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## **INCOME AND EXPENDITURE ANALYSIS AND COPING MECHANISMS OF RICE FARMER HOUSEHOLDS IN MUARA BELIDA DISTRICT MUARA ENIM REGENCY BEFORE AND DURING THE PANDEMIC**

*Analisis Pendapatan dan Pengeluaran Serta Mekanisme Koping Rumah Tangga Petani Padi di Kecamatan Muara Belida Kabupaten Muara Enim Sebelum dan Saat Pandemi*

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### **ABSTRACT**

*The pandemic has brought major changes to all aspects of the society, including social and economic changes. Various limitations are experienced by almost all levels of society. This study aims to 1) analyze changes in household income and expenditure of rice farmers before and during the pandemic and 2) describe the coping mechanisms of rice farmer households during the pandemic. The method used is a survey method. Data collection is done directly through interviews using a questionnaire. The samples used were 80 farmer households which were taken through simple random sampling technique. The data were processed quantitatively and explained descriptively, then presented in tabulated form and continued with paired-sample t test. The results show that 1) there is a significant decrease in household income, which is 5.65% during the pandemic compared to the income before the pandemic, 2) there is a shift (an increase of 1.88%) in household food consumption expenditures before and during the pandemic, while household non-food expenditure decreases by 3.65% during the pandemic, and 3) The survival strategies applied by farming households during the pandemic include a combination of active strategies and passive strategies by 62.5%, a combination of passive strategies and network strategies by 36% and those applying a combination of active strategies, passive strategies and network strategies by 15%. Farmer households are*

*expected to be able to maximize the use of their yards, fish ponds, and livestock as an additional source of livelihood or an effort to reduce household non-food expenditure.*

**Keyword:** *consumption patterns, survival strategies, income, pandemic*

### ABSTRAK

Pandemi telah membawa perubahan besar bagi seluruh lapisan masyarakat, termasuk perubahan sosial dan ekonomi. Berbagai keterbatasan dialami oleh hampir seluruh lapisan masyarakat. Penelitian ini bertujuan untuk 1) menganalisis perubahan pendapatan dan pengeluaran rumah tangga petani padi sebelum dan pada masa pandemi dan 2) mendeskripsikan mekanisme koping rumah tangga petani padi pada masa pandemi. Metode yang digunakan adalah metode survey. Pengumpulan data dilakukan secara langsung melalui wawancara menggunakan kuesioner. Sampel yang digunakan sebanyak 80 rumah tangga petani yang diambil melalui teknik simple random sampling, dengan cara pengundian. Data diolah secara kuantitatif dan dijelaskan secara deskriptif, kemudian disajikan dalam bentuk tabulasi dan dilanjutkan dengan uji t sampel berpasangan (*paired-sample t test*). Hasil penelitian menunjukkan bahwa 1) terjadi penurunan pendapatan rumah tangga yang signifikan, yaitu sebesar 5,65% saat pandemi dibandingkan sebelum pandemi, 2) terdapat pergeseran (peningkatan sebesar 1,88%) pengeluaran konsumsi pangan rumah tangga petani sebelum dan saat pandemi, sedangkan untuk pengeluaran non pangan rumah tangga mengalami penurunan sebanyak 3,65% pada saat pandemi, dan 3) strategi bertahan hidup yang diterapkan rumah tangga petani selama pandemi mencakup kombinasi strategi aktif dan strategi pasif sebesar 62,5%, kombinasi strategi pasif dan strategi jaringan sebesar 36% dan yang menerapkan kombinasi antara strategi aktif, strategi pasif dan strategi jaringan sebesar 15%. Rumah tangga petani diharapkan mampu memaksimalkan pemanfaatan lahan pekarangan, kolam ikan, dan ternak yang dimiliki sebagai sumber mata pencaharian tambahan ataupun upaya mengurangi pengeluaran non pangan rumah tangga.

**Kata Kunci:** *pola konsumsi, strategi bertahan hidup, pendapatan, pandemi*

### INTRODUCTION

The pandemic has brought great changes to all levels of society. Various limitations are experienced by almost all levels of society (Pujowati & Sufaidi, 2021; Shang et al., 2021; Wardayani et al., 2022). Data from the Manpower Office of the City of Palembang show that as of April 5, 2020, the number of workers who have been laid off or experienced layoffs has reached 1,262 workers in Palembang (Dewi, 2020).

Although the pandemic has resulted in people losing their jobs, being laid off, changing jobs, limited working hours, and lowered wages, it also creates new job opportunities that rely on creativity in various sectors (Graeber et al., 2021; Lippert et al., 2021). In addition, the use of social media and applications is also

growing rapidly during the pandemic because many sales transactions are carried out online (Dianda & Pandin, 2021; Gu et al., 2021). Based on a research (Sayuti & Hidayati, 2020), the pandemic affects the pattern of people's economic life significantly, starting from the income received, spending patterns for daily life, employment, and shopping habits which are dominated by online shopping.

The agricultural sector supports food security and food availability and improves people's welfare. Welfare of farmers plays an important role in maintaining and increasing agricultural production. An advanced agricultural sector can encourage faster economic growth and reduce poverty (Abidin, 2021; Wibowo & Suharno, 2022).

The study by (Hernanda et al., 2017; Novia & Zulkifli, 2021) state that food expenditure has a negative relationship with food security. Even though the impact of the pandemic resulted in a weakening of the community's economy (Ridwan, 2022), people in rural areas who are generally engaged in the agricultural sector still have various strategies to be able to maintain their family's economy. This is done because family income during the pandemic has decreased significantly (Hertz et al., 2021; Kansime et al., 2021). In the economic activity of a country, consumption has an important role and has a very large influence on economic stability (Ratnawati, 2020; Sari & Prastyani, 2021). The economic slowdown in the community causes households in this layer to find difficulties to meet the needs of life. As a result, household consumption decreases due to decreased purchasing power (Setyorini et al., 2022).

The results of (Hasanah et al., 2021) show that food insecurity for poor families occurs due to the impact of the pandemic which has caused access to food for poor families to become increasingly limited which is characterized by decreased food consumption in terms of quantity and quality. The capacity level of farmers is in the moderate category, the food security level of farmer households is classified as low, and the coping mechanisms of farmer households are classified as high (Yunita et al., 2011).

Based on a research it is known that the COVID-19 pandemic has also had an impact on the agricultural sector, including food crop farmers in the world in general and in several regions in Indonesia (Faradina & Sukayat, 2021). The research results of (Bidarti, 2021; Guampe et al., 2021) show that the impact of Covid-19 has affected the rural agriculture sector, such as a scarcity of production inputs. The scarcity of agricultural inputs occurs due to limited trade mobilization due to the pandemic. According to (Bidarti, 2021) research, the impact of the pandemic on the downstream sector of food distribution centers has also had an impact on the upstream sector of food production in rural South Sumatra. South Sumatra as one of the provinces with the title of food barn, cannot be separated from the availability of quite varied land resource potential, ranging from irrigated rice fields, rainfed land, tidal swamps, lowland and dry land (Defriyanti, 2019). Tidal swamp land and lowland are divided into potential

land and functional land (Kurniawan & Wahyudati, 2015; Syahputra & Inan, 2019).

Muara Belida District, Muara Enim Regency, which borders the city of Palembang, is a rice-producing area which is the staple food of the people of South Sumatra Province. Rice farming in Muara Belida District is cultivated on tidal lowlands. Farmer households in tidal lowlands are classified as poor households with low incomes and limited access to household food. A pandemic can have an impact on the production process of rice farming, such as the distribution of agricultural production inputs (production facilities; seeds, pesticides, labor and access to marketing). Restrictions on human movement and mobility and the distribution of agricultural inputs and outputs can lead to scarcity, which in turn will increase the price of production inputs (Bidarti, 2021). In addition, limited access to marketing for the output of rice farming will also depress prices at the farm level and in turn have an impact on farmer income. Several research results show a decline in farm household income during the pandemic, for example explanations from A'dani et al (20210, Darnhofer (2020), Pontoan (2021), Satriyati (2021) and Sudaryanti & Suharyono (2020). Rationally, farmers will try to find other sources of income or regulate their household spending patterns. Because of this, it is important to conduct research related to changes in rice farming household income before and during the pandemic and how these farmer households implemented coping mechanisms for their food needs.

## RESEARCH METHOD

This research was conducted in Muara Belida District, Muara Enim Regency, South Sumatra Province. The location selection was carried out intentionally with the consideration that Muara Belida sub-district is a fairly large rice producer and most of its residents are rice farmers in the lowlands. This research was conducted in July 2022.

This study applied a survey method by interacting directly with the head of the household who is the respondent to be interviewed. The interviews were guided with the help of structured questionnaires in order to obtain information and primary data on household income and expenditure as well as the coping mechanisms of rice farmers' households during the pandemic. The sampling method in this study uses a simple random sampling technique, namely a sampling technique that provides equal opportunities for each element (member) of the population to be selected as a member of the sample. The number of samples in this study was 80 respondents, by using the lottery method. A lottery is made by giving a number, then respondents will be selected according to a predetermined lottery number.

This study used primary and secondary data. Answering the first objective, the data were processed quantitatively and explained descriptively, namely by

calculating the income and expenditure of farmer households before and during the pandemic. The data were presented in tabulated form, then followed by a paired-sample t test.

According to Sagoro (2014), Paired Samples T Test is a parametric test used to test the hypothesis, whether or not the two variables are the same. The data came from two measurements or two different observation periods taken from paired subjects. Paired sample t-test in this study was to determine whether there were differences in income and household expenditure of farmers before and during the pandemic. The formula used to find out whether there is a difference in household income before and during the pandemic is as follows:

$$t = \frac{Xa - Xb}{Sp \sqrt{\left(\frac{1}{na}\right) + \left(\frac{1}{nb}\right)}}$$

$$\text{In which : } Sp^2 = \frac{(na - 1)Sa^2 - (nb - 1)Sb^2}{na + nb - 2}$$

Notes:

Xa = Average household income of farmers before the pandemic

Xb = Average household income of farmers during the pandemic

Sp = Combined standard deviation

Sa = Standard deviation of farmer household income before the pandemic

Sb = Standard deviation of farmer household income during the pandemic

na = Sample of farmer household income before the pandemic

nb = Farmer household income sample during the pandemic

With the following decision rules:

1. The significance value (2-tailed) < 0.05 indicates that the household income of farmers during the pandemic is lower than that before the pandemic.
2. The significance value (2-tailed) > 0.05 indicates that there is no significant difference in farmer household income before and during the pandemic.

According to (Sagoro, 2014), the formula used to find out whether there are differences in farmer household expenditures before and during the pandemic is as follows:

$$t = \frac{Xa - Xb}{Sp \sqrt{\left(\frac{1}{na}\right) + \left(\frac{1}{nb}\right)}}$$

$$\text{In which : } Sp^2 = \frac{(na - 1)Sa^2 - (nb - 1)Sb^2}{na + nb - 2}$$

Notes:

Xa = Average household expenditure of farmers before the pandemic

Xb = Average household expenditure of farmers during the pandemic

Sp = Combined standard deviation

Sa = Standard deviation of farmer household expenditure before the pandemic  
Sb = Standard deviation of farmer household expenditure during the pandemic  
na = Sample of farmer household expenditure before the pandemic  
nb = Sample of farmer household expenditure during the pandemic

With the following decision rules:

1. The significance value (2-tailed)  $< 0.05$  indicates that the household expenditure of farmers during the pandemic is lower than before the pandemic.
2. The significance value (2-tailed)  $> 0.05$  indicates that there is no significant difference in farmer household expenditures before and during the Pandemic.

The second objective is described descriptively from the data and information obtained through interviews. This descriptive analysis is used to find out what strategies are carried out by farmer households to survive during the pandemic.

## RESULT AND DISCUSSION

### Respondent's Characteristics

Age is the length of time a person has lived from birth to the present. The age level that a person has will show the work ability activity possessed by that person, because productive age will be able to produce better jobs and be able to do various types of work. The identity of respondents based on age shows that most of the respondents are of productive age. Meanwhile, based on gender, the number of female respondents is higher than the number of male respondents.

The higher a person's education, the greater the opportunity to get a job. By that the opportunity to earn a decent income is also greater. In addition, the higher a person's level of education, the better his knowledge of nutrition tends to be. It is hoped that households with a higher level of education will earn income that can be used to meet food consumption needs and be able to choose good nutritious food for the lives of their family members, especially during a pandemic. Table 1. shows that the education level is dominated by the elementary school group (71.25%).

The number of family members in question is the number of individuals/people who are borne by a head of family in one house. The results showed that overall the respondents did not have too many family members to support. The average number of respondents' family members is 4-5 people in one house.

Table 1. Respondent's Identity

No.	Identity	Number of People	Percentage (%)
I	Age (Year)		
	a. 21-30	8	10.00
	b. 31-40	19	23.75
	c. 41-50	28	35.00
	d. 51-60	18	22.50
	e. 61-80	7	8.75
	Total	80	100.00
II	Gender		
	a. Male	30	37.50
	b. Female	50	62.50
	Total	80	100.00
III	Level of Education		
	a. No school	11	13.75
	b. Elementary school	57	71.25
	c. Junior high school	11	13.75
	d. Senior high school	1	1.25
	Total	80	100.00
IV	Family Members		
	a. 0	1	1.25
	b. 2-3	33	41.25
	c. 4-5	43	53.75
	d. 6-8	4	5.00
	Total	80	100.00

### Changes in Farmer Household Income before and during the Pandemic

The research found that the type of work of the respondents was dominated by farmers by 92.50%, 5% also work as traders. Then each 1.25% also work as fishermen and laborers. Household income is the amount of money obtained from the head of the household and its members which is used to meet common needs in the household. The average total household income before and during the pandemic in Muara Belida by occupation (IDR/month) can be seen in Table 2.

Based on Table 2, it is found that during the pandemic, household income in Muara Belida decreases from the one before the pandemic, which is 5.65 percent or equivalent to 131.945 IDR per month. This situation causes household members to look for side jobs to supplement income, save on family expenses, and borrow some money from other family or friends so they can meet their family's needs. This result is in line with the research of (Junaedi et al., 2021) which stated that the pandemic has caused most people to experience a decrease in monthly income between 5-20%. The pandemic has also made people try to

find additional income through culinary businesses, part-time work, odd jobs, and providing consulting services.

Table 2. Average Total Farmer Household Income Before and During the Pandemic by Occupation (Rp/Month)

No	Type of work	Average Monthly Income (Rp.)		Difference (Rp)	Growth (%)
		Before the Pandemic	During the Pandemic		
1.	Farmer	2,147,916	1,995,138	- 152,778	- 7.11
2.	Merchant	2,200,000	1,825,000	- 375,000	- 17.05
3.	Fisherman	2,000,000	2,000,000	0	0.00
4.	Labor	3,000,000	3,000,000	0	0.00
	Average	2,336,979	2,205,034	- 131,945	- 5.65

Source: Primary Data Processed, 2022

Table 3. Results of Paired Sample T-test

		Paired Difference					T	Df	Sig. (2-tailed)
		Mean	Std. Dev.	Std. Error Mean	95% Conf.Int. of the Diff.				
					Low	Upp			
Pair 1	Before the pandemic during the pandemic	156250.00000	576950.46186	64505.02262	27855.96417	284644.03583	2.422	79	.018

Source: Processed by researchers, 2022

Based on the results of the paired sample T-test using SPSS, it is stated that the pandemic causes the average household income of farmers in Muara Belida to be lower than the one before the pandemic. The results of the paired sample T-test test show that the value of t-count = 2.422 while the value of t-table = 1.664. It can be concluded that the value of t-count > t-table or 2.422 > 1.664 so that the decisions taken from this study rejects  $H_0$  and accepts  $H_1$ , which means that the household income of farmers in Muara Belida during the pandemic is lower than the one before the pandemic. During a pandemic, farming households minimize household expenses by prioritizing staple food needs.

### Changes in Farmer's Household Expenditures Before and During the Pandemic

Changes in the household expenditure of farmers in Muara Belida before and during the pandemic in this study consist of food expenditure and non-food



expenditure. Farmer household consumption expenditures in this study are expenditures to buy goods and services that will be used to fulfill their lives. Farmer household consumption expenditure is the total expenditure on food and non-food. Whereas non-food consists of clothing, housing, education, health, transportation, and communication, and electricity. In general, this expenditure is influenced by the level of income received by farmer households. If the income level is low, then the farmer's household will prioritize food needs over others. On the contrary, if the household income of farmers is high, there will be a shift from food needs to needs other than food. Food expenditure is one of the most important expenditures because food is a basic human need that must be fulfilled. This is explained in the results of (Martadona & Leovita, 2021) research, which states that the proportion of farm household expenditure is used for food expenditure, namely grains, with an average total expenditure of 60.26%.

In addition, there are many household expenditures that are considered as important needs to strengthen the household. This depends on the level of income received. Differences in household consumption expenditure of farmers are influenced by how many household dependents and also the habits of each household in fulfilling their daily needs. The average percentage of household food consumption expenditures before and during the pandemic (IDR/month) can be seen in Table 4.

Table 4. Average Monthly Food Expenditure of Farmers' Households Before and during the Pandemic

Food Group	Average Food Expenditure (IDR/month)				
	Before the Pandemic	During the Pandemic	Diff. (IDR)	Perc. (%) Increase	Perc. (%) Decrease
Grains	345,455.56	345,877.78	422.22	0.12	0.00
Tubers	7,022,22	6,944.44	-777.80	0.00	1.12
Fish	124,455.56	127,311.11	2,855.55	2.24	0.00
Meat	82,911.10	85,300.00	2,388.90	2.80	16.85
Egg and Milk	45,277.80	46,566.70	1,288.90	2.77	0.00
Vegetables	64,244.40	69,077.78	4,833.38	7.00	0.00
Nuts	26,000.00	25,444.40	-555.60	0.00	2.18
Fruits	5,688.89	7,966.67	2,277.78	28.59	0.00
Total	701,055.53	714,488.88	13,433.35	1.88	

Source: Survey Results, 2022

Based on Table 4., it is found that the average percentage of expenditure on food consumption by farmer households, both before and during the pandemic, is in the food group of fruits and vegetables. This is because, during a pandemic, fruits and vegetables are a source of important nutrients that the body needs to meet the needs of fiber, vitamins, minerals, and several enzymes

that are beneficial for digestive function. Vegetables and fruits contribute to the fulfillment of essential nutrients for the body.

The increase in the average expenditure on the consumption of fruits and vegetables during this pandemic is also followed by other food groups such as fish, meat, eggs and milk with the percentage increase in average expenditure respectively as much as 2.24%, 2.80%, and 2.77%. As for the food groups that experience a decline during the pandemic, namely the tubers and legumes, the percentages decreases by 22.18 percent and 1.12 percent, respectively. Different research results are found in food consumption expenditure in farmer households when there is no pandemic. The largest food expenditures are tobacco (225), grains (21%), and fish/shrimp/squid/scallops (11%) of total food expenditure (Fatimah & Syamsiyah, 2018).

The increase and decrease in household food expenditure during this pandemic are caused by the increase in prices for these types of food. This is also in line with the information conveyed by the general chairman of IKAPPI that in 2020 almost all household foodstuffs experienced an increase in prices that made households change their consumption patterns. Households with low incomes, for example, reduced their spending on meat consumption and replaced their meat consumption with more eggs, milk, and nuts.

In line with the results of this study, research shows that there has been a very sharp decline in income between 30%-70% due to the pandemic while spending tends to remain constant (Ratnawati, 2020). Since the pandemic, people have drastically changed their food consumption patterns. People only change the pattern of food consumption by changing the type of side dish and prefer to find additional income to cover family expenses in order to maintain life. A research conducted in four Indian states suggested that the impact of the pandemic was seen in disruptions to the food system and impacted livelihoods and diets (Harris et al., 2020). It is known that the initial impact of the pandemic and the policy response on farming households, the majority of farmers reported a negative impact on production, sales, prices and income.

Based on the data in Table 5., it is found that during the pandemic, household non-food consumption expenditure experiences two changes, namely an increase, and a decrease in the average percentage of expenditure. For non-food types, expenditures have increased in housing costs by a percentage of 5.69 percent and health costs by a percentage of 10.10 percent. Housing costs in this study consist of electricity needs, water needs, and communication equipment needs. Housing costs increased during the pandemic because the implementation of the *PSBB* (lockdown) during the pandemic has caused people to use electricity more at home. The average monthly non-food expenditure of farmer households before and during the pandemic can be seen in Table 5.

Table 5. Average Monthly Non-Food Expenditures of Farmers' Households Before and During the Pandemic

Non-Food Group	Average Expenditure (IDR/month)				
	Before the Pandemic	During the Pandemic	Difference (IDR)	Perc. (%) Incr.	Perc. (%) Decr.
Housing	212,733,30	225,577.78	12,844.48	5.69	0.00
Goods and services	193,933.30	183,877.78	-10,055.52	0.00	5.47
Education costs	32,777.78	14,000.00	-18,777.78	0.00	134.13
Health	10,388.89	11,555.60	1,166.71	10.10	0.00
Clothing	111.11	111.11	0	0.00	0.00
Durable goods	2,444.44	1,888.89	-555.55	0.00	29.41
Taxes and insurance	4,266.67	4,266.67	0	0.00	0.00
Social needs	1,777.78	0	-1,777.78	0.00	0.00
Total	458,433.27	442,277.83	16,155.44		3.65

Source: Primary Data Processed , 2022

On the other hand, non-food types that experienced a decrease in the average percentage of expenditure during a pandemic include the cost of various goods and services, education costs, and durable goods costs with a decrease in percentages of 5.47%, 134.13%, and 29.41%, respectively. This decline in expenditure occurs because, during the pandemic, household income decreases so that households reduce their consumption to buy clothes and electronic goods or additional household items. The average expenditure on overall household consumption in Muara Belida before and during the pandemic can be seen in Table 6. below.

Table 6. Average and Percentage Difference in Average Household Consumption Expenditure in Muara Belida Before and During the Pandemic (IDR/Month)

Type of Household expenditure	Before	During	Differences	Perc. Diff. (%)
Food Consumption	701,055.53	714,488.88	13,433.35	1.88
Non-Food Consumption	458,433.27	442,277.83	16,155.44	3.65
Total	1,159,488.8	1,156,766.71	2,722.90	0.24

Source: Processed by Researchers, 2022

Household spending in Muara Belida experiences a decrease in the average amount of expenditure during the pandemic by 2,722.90 IDR or as much as 0.24 %, where this expenditure decreases from an average of 1,159,488.8 IDR to 1,156,766.71 IDR. However, when viewed from the consumption group, it is found that the average household food consumption expenditure in Muara

Belida increases by 1.88% or is equivalent to 13,433.35 IDR during the pandemic. The results show that people in Muara Belida continue to consume foodstuffs in the grain group, especially rice as the main or staple food, continue to consume foodstuffs from the tubers, legumes, animal food groups, as well as vegetables, and fruit groups, before the pandemic and during the pandemic, but with different amounts. Inversely, the average household non-food consumption expenditure decreases by 3.65% or decreases from 458,433.27 IDR to 442,277.83 IDR during the pandemic.

Table 6. also shows that the percentage of household food consumption expenditure for rice farmers in Muara Belida is more than 60% of total household expenditure. This indicates that rice farming households in this location are classified as food insecure when viewed from the proportion of expenditure. The results of this study are different from the results of research conducted by Pradnyadewi et al. (2021) on farming households in Subak Sembung during the Covid-19 pandemic, where the results of his research showed that food consumption expenditure was less than 60% of total household expenditure.

The results of the paired sample T-test using SPSS on household consumption expenditures of farmers in Muara Belida before the pandemic and during the pandemic can be seen in Table 6., where the value of t-count = 1.209, while the value of t-table = 1.664. So, it can be concluded that the value of t-count > t-table or  $1.209 > 1.664$ , so the decision taken from this study is to reject  $H_0$  and accept  $H_1$ , meaning that the consumption expenditure of farmer households in Muara Belida during the pandemic is lower than that before the pandemic.

Table 7. Results of Paired Sample T-test

		Paired Differences							
		Mean	Std. Dev.	Std. Error Mean	95% Conf. Int. of the Diff.		T	df	Sig.(2-tailed)
				Low		Upp			
Pair1	Before the pandemic								
	During the pandemic	10,275.00	75,996.49	8,496.66	2,7187.19	6,637.19	1.209	79	.000

Source: Processed by Researchers, 2022

The change in household consumption expenditure patterns in this study is in line with the results of a research that shows that household consumption patterns vary and are based on the amount of income (Suryati, 2017). The greater the level of income owned; the consumption pattern also changes.

## Survival Strategies For Farmers' Households During the Pandemic

The pandemic that causes changes in household income has become the main factor for households to make efforts to maintain their family life. In general, farming households will adjust their farming activities during a pandemic. The results of research conducted by (A'dani et al., 2021) explain that there are different opinions regarding farming activities during a pandemic. Some farmer households think that the pandemic has affected their farming activities, and on the other hand, there are those who think that the pandemic has not affected their farming activities.

The pandemic requires households to implement survival strategies, namely looking for side jobs to increase income, save family expenses, and implement social networking strategies by borrowing some money to temporarily meet the needs of their families. In this study, there are three types of survival strategies carried out by households, namely active strategies, passive strategies, and network strategies.

### Active Strategy

An active strategy is a strategy that optimizes all existing potential to get additional income. As many as 92.50% of farmers in Muara Belida carry out different active strategies, depending on the abilities and potentials of each respondent. The forms of active strategy carried out by respondents can be seen in Table 8. following.

Table 8. Forms of Active Strategies Taken by Households in Muara Belida During the Pandemic

No.	Active Strategies Formed by Respondents Due to the Pandemic	Number of People	Percentage (%)
1	Doing a side job as a Fisherman	31	41.90
2	Doing a side job as a merchant	5	6.75
3	Doing a side job as a Farmer	9	12.16
4	Doing a side job as a massage service	1	1.35
5	Doing a side job as a Truck Driver	1	1.35
6	There are family members who work	27	36.48
Total		74	100.00

Source: Primary Data Processed, 2022

Households whose main occupation is farming, have a way of surviving when harvests fail or when production declines. They usually look for side jobs such as trading, fishing, agricultural labor, massage services, coal employees, or truck drivers. Table 8. shows that 41.90% do side jobs as fishermen. As many as 6.75% do side jobs as traders. As many as 12.16% do side work as farm laborers. For side jobs as massage services, employees and truck drivers each only account

for 1.35%. As many as 36.48% of rice farmer households allow their wives and children to work outside the agricultural sector because they cannot rely on farming results to increase their income.

### Passive Strategy

Passive strategy is a survival strategy that is done by minimizing family expenses. The passive strategy is a survival strategy by reducing household expenses.

Table 9. shows that 12.5% implements a passive strategy by making changes to their family's diet. Before the pandemic the households could eat fish quite often, now they can only eat it once a week or even less than once week. The rest consumes tofu, tempeh, vegetables or eggs. As many as 73.35 % implements a strategy by prioritizing basic food needs. Through this strategy, farmer households are required to arrange their needs based on their priority scale.

Table 9. Forms of Passive Strategies carried out by Farmer Households in Muara Belida during the Pandemic

No.	Forms of Passive Strategies by Respondents Due to the Pandemic	Number	Percentage (%)
1	Applying a frugal lifestyle	10	12.5
2	Make changes to the food menu	11	13.75
4	Prioritizing basic food needs	59	73.35
Total		80	100.00

Source: Processed by Researchers, 2022

Then 12.5% said that the passive strategy is carried out by making savings in all aspects of spending to support their family, for example: by reducing the frequency of eating out (stalls/restaurants), by eating at home with a simple meal menu, by only buying things that are really needed, and so on. Based on the facts above, it can be concluded that farmer households prioritize their spending on food needs and minimize spending on basic needs.

The results of this study are in line with the research of (Faradina & Sukayat, 2021) which shows that farming households make several adaptations so they can continue to survive during the pandemic. The adaptations that have been made are reducing the workforce to become family workers, reducing grain sales, and doing various side jobs. This is also the case with the research results of Zaeni et al. (2022) which showed that the survival strategy adopted by cut flower farming households during the COVID-19 pandemic in order to be able to meet their household needs was by doing side jobs, increasing hours or work intensity, implementing patterns double income, selling assets owned, reducing

household expenses, borrowing money from financial institutions, and utilizing social networks owned by these households. The results of research by (Sabariman & Susanti, 2021) explain the same thing. Adaptation strategies carried out by poor farming families in rural areas, namely: building group solidarity according to developing values and norms, utilizing very strong family ties, and minimizing household expenses and utilizing social networks for business development.

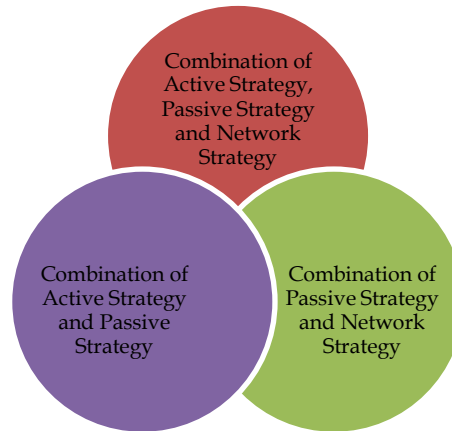


Figure 1.  
Farmer Household Strategy Combination

The results also show that farming households do not only apply one strategy to survive during a pandemic, but also combine the three strategies. Farming households that apply a combination of active strategies and passive strategies are 50 households with a percentage of 62.5%. There are 18 people who apply a combination of passive strategies and network strategies with a percentage of 36%. Meanwhile, those who apply a combination of active strategies, passive strategies, and network strategies are 12 people with a percentage of 15%.

The combination of active and passive strategies used is to work as a fisherman as well as to make savings or change the food menu by choosing cheaper ingredients. or looking for additional income as a farm laborer and prioritizing expenses to meet basic food needs compared to other expenses. Farming households that apply a combination of passive strategies and network strategies make savings and also borrow money from family, neighbors or other friends. In addition, there are also households that take advantage of various assistance from the government and reduce non-food purchases. Meanwhile, households that apply a combination of active, passive and network strategies try to find side jobs by working as farm laborers or construction workers, while their wives make savings by utilizing food that is around the house. In addition,

if the supply of money or food is not sufficient, they try to borrow from family or neighbors.

## CONCLUSION AND SUGGESTION

### Conclusion

Based on the results of the analysis and discussion of the data described above, several important things that can be concluded in this study include:

1. Household income during the pandemic is lower than the one before the pandemic with a percentage decrease of 5.65%. Based on the results of the Paired Samples T-test, there is a significant difference between the household income of rice farmers before and during the pandemic.
2. There is a shift in household food consumption expenditure of farmers before and during the pandemic where the average food expenditure before the pandemic was 701,055.53 IDR and during the pandemic is 714,488.88 IDR, meaning that there is an increase of 1.88%. Meanwhile, household non-food expenditure decreases by 3.65% during the pandemic. This is because, during the pandemic, farmer households are more concerned with food expenditure than non-food expenditure.
3. Survival strategies implemented by farming households during the pandemic include a combination of active strategies and passive strategies by 62.5%. The combination of passive strategy and network strategy is 36% and those who apply a combination of active strategy, passive strategy and network strategy are 15%.

### Suggestion

1. Farmer households are expected to be able to maximize the use of their yards, fish ponds, and livestock as an additional source of livelihood or an effort to reduce household non-food expenditure.
2. It is hoped that further researchers will be able to analyze other factors, besides income, that affect changes in household food consumption.

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