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Potential Identification of Coard Land as a Basis for Increasing Food Production and Family Income in Tebing Tinggi Okura Ward, Pekanbaru City During The COVID-19 Pandemic

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ABSTRACT

Yard land is land that is around the household, usually has an ownership relationship with the owner of the house. In Tebing Tinggi Okura Ward, Rumbai Pesisir District, there are 6 hamlets (RW) located in 19 Neighborhood Units (RT), 655 Family Heads (KK). The aims of this research are to: 1). Identifying the Potential of the Yard in Tebing Tinggi Okura Village, Pekanbaru City. 2). Analyzing the availability of family labor in yard empowerment in Tebing Tinggi Okura Village, Pekanbaru City. 3). Knowing the obstacles in empowering the yard in the Tebing Tinggi Okura Village, Pekanbaru City. The research was carried out using a survey method. The unit of analysis in this study is the household. Sampling by purposive sampling is based on the area of the yard in the selected hamlets. The data collected in this study include primary data and secondary data. The data obtained in this study were processed descriptively and quantitatively. The results of the research and data analysis can be concluded as follows: The interest of the sample of households towards the empowerment of their yard to increase food production and family income in Tebing Tinggi Okura Ward, Pekanbaru City increased compared to the percentage of sample households that had empowered their yard at the time of the study. The average potential for family labor in yard empowerment in Tebing Tinggi Okura Village, Rumbai Timur District, Pekanbaru City is 73.27 HKP/year. This potential can be used to realize interest in empowering the yard by developing the cultivation of vegetable and secondary crops to increase household food production and increase family income. Pekanbaru City includes land that is less fertile, lacks capital. It is recommended to improve education, assistance and assistance to households in Tebing Tinggi Okura Village, Rumbai Timur District in yard empowerment activities to increase household food production and increase family income.

Keywords : *Identification, potential, Food, Yard, COVID-19 Pandemic*

1. INTRODUCTION

Food sufficiency is something that is always a concern for us all. With sufficient food, it is hoped that nutritional adequacy will be fulfilled which in turn can improve the quality of human resources.

One aspect of achieving food sufficiency is in terms of household food availability. The fulfillment of household food can be increased by empowering the yard which has often been underutilized optimally. The yard can be a source of food and income for the family.

Tebing Tinggi Okura Village is one of the villages in East Rumbai District with a population of 2,326 people, consisting of 655 families. (Monthly Report of Tebing Tinggi Okura Village, October, 2020). In general, every household in Tebing Tinggi Okura village has a yard. Research results (Niken & Mufti, 2021), Yard utilization is still low, the average yard land that has been utilized is 26.50% (68.68 m2) and the remaining 73.50% (190.52 m2) has not been utilized.

This activity is based on the idea that during the current COVID-19 pandemic, some families experience a decrease in income, either because of losing their jobs due to layoffs or the cut off of community economic access. The loss of a source of income for the family is closely related to family food security as a basic need, in such a context the lack of food for the affected family will have an impact on their body's resilience to face the COVID-19 pandemic. Therefore it is deemed necessary to carry out research on "Adaptation of Empowerment" Yard Based on Increased Food Production and Family Income in Tebing Tinggi Okura Village, Pekanbaru City"

The yard in Tebing Tinggi Okura Village is relatively large, but has not been fully utilized. The problem is 1). His is interest in the use of yard land in Tebing Tinggi Okura Village, Pekanbaru City 2). How is the availability of family labor in the use of yard land in Tebing Tinggi Okura Village, Rumbai Pesisir District, Pekanbaru City. 3). What are the obstacles in using yard land in Tebing Tinggi Okura Village, Rumbai Pesisir District, Pekanbaru City.

The objectives of this research are:

1). Identifying potential use of yard land in Tebing Tinggi Okura Village, Pekanbaru City
2). Analyzing the potential of family workers in empowering yards in Tebing Tinggi Okura Village, Rumbai Pesisir District, Pekanbaru City.
3). Knowing the obstacles in the use of yard land in Tebing Tinggi Okura Village, Rumbai Pesisir District, Pekanbaru City.

2. MATERIAL AND METHOD

The research was conducted in Tebing Tinggi Okura Village, Rumbai Pesisir District, Pekanbaru City. The research was carried out from May 2021 to July 2021. The research was carried out using a survey method. The unit of analysis in this study is the household. The data collected in this study consisted of primary data and secondary data. Primary data were obtained directly from households that were selected as samples and collected through interviews and filling out a list of questions and field observations. Secondary data was obtained from various related agencies.

Sampling by *purposive sampling* based on the area of the yard in the selected RW. The household sample was taken as many as 25 households, using the Slovin formula, as follows:

$$n = \frac{N}{1+N\,e^2}$$

With N = 655
e = 20%

The data collected in this study include primary data and secondary data.

Primary data were obtained from respondents using a list of questions (Questioners) and direct observations in the field. The primary data taken include:

Identification of samples such as: age, gender, education level, main occupation, number of family members, income, yard use (area of the yard, area used, types of plants planted in the yard, farm structure in the yard, area that has not been used), interests empowerment of the yard, obstacles in empowering the yard

Secondary data were obtained from related agencies, and literature related to this research. Data analysis in this study used descriptive analysis and quantitative analysis.

Descriptive analysis is a statistic used to analyze data by describing or describing the data that has been collected as it is without intending to make conclusions that apply to the public or generalizations (Sugiyoyo, 2002). Descriptive analysis is used to analyze the interests and obstacles in the empowerment of the yard.

Quantitative analysis is an analysis using raw data in the form of numbers which are then processed using statistics, and then conclusions are drawn. This quantitative analysis is used to calculate the potential for labor in the family..

3. RESULT AND DISCUSSION

Tebing Tinggi Okura Village is one of the villages in the Rumbai Pesisir District, Pekanbaru City, with a lowland topography and slightly hilly area. The area of Tebing Tinggi Okura Village is 9.40 Km2. The boundaries of Tebing Tinggi Okura Village are:

In the east	:	bordering the Sungai Ambang Village, Rumbai Pesisir District
In the west	:	bordered by Perawang District, Siak Regency
To the north	:	bordered by Sungai Ukai Village, Rumbai Pesisir District
To the south	:	it is bordered by Senapelan and Limapuluh sub-districts (Rumbai Pesisir in Figures, 2019)

The population of Tebing Tinggi Okura Village, Rumbai Pesisir District, Pekanbaru City is 2,326 people, consisting of 1,199 male and 1,127 female (Monthly Report, 2020). The largest percentage is livelihood as farmers and farm laborers is 66.40%, followed by livelihood as private employees. The smallest percentage is livelihood as a midwife. The largest percentage of the population of Tebing Tinggi Okura Village has an education of Junior High School (SLTP) and below, including those who do not attend school, at 79.21%. The percentage rate decreases along with the higher the level of education. This condition illustrates that in Tebing Tinggi Okura Village, it is necessary to increase knowledge and skills.

Household Sample Characteristics

The sample households in the study were identified based on age, education, livelihood of the head of the household and number of family members. The sample of the head of the household is at the age of 27-58 years. At this age a person is still strong enough to be active in yard empowerment. The largest percentage is in the 40-44 year age group, at 36%, then the 55-59 year age group at 20%. The smallest percentage is in the age group of 25-29 years and the age group of 50-54 years. The education level of the sample is mostly (48%) at a moderate level (high school graduation), but there are still those who are at a low level of education, namely not completing elementary school and not attending school. The number of family members in

the household sample is mostly 5 people, only a small part has more than 6 family members. The largest livelihood (56%) is farmers. Some of the farmers in Tebing Tinggi Okura village are sharecroppers, not landowners. The data on the characteristics of the sample households are presented in table 1.

Table 1. Household Sample Characteristics

NO	*Description*	*Amount (people)*	*Percentage(%)*
1	Age		
	25-29	1	4
	30-34	3	12
	35-39	3	12
	40-44	9	36
	45-49	1	4
	50-54	3	12
	55-59	5	20
	Total	25	100
2	Education		
	Elemntary School	8	32
	Junior High School	3	12
	Senior High School	12	48
	Collage/University	2	8
	Total	25	100
3	Number of Family Members		
	2-3	11	44
	4-5	12	48
	>6	2	8
	Total	25	100
4	Occupation		
	Private employee	2	8
	Self-employed	5	20
	Farmer	14	56
	Fisherman	1	4
	Trade	2	8
	Farm workers	1	4
	Total	25	100

Source : Primary data

Data Analysis

Courtyard Area

Yard land is land that is around the house where you live. The area of the yard is different for each household sample. The distribution of the yard area of the household sample is presented in table 2.

Table 2. Distribution of Household Sample Yard Area

No	*Yard Area (m^2)*	*Total (KK)*	*Percentage (%)*
1	< 120	12	48
2	> 120-400	9	36
3	> 400	4	16
	Total	25	100
4	Average Yard Area	299,4	

Source : Primary data

The average land area of the sample households is 299.4 m2. The largest percentage (48%) is in a narrow area of <120 m2 and 36% with a medium

area of>120-400 m2, only 16% with a land area of> 400 m2. The large yard area is an indispensable natural resource potential. If the large yards are empowered, it is expected that there will be an increase in food production and family income.

Interest in Yard Empowerment

Measurement of interest in yard empowerment in order to increase production and family income shows an increase in the number of households that have empowered their yards with farming activities. Data on interest in empowering sample household plots of land are presented in the table 3.

Table 3. Household Sample Yard Land Use Interest

No	*Description*	*Total (KK)*	*Percentage (%)*
1	Conditions at the time of the study		
a.	Empowering the Yard		
	Commodity		
	Vegetables	5	20,00
	Vegetables & crops planted as 2d crop in dry season.	4	16,00
	Fruits	1	4,00
	Decorative plants	4	16,00
	Fishery	1	4,00
	Country chicken	1	4,00
	Crops planted as 2d crop in dry season.	1	4,00
	Total	17	68,00
b	Not Empowering the Yard	8	32,00
	Total	25	100,00
2	Results of Measurement of Interest in Yard Empowerment		
a.	Empowering the Yard		
	Commodity		
	Vegetables	10	40,00
	Vegetables & crops planted as 2d crop in dry season.	5	20,00
	Fruits	1	4,00
	Decorative plants	0	0,00
	Fishery & vegetables	1	4,00
	Country chicken & vegetables	1	4,00
	Total	18	72,00
b	Not Interested in Empowering the Yard	7	28,00
	Total	25	100,00

Source : Primary data

The results of the analysis of interest in yard empowerment to increase family production and income show 40% of sample households have an interest (at the interested, willing, implement stage) to empower their yard with vegetable commodities, where there is an increase from the current condition of the study 20% of sample households have empowering the yard with vegetable commodities, meaning that at the time of the study 20% of the household sample was already involved in the empowerment of the yard. On the other hand, interest in ornamental plant commodities decreased compared to the conditions at the time of the study, where 16% of sample households empowered their gardens with ornamental plants, interested in empowering their gardens with vegetables. This is in accordance with the opinion of Hurlock, (1999, in Erliadi 2015) that interest is a source of motivation that encourages people to do what they want when they are free to choose. When someone judges that something will be useful, it will become interested, then it will bring satisfaction. The interest in

empowering the yard is an encouragement to do what they want that provides benefits.

In the current era of the covid pandemic, where there is a decline in social access and economic access, the empowerment of the yard must continue to be improved in order to fulfill household food needs and increase family income. A small number of sample households (28%), are not interested in empowering their yards with agricultural activities. The sample of households that are not interested in empowering their yards by doing farming partly has a relatively narrow land area (<120 m2). Because the yard is relatively narrow so it is only used for the home page. Some of the other household samples have interests other than farming, for example their interest in selling.

Labor Potential in the Family

The implementation of yard empowerment requires the support of the availability of labor, so that yard empowerment can be carried out properly, especially workers in the family. The potential for labor is calculated based on the free time of family members (mother and children) to carry out yard empowerment. Farmers as heads of families generally carry out field and plantation farming activities so that there is no free time to empower their yards. Based on data from the household sample, the free time of a farmer is 3.18 hours per day on average. The work of the mother of the farmer in general is a housewife. Meanwhile, for children who have free time for yard empowerment, it is only 16%, with only 1 hour/day available. This is because most of the farm children are school students, and some of the farm children are already working.

The calculation of the availability of labor in this study used the number of effective days of 226 working days/year for female workers and 140 working days/year for children. (Rukasah, In Frisca Octavionita Musa, Wawan K Tolinggi, Amelia Murti Sari, 2018). In calculating this effective day, the farmer can still participate in social and religious activities. The calculation of the workforce in this study uses the HKP unit (Men's Working Day) equivalent to an outpouring of 8 hours of male labor (Fadholi, 1998). Based on the results of data analysis, it is obtained that the potential for labor in the family from the household sample is as follows in table 4

Table 4. Potential Labor in Household Sample Families

No	Description	Total (KK)	Percentage (%)
I	Availability of Free Time /Day		
a.	Farmer's Mother		
	≤ 3 hours	18	72,00
	> 3 hours	7	28,00
	Total	25	100,00
b	Farmer’s son	4	16,00
	≤ 1 hour	25	100,00
	> 1 hour	0	0,00
	Total	25	100,00
II	Availability of manpower (HKP/Year)		
	≤ 50	1	4,00
	51-75	15	60,00
	>75	9	36,00
	Total	25	100,00
	Average Labor Potential in the Family (HKP/Year)	73,27	

Source : Primary data

The results of data analysis of the average potential for labor in the family are 73.27 HKP/year, with the largest percentage (60%): 51-75 HKP/year. The

results of research by Yan Yozef Agus Suratman (2016), illustrates that for mustard farming with an average land area of 0.43 ha, it requires a workforce of 30.53 HKP per growing season, with a labor productivity index greater than the prevailing wage level. The results of Surya Dharma's research (2014), the use of labor in spinach farming with an average land area of 4.2 rante is 34.34 HKSP (Male Equal Working Days). The results of research by Evita Natasya Hutapea, Bustanul Arifin, Zainal Abidin (2021) that the use of labor in large red chili farming is 302,442 HKP/ha.

The potential for labor in the Tebing Tinggi village of Okura is an average of 73.27 HKP, which can be used to realize the interest of a sample of households to carry out farming empowerment in their yards with the commodities they want to increase household food production and increase family income.

Yard Empowerment Barriers

Yard empowerment often encounters several obstacles, so that empowerment is not optimal. The results of the data analysis are presented in table 5, only a small portion (12%) of the sample of households that utilize their yards to the fullest. Households that empower their yards to the maximum are households whose main income is from the income of their yards. Most of the sample households (56%) have not utilized their yards optimally, the area of the yards that are empowered to increase food production and family income is only 0%-25%. The average area of yard land that has not been empowered to increase household food production and increase family income is 125.45 m2 or 41.90% of the average land area of the household sample. This condition illustrates that there are still quite a lot of obstacles faced in the empowerment of the yard. The distribution of yard empowerment is presented in table 5.

Table 5. Household Sample Yard Land Use Distribution

No	*Description*	*Total (KK)*	*Percentage (%)*
1	**Yard Area (m^2)**		
	< 120	12	48
	> 120-400	9	36
	> 400	4	16
	Total	25	100
	Average Yard Area (m2)		299,4
2	**The area of the yard that has been utilized (m^2)**		
	< 120	19	76
	> 120-400	4	16
	> 400	2	8
	Total	25	100
	Average Yard Area that has been used (m2)		173,94 (58,10%)
3	Percentage of land area that has been used		
	0-25	14	56
	26-50	4	16
	51-75	4	16
	76-100	3	12
	Jumlah	25	100
3	**Area of the yard that has not been used (m2)**		
	< 120	19	76
	> 120-400	4	16
	> 400	2	8
	Total	25	100
	Average Unutilized Yard Area (m2)		125,46 (41,90%)

Source : Primary data

Searching for these problems found obstacles or causes of the lack of empowerment of the yard. Table 5. explains that the obstacles for some sample households (28%) in empowering their yards are infertile land so that a large amount of money is needed to increase land fertility, considering that the type of land in the cliff area of Tinggi Okura is PMK land (Podsolik Merah Kuning). . Some sample households (24%) lack capital to empower their yards, 20% because the land is narrow. Data on barriers to yard empowerment are presented in table 5.

Table 5. Barriers to Land Use of Household Sample Yard

No	Description	Total (KK)	Percentage (%)
1	Infertile land	7	28,00
2	Narrow field	5	20,00
3	No time	4	16,00
4	Lack of capital	6	24,00
5	Understaffed	3	12,00
	Total	25	100,00

Source : Primary data

Some samples of households stated that the land was relatively narrow, namely in households with a yard of 50 m2, the land was only used for home gardens. A small number of labor shortages in the family to empower the yard.

4. CONCLUSION

From research activities and data analysis, the following can be concluded:

a. The interest of the household sample in the use of yard land to increase household food production and increase family income in the Tebing Tinggi Okura Village, Pekanbaru City increased compared to the percentage of sample households that had empowered their yard at the time of the study.
b. The average potential for family labor in the effort to use yard land in Tebing Tinggi Okura Village, Rumbai Timur District, Pekanbaru City is 73.27 HKP/year. This potential can be used to realize interest in empowering the yard by developing vegetable and secondary crop cultivation in order to increase household food production and increase family income.
c. Obstacles in empowering yard land to increase household food production and increase family income in Tebing Tinggi Okura Village, Rumbai Timur District, Pekanbaru City include less fertile land, lack of capital.

SUGGESTION

Based on the results of field observations, interviews and data analysis, it is recommended to increase education, assistance and assistance to households in Tebing Tinggi Okura Village, Rumbai Timur District in yard empowerment activities to increase household food production and increase family income.

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