmer's respondents. The income earned by farmers in program is a side income from the husband's primary work, their children and other additional income. For explanation household income of respondent farmers can be seen Table 4 as follows.

Tabel 4. Distribution Of Farmer's Household Income With KRPL Program In Pekanbaru City

Income (Rp)	Amount of Farmers (People / %)					Total
	Palas	Limbangan	Kulim	Tuah Karya	Sago	
<2.924.500	9 (69,23)	3 (25,00)	9(69,23)	4(33,33)	6(50,00)	31(50,00)
2.924.501 – 4.345.500	2(15,38)	8(66,67)	3(23,08)	5(41,67)	3(25,00)	21(33,87)
4.345.501 – 5.766.500	0(0,00)	0(0,00)	1(7,69)	0(0,00)	2(16,67)	3(4,84)
>5.766.500	2(15,38)	1(8,33)	0(0,00)	3(25,00)	1(8,33)	7(11,29)
Amount	13	12	13	12	12	62

Table 4 shows the income of households obtained by the largest KRPL farmers is Rp. 1,009,500 - Rp. 2.924.500 is 31 people (50,00%) and followed by income of Rp. 2.924.501 - Rp. 4.345.500 is 21 people (33.87%). While the smallest income level amounted to Rp 4.345.501 - 5.766.500 is 3 people (4.84%) with average household income of Rp.3.142.669 per month. According to Yudhohusodo in Anita (2005), the income level of a person belongs to a high income group, which is an average income of over Rp 900,000.00. So, household income levels in this study area show high household incomes as above average. Viewed from the source of household income farmers respondents who came from husband income

average of Rp. 2,210,484, - wife income of Rp 666,935 and other income Rp125,161, and farm income of average KRPL Rp 140.089, -

Landscaped yard farming is a positive activity for housewives such as cultivating environmentally friendly crops to meet the nutritional needs of their families. The result of the utilization of yard land is mostly used by farmers to fulfill the daily consumption of vegetables, but there are also farmers who are partly crops consumed and sold in shops nearest to their house. For farmers who sell their produce, they sell to shop near house or collectors who come to pick up their land for sale to the market.

3.4. Contribution Of KRPL Program Income To Household Economy

In conducting farming activities the main purpose is to meet the needs of family life and increased family income. Contribution of farming income KRPL program to the average family income is Rp 140,089 per month, while the income of farmers household outside the KRPL program average is Rp. 3,142,669 per month. The average contribution of farmers income in KRPL program to increase the households is used by Suratiahformula (2003). The average income contribution earned by farmers to household income in the program is as follows:

$$\text{Contribution (\%)} = \frac{Pdi}{TPd} \times 100\%$$

$$\text{Contribution (\%)} = \frac{140.089}{3.142.669} \times 100\%$$

$$\text{Contribution (\%)} = 4,46\%$$

The calculation result shows that the contribution of farming income of KRPL program to household economy is 4,46%. Although the contribution is not large, but sustainable food house area farming activities an important role in increasing household income and have benefited both economically and socially. The role of yard land use not only serves as an economic source but also contributes socially in society. Besides the commodity of yard also become a means of socialization with the neighbor around. When farmers harvest the produce of their yard, they share the neighbors and keep in touch with each other, and often farmers exchange information about the farming they do.

This indicates that the KRPL program has a large role in increasing household income. It is also supported by Vipriyanti (2007) that women have an important role in the household

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economy and contribute to the family income that can be obtained from economic activities. However limited knowledge, attitudes and skills of farmers are very influential on the ability to better farming so that the quality, quantity of agricultural production is reduced and not oriented agribusiness. To improve knowledge, change the attitude of farmers and improve skills, it takes the important role of an agricultural extension worker.

4. Conclusion And Suggestion

4.1. Conclusion

1. There are 11 types of commodities cultivated by farmers KRPL program in Pekanbaru City namely cayenne pepper, red chili, mustard, eggplant, tomato, onion, bean, kale, spinach, lettuce and celery, among which the most cultivated commodities are cayenne pepper
2. The average farm income of the KRPL program is Rp.140.089 per month, the household income of respondent farmers is Rp.3.142.669 with the contribution of income from women farmers in increasing the household income by 4.46%, although the contribution of income small farming KRPL but provide good economic benefits for households and also strengthen social relationships in the surrounding community.

4.2. Suggestion

1. To increase production and income farmers should do intensive plant maintenance because in the field there are still less intensive respondents in plant maintenance
2. In order to have a good cooperation in the field of agricultural field extension with farmers so as to improve knowledge, and skills, better motivation of farmers through training, skills in dealing with problems in the struggle

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