

Analysis of the Welfare Level of Rice Farmers Using the Farmer's Exchange Rate (FER) Approach and Factors Affecting FER in South Tapanuli Regency

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ABSTRACT

Data released by BPS North Sumatra shows that rural poverty in September 2020 is at 600.48 thousand people or 9.02 percent. The low economic value in the agricultural sector results in a low level of farmer welfare. Farmer's exchange rate (FER) is one indicator of farmers' welfare. FER can be measured by comparing the price index received by farmers (output selling price index) with the price index paid by farmers (production process input price index). Agricultural development can contribute to national development and is the largest contributor to both national GDP and regional GDP. There are several factors that affect the exchange rate of farmers themselves, including: Consumer Price Index (CPI), GDP, and rice prices. The purpose of the study was to determine the farmer's exchange rate (FER) and the factors that influence the farmer's exchange rate in South Tapanuli Regency. Methods: Research Location: Tatengger Village, Angkola Muara Tais District, South Tapanuli Regency. Type of data: primary data, primary data. Population: all rice farmers in Tatengger Village, Angkola Muara Tais Sub district, Tapsel Regency, as many as 127 farmers; the sampling used the Krejcie and Morgan method; as many as 56. Data analysis methods: calculating FER, Calculating FER factors. From the analysis that has been carried out regarding the Analysis of Rice Paddy Farmers' Exchange Rates in Tatengger Village, Angkola Muara Tais District, South Tapanuli Regency, the conclusions are: On average, the Farmer's Exchange Rate (FER) of the sample in Tatengger Village is 96.87 or less than 100 Thus, it can be concluded that the welfare level of the sample farmers in Tatengger Village, Angkola Muara Tais District, South Tapanuli Regency in 2020 is classified as not yet prosperous.

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1. INTRODUCTION

Based on the release of economic growth in Quarter IV-2020 last February 5, the Central Statistics Agency stated that the agricultural sector is a sector that supports the Indonesian economy. The Indonesian agricultural sector was still able to grow by 1.75% throughout 2020 when other economic sectors contracted quite deeply as a result of the COVID-19 pandemic. Moreover, in the Food Crops Sub-category, which is believed to be a Sub-category that is resistant to crisis shocks. However, in North Sumatra Province, Food Crops Commodities were negatively affected by the economic crisis caused by this pandemic. One of the factors that caused the sluggishness of the food crop sector was due to the decrease in the harvested area of food crops compared to 2019 which was -5.94%, which caused a decrease in production areas. For example, rice, which is a leading commodity in North Sumatra [1]. Data released by BPS North Sumatra shows that rural poverty in September 2020 is at 600.48 thousand people or 9.02

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percent [1]. The low economic value in the agricultural sector results in a low level of farmer welfare. A farmer's exchange rate (FER) is one indicator of a farmer's welfare [2]. FER can be measured by comparing the price index received by farmers (output selling price index) with the price index paid by farmers (production process input price index) [3]. In November 2021, the NTP of North Sumatra Province (2018=100) was recorded at 125.75, an increase of 2.06 percent compared to the NTP of October 2021, which was 123.21 [4]

South Tapanuli Regency has become an agricultural center, so that the area remains an agrarian area in the southern part of Tapanuli. In fact, in 2016 South Tapanuli experienced a rice surplus of 84 tons. Meanwhile, South Tapanuli's 2016 rice needs are more than 134 tons, and for food needs 39 tons more, so South Tapanuli 2016 has a surplus of 84 tons of rice, equivalent to 67.89%. That much rice production was produced by South Tapanuli from an area of 17,170 hectares of raw rice fields in 2016, a decrease compared to 2015 where the raw area of rice fields was 17,847 hectares. The reduction in the standard area of rice fields of 677 hectares is due to the conversion of land functions by the community [5].

Agricultural development can contribute to national development and is the largest contributor to both national GDP and regional GDP [6]. There are several factors that affect the exchange rate of farmers themselves, including: Consumer Price Index (CPI), GDP, and rice prices [6].

Several studies related to the title of this research include: [7], [8], [9], [10], [11], [12], [13], [14], [3], [15], [16], [6], [2], [17], [18]. It can be seen from various references that there have been studies related to FER with various analytical methods, but there has been no simultaneous research on FER and FER factors, especially with objects in South Tapanuli Regency.

The problem to be studied is how much the exchange rate of rice farmers are and the factors that influence the farmer's exchange rate (NTP) in South Tapanuli Regency.

The specific purpose of the research is to find out the Farmer's Exchange Rate (NTP) and the factors that affect the Farmer's Exchange Rate (Consumer Price Index, GDP, and rice prices).

2. METHOD

2.1 Research Site

The research was conducted in Tatengger Village, Angkola Muara Tais District, South Tapanuli Regency.

2.2 Types and sources of data

Types of data: primary data, primary data obtained such as Area, Boundaries and Geographic, Land Designations and Benefits, Natural resources available in Tatengger Village, Human Resources (HR) in Tatengger Village, Social Resources of Tatengger Village, Village Social Situation and data related to research.

Secondary data is primary data that has been further processed and presented either by primary data collectors or by other parties or from previous research articles.

2.3 Population and Sample

The population in this study were all rice farmers in Tatengger Village, Angkola Muara Tais District, South Tapanuli Regency, as many as 127 farmers.

The sample uses the Krejcie and Morgan method with a chi-square approach, $p = 0.5$, with an assumed error limit of 5% (0.05). Determination of the number of research samples using a stratified random sampling technique, from the table obtained 56.

2.3 Data Collection Method

The data collected in this study consisted of primary data and secondary data. Primary data was obtained from direct interviews with rice farmers using a questionnaire that had been prepared in advance, while secondary data was obtained from institutions or agencies such as the Central Statistics Agency and other agencies related to this research.

2.4 Data analysis method

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To calculate FER, the formula for the concept of income can be used as follows:

$$FER = \frac{P_x \cdot Q_x}{P_y \cdot Q_y} \times 100$$

Information :

FER = Exchange Rate

P_x = Price of commodity produced by farmers

Q_x = Number of commodities produced by farmers

P_y = commodity price paid by farmers

Q_y = Amount of commodity paid by farmer

From the above formula it can be concluded that:

$$FER = \frac{TR}{TC} \times 100$$

Information:

FER = Exchange Rate

TR = Total Revenue (Revenue)

TC = Total Cost (Expenditure)

The price index received by farmers is the value of production sold by farmers from each type of agricultural good. The price index paid by farmers is the type of goods included in household consumption expenditures and agricultural production costs.

Criteria for Farmer's Exchange Rate (FER):

- FER > 100 means that farmers have a surplus. The price of production rose more than the increase in the price of consumption.
- FER = 100 means that farmers break even. The increase/decrease in the price of production is the same as the percentage increase/decrease in the price of consumed goods. The level of farmers' welfare has not changed.
- FER < 100, means that farmers have a deficit. The increase in the price of their produced goods is relatively small compared to the increase in the price of their consumption goods. The level of welfare of farmers in one period has decreased compared to the level of welfare of farmers in the previous period.

3 RESULT AND DISCUSSION

3.1 Description of Research Site

3.1.1 Area, Boundary and Geographic

Tatengger Village is included in the Angkola Muara Tais District, South Tapanuli Regency. Tatengger Village has an area of 1150 Ha, with the following details:

1. Rice Fields/ Moor/ Farms : 100 Ha
2. Settlement : 12 Ha
3. Plantation/ Community Forest : 984 Ha
4. Fishery/Water : 4 Ha

Tatengger village is ± Km from the sub-district capital, with the following boundaries:

To the north, it is bordered by: Padangsidempuan, Southeast

To the south, it is bordered by: Aek Nauli Village

In the east it is bordered by: Batang Onang/ Simardona

To the west, it is bordered by: Muara Purba Nauli Village

3.1.4 Human Resources

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Human resources (HR) in Tatengger Village are the main things that must be owned by the village in order to support programs for both village, central and regional governments, which in determining a successful development is strong human resources. The following is a list of human resources in the village of Tetengger.

Table 3.3 Human Resources Potential of Tatengger Village

No	Description of Human Resources (HR)	amount	Unit
1	Resident and Family		
	a. Number of Population Male	334	person
	b. Number of Female Population	373	person
	c. Number of Family	179	family
2	Main Sources of Income of Residents		
	a. Agriculture, Fishery, Plantation	127	families
	b. Construction and Excavation	14	families
	c. Processing Industry (Factory, Craft, etc.)	-	
	d. Wholesale/retail trade and restaurants	4	families
	a. e. Service	18	families
3	Manpower based on educational background		
	a. S-1 graduates and above	22	person
	b. High school graduate	132	person
	c. Junior High School Graduates	131	person
	d. Elementary school graduate	138	person
	e. Didn't finish elementary school/ didn't go to school	48	person

Source: RPJM Tategger Village 2020-2026

3.1.6 Village Social Situation

The residents of Tatengger Village come from various different areas, where the majority of the most dominant population comes from the Angkola Batak tribe, so that the traditions of deliberation for consensus, mutual cooperation and other local wisdom have been carried out by the community since the existence of Tatengger Village can effectively avoid clashes between community groups.

Tatengger Village has a population of 671 people, consisting of 334 males, 337 females and 179 families with the following details:

Population : 671 People

Level of education :

- Pre-School : 70 people
- Elementary school : 217 people
- Junior high school : 175 people
- High school : 171 people
- Undergraduate : 37 people

Because the village of Tategger is an agricultural village, most of the population makes a living as farmers do. The details are as follows:

Occupation :

- Farmer : 127 HH
- Traders, civil servants, police: 52 families

The composition of the population of Tategger Village based on gender and religion is shown in the following table below:

Table 3.5 Composition of the Tategger Village Population by gender and religion

No	Name of Village	Number of Population			Religion			
		Male	female	Total	Islam	Protestant	Hindu	Buddhism
1	Tatengger	334	337	671	537	134	-	-
Total		334	337	671	537	134	-	-

Source: RPJM Tategger Village 2020-2026

3.2 Data presentation, data analysis and discussion

1. The Exchange Rate of Rice Farmers in Tategger Village

Farmer's Exchange Rate (FER) is a measure of the ability to exchange agricultural products produced by farmers for goods and services purchased by farmers' households, both in the context of agricultural production and consumption by farmers' households. Farmers' purchasing power measuring instrument that reflects the level of welfare is formulated in the form of a farmer's exchange rate (FER). FER functions to measure the ability to exchange agricultural products produced by farmers with goods or services needed for household consumption of farmers and the need to produce agricultural goods. According to Soekartawi (2002), the farmer's exchange rate (FER) can be calculated using the income concept formula, namely:

$$FER = \frac{TR}{TC} \times 100$$

Information

FER = Exchange Rate of Lowland Rice Farmers

TR = Total Revenue

TC = Total Cost

The type of commodity studied is lowland rice. The production inputs paid by farmers include seeds, fertilizers, pesticides, labor costs, and other production factors including equipment depreciation costs. Meanwhile, commodities purchased by farmers to meet their daily needs include food and non-food consumption. The price used to calculate the farmer's exchange rate is the price in 2020. Using the concept of calculation (FER), the following are the results of the calculation of the farmer's exchange rate from the sample farmers in the study area.

Table 3.6 Calculation Results of Farmers' Exchange Rates in Tategger Village

No. Sample	FER	No. Sample	FER
1	113,26	29	40,40
2	41,07	30	135,25
3	67,54	31	151,62
4	103,02	32	67,25
5	76,37	33	68,56
6	127,59	34	64,28
7	68,72	35	93,02
8	65,30	36	61,30
9	73,85	37	107,02
10	61,57	38	182,09
11	94,49	39	47,88
12	142,37	40	201,35
13	124,04	41	71,03
14	75,81	42	89,73
15	162,19	43	82,12
16	83,57	44	94,20

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17	131,26	45	71,60
18	148,05	46	187,06
19	93,69	47	77,55
20	74,16	48	69,95
21	72,01	49	46,80
22	95,19	50	92,44
23	142,65	51	111,11
24	49,90	52	93,97
25	85,30	53	96,86
26	131,07	54	85,89
27	148,09	55	100,72
28	103,02	56	79,08
average		:	96,87

Source: Processed results of research data

A farmer's exchange rate is the ratio of the index received by farmers to the index paid by farmers. The value of NTP is obtained by dividing the total income of farmers from lowland rice farming by the total expenditures of farmers, namely farming expenses and household expenditures (food and non-food). A farmer's exchange rate above 100 means that the index received by farmers is higher than the index paid by farmers, so it can be said that farmers are more prosperous. And the farmer's exchange rate below 100 means that the index received by farmers is lower than the index paid by farmers, so it can be said that farmers are not prosperous. In table 5.1, it can be seen that there are 20 farmers who have an FER of more than 100 or 35.71% of the total sample. The highest sample is in sample 40 with a total price index received of Rp. 13.800.000,- and the index paid is Rp. 6,870,000,-. Based on the prices of the two indices, it can be calculated that the Farmer's Exchange Value is 201.35, meaning that the farmer's household is prosperous (can meet the needs of farmers in rice farming and for household purposes) and has an excess value of 101.35, which can be used as savings.

There is 1 (one) sample of farmers who break even or 1.78% of the total sample because they have a value of FER = 100. From the survey results on 55 sample farmers, it can be calculated how much the total income from farming is equal to the farmer's total expenditure, so FER = 100. In sample 55, the total index received by farmers is Rp. 1.433.000,- and the index paid by farmers is Rp. 1,423,000, - then they obtained FER of 100.72, meaning that farmers break even because the price received is the same as the price paid by farmers.

Furthermore, there are 36 farmers who have an FER of less than 100 or 64.28% of the total sample. The smallest sample is in sample 29 with a total accepted price index of Rp. 800,000, - and the index paid is Rp. 1,980,000,-. Based on the prices of the two indices, the farmer's exchange rate can be calculated at 40.40. This means that the farmer's household is not yet prosperous. On average, the overall sample in the research area is 96.87 or less than 100. Thus, it can be concluded that the welfare level of the sample farmers in Tatengger Village, Angkola Muara Tais District in 2020 is relatively low (not yet prosperous). This means that the income received from lowland rice farming has not been able to meet the needs of the farmer's household (family) and farmers also have not been able to save from this income and even have to meet their needs from other income. Thus, the hypothesis that the average Farmer's Exchange Rate (FER) for lowland rice in the study area is greater than 100, cannot be accepted.

2. Farmers' Household Expenditures from Total Paddy Rice Business Income

A farmer's household is a group of people who inhabit part or all of the building, generally eat together from one kitchen or someone who inhabits part/whole of the building and takes care of their own household, with the head of the household working in the agricultural sector. Household members are those who occupy part or all of the building and generally eat together from one kitchen and take care of their own household who work in the agricultural sector. The number of household members will affect household income, expenditure, and food availability. Respondents in this study amounted to 56 people, who were residents of Tategger Village, Angkola Muara Tais District, South Tapanuli Regency. Household expenditures are costs incurred for the consumption of all household members. Household consumption

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is classified into 2, namely food and non-food consumption without regard to the origin of the goods and is limited to expenditures for household needs only, excluding expenditures for business.

At low income levels, consumption expenditures are generally spent on basic needs to meet physical needs. Food consumption is the most important factor because food is the main type of good to maintain survival. However, there are various kinds of consumer goods (including clothing, housing, fuel, etc.) that can be considered as necessities for running a household. The diversity depends on the level of household income. The level of community welfare can be described by the amount of income it receives. However, the revenue-driven approach is difficult, so revenue is estimated by expenditure. Expenditures are distinguished according to expenditures for food and non-food. Both types of expenditure can be explained quite well by the consumption pattern of the people.

In developing areas, food expenditure still accounts for the largest share of total household expenditure. On the other hand, in relatively developed areas, spending on various goods and services such as for health care, education, recreation, sports, and the like is the largest part of total household expenditure. So that the level of non-food expenditure becomes one measure in measuring the progress of a region.

The number of dependents of the sample farmers ranged from 1-6 people. The number of dependents will affect family income and expenses to meet the living needs of family members. The amount of income and expenditure will affect the welfare of the sample farmers. The greater the family dependents, the greater the responsibilities borne by the head of the family in meeting the needs of his family's life. Household income is income received by residents for their work performance during a certain period, either daily, weekly, monthly or yearly. In addition to fixed income, side income also includes household income. Side income is expected to increase people's income.

Table 3.7 Average Total Household Expenditure for Food Expenditure Rice Farmers in Tategger Village, Angkola Tais District

Type of Food Expenditure	Average (Rp)	Percentage (%)
Grains (Rice)	198.392	36,75
Vegetables	78.839	14,60
Side dishes	161.339	29,88
Fruit	4.107	0,76
Lamp oil and gas	41.785	7,74
Drinking water	-	-
Other consumption	55.357	10,25
Total	539.819	100,00

Source: Processed results of research data

Table 3.7 shows that the average total household expenditure for food expenditure for rice farmers in Tategger Village, Angkola Muara Tais District, South Tapanuli Regency per month is Rp. 539,819,-

The largest average household food expenditure is expenditure on grains (rice) of Rp. 198.392,-. Then followed by the expenditure of side dishes of Rp. 161.339,-. Expenditures for side dishes are obtained from the total costs incurred for food categorized into side dishes (meat, eggs, milk, fresh fish, dried fish, tempeh, tofu, eggs, instant noodles and others) divided by the total expenditure (Rp/ month) in the amount of Rp. 161,339,- or 29.88% of the total food expenditure. The side dishes that are often consumed daily are dried fish, tempeh, tofu, and eggs. Meat groups include (beef, chicken, goat, and others). Among the meat group, chicken is the most frequently consumed but not every day, usually only consumed at certain times, for example when family visits or certain events.

Expenditure for lamp oil and gas is Rp. 41,785,- per month or 7.74%. This expenditure is relatively small, where farmers mostly use wood fuel for daily cooking. Only a small number of farmers use gas stoves for cooking.

Expenditure on fruit is the smallest expenditure of farmers. Only some farmers consume fruit by buying it at the market. Usually, farmers' fruit needs are met by their own garden produce. Fruits that are often consumed by farmers in their own gardens are papaya, banana, guava and rambutan. While the fruit purchased from the market is usually snake fruit and oranges.

Expenditure for other consumption of Rp. 55,357,- or 10.25% of the total food expenditure. Other consumption groups include: biscuits, meatballs, chicken noodles, instant noodles, crackers, ready-to-eat foods, and so on. Consumption of noodles is the largest expenditure in this group. Almost all households consume noodles. Noodles are an alternative for fulfilling needs other than rice compared to other food groups. Many noodle products are quickly served and consumed with good packaging and with price variations that allow people to make choices of noodle products according to their abilities. Besides that, noodles are also easily found in various places, not only in supermarkets but also in traditional markets or small stalls in the countryside. The low percentage of prepared food is because farming households are households with low incomes, so they choose to cook their own food because it is more economical and adjusted to their income.

Expenditure on vegetables is Rp. 78,839,- or 14.60% of the total food expenditure. Vegetable groups include spinach, kale, cabbage, long beans, beans, tomatoes, eggplant, pumpkin and so on. Farmers getting vegetables usually buy in stalls or traditional markets in the village. In addition, farmers can also get vegetables from their own gardens so that they save more on their expenses.

Table 3.8 Average Total Household Expenditures for Non-Food Expenditures for Rice Farmers in Tategger Village

Type of Non-Food Expenditure	Average (Rp)	Percentage (%)
Housing (Rental Fee)	3.571	0,51 %
Health	160.803	23,26 %
Education	231.250	33,45 %
Recreation and Social Purposes	4.464	0,64 %
Transportation and Communication	162.678	23,53 %
regular social gathering Others	128.571	18,60 %
Total	691.337	100 %

Source: Processed results of research data

From table 3.8, the average total household expenditure for non-food expenditures for rice farmers in Tategger Village, for the largest average expenditure, is on education expenditure, where this expenditure is an accumulation of costs for education (tuition fees/tuition fees, stationery, uniforms, and other educational needs), divided by the total non-food expenditure as a whole (Rp/month) which is Rp. 231,250/month or 33.45%. The high percentage of education is because most of the respondents' children/grandchildren are still in school. Some of the children from the respondent's households have completed high school education and continue to go to college on the grounds that their children's future must be better than that of their parents, even with limited funds. Expenditures for other educational needs, for example, including school pocket money.

Furthermore, the expenditure of farmers' households on non-food expenditure is on expenditure for transportation and communication on the total expenditure of farmers for transportation and communication is quite high because the village of Tategger is included in a suburban area in South Tapanuli Regency, so that transportation expenditure costs are relatively high due to the distance. The distance from Tategger Village to Padangsidempuan City or South Tapanuli Regency. Likewise, with communication needs, currently in the 4.0 era, where all communication access requires a fee for purchasing internet packages for communication and information needs, so this is also an additional cost for rice farmers in Tategger Village. The average expenditure of rice farmers in Tategger Village for transportation and communication is Rp. 162,678/month or 23.53% of the total average non-food expenditure.

The average expenditure of lowland rice farmers in Tategger Village for the health sector is Rp. 160 on 803/month. These health costs are usually issued by farmers to finance their health if a family member is sick. For mild illness, the people of Tategger village can seek treatment at the midwife or health center in Angkola Muara Tais District, while for medical expenses, those who suffer from severe illness can seek treatment at the Padangsidempuan City Hospital, or seek treatment at the South Tapanuli District Hospital in Sipirok.

Expenditures for social gatherings and others are expenditures for rice farmers in Tategger Village as a form of social activity in Tategger village, usually in the form of regular social gathering (help unions). This usually occurs at weddings or when there is an accident in Tategger Village or in other areas, villages around the village of Tategger. The amount of expenditure of rice farmers in Tategger Village on average each month is Rp. 128,571/month or 18.60% of the total average expenditure of rice farmers in Tategger village for non-food expenditures.

Expenditure for recreation and social needs of Rp. 4,464/month, this expenditure is relatively small because the rice farmers in the village of Tategger do not consider recreation a necessity of life that must be fulfilled. Generally, the recreation that is carried out by the people of Tategger village is to eat on the riverbank by bringing their own food from home and eating by the river. Expenditures for social needs generally occur in the form of marital donations or misfortunes.

The smallest expenditure for lowland rice farmers in Tategger village for non-food expenditure is on housing expenditure (house rental), which is Rp.3.571/month or 0.51% of the total expenditure of rice farmers in Tategger village for non-food expenditure. This is because almost all rice farmers in the village of Tategger already have their own houses, even though the conditions are quite simple, housing needs are only for expenses for house repairs which are relatively small and repairs themselves without having to call a builder, so the costs incurred are only to buy building materials for rehabilitation purposes only.

Table 3.9 Average Total Expenditure (food and non-food) per Household per Month Rice Farmers in Tategger Village.

No	Description	Average (Rp)	Percentage (%)
1	Food	539.819	43,85%
2	Non-Food	691.337	56,15%
Total		1.231.156	100%

Source: Processed results of research data

Table 3.9 shows that the average total expenditure of lowland rice farmer households in Tategger Village, Angkola Muara Tais District, South Tapanuli Regency is Rp. 1,231,156/month, which includes food expenditure of Rp. 539,819 or 43.85% and non-food expenditures of Rp. 691,337 or 56.15% of total household expenditure, expenditure on food is smaller than expenditure on non-food. Non-food expenditures have greater expenditures than food expenditures. This is because the food needs of the people of Tategger village are mostly met from agricultural and plantation products in Tategger Village. Thus, non-food expenditures are relatively larger than food expenditures for lowland rice farmers in Tategger Village.

3. Rice Farming Business Income

Farmer's income is a measure of income received by farmers which is obtained from the difference between revenues and the total costs that have been incurred in lowland rice farming. In this analysis of lowland rice farming, the income of lowland rice farmers is used as an important indicator to find out whether lowland rice farming is profitable or not. Therefore, for more details regarding the components that determine the income of rice farmers in Tategger Village, Angkola Muara Tais District, South Tapanuli Regency, it will be described as follows:

1.1 Total Cost

Running a farming business requires money. Costs are sacrifices that absolutely must be made or must be incurred in order to obtain a result. The same is true for low-cost rice farming. The costs of lowland rice farming in the study area include the cost of seeds, fertilizer costs, pesticide costs, labor costs, fuel costs and irrigation maintenance costs. For more details on the costs incurred by lowland rice farmers in Tategger Village, see the table below:

Table 3.10 Average Total Cost of Paddy Rice Farming per Farmer in Tategger Village, Angkola Muara Tais District

No	Cost Component	Average Cost
1	Seed Cost	75.357
2	Fertilizer Cost	237.142
3	Pesticide Cost	265.000
4	Labor Cost	265.000
5	Labor Cost	406.875
6	Irrigation Maintenance Cost	10.000
Total		1.249.374

Source: Processed results of research data

1.2 Farming Business Revenue

Revenue is the total production of lowland rice multiplied by the selling price of lowland rice. The size of the revenue obtained from a business is influenced by the size of the production and the prevailing selling price. For more details regarding the average income obtained by farmers in lowland rice farming in the research area, can be seen in the table below:

Table 3.11 Average Rice Farming Business Revenue per Farmer in Tategger Village

No	Description	Value
1	Production (Kg)	2.154
2	Selling Price	4000
Total		8.616.000

Source: Processed results of research data

1.3 Farmer's Income

In farming, a farmer's income is the income received by farmers which is obtained from the difference between the income and the total costs that have been incurred in lowland rice farming. Therefore, for more details regarding the income component of farmers in Tategger Village, it can be described in the following table:

Table 3.12 Average Income of Paddy Farmers in Tategger Village

No	Description	Value
1	receipt	8.616.000
2	Total Farming Cost	1.249.374
Total		7.366.626

Source: Processed results of research data

Table 3.12 shows that the average income of lowland rice farming in Tategger Village, Angkola Muara Tais District is Rp. 7,366,626 per farmer per growing season. Farming income is obtained from the difference between revenue and total farming costs.

4 CONCLUSION

From the analysis that has been done regarding the Exchange Rate Analysis of Rice Farmers in Tategger Village, Angkola Muara Tais District, South Tapanuli Regency, the following conclusions are obtained:

1. On average, the sample farmer exchange rate (NTP) in Tategger Village is 96.87 or less than 100. Thus, it can be concluded that the welfare level of the sample farmers in Tategger Village, Angkola Muara Tais District, South Tapanuli Regency in 2020 is classified as not prosperous yet.
2. Of the 56 sample farmers in Tategger Village, there are 20 samples or 35.71% who have an average Farmer Exchange Rate (NTP) of 201.35, meaning that the sample rice farmers in Tategger Village, Angkola Muara Tais District, South Tapanuli Regency in 2020 are classified as

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Prosperous. And there is only one sample of farmers who have an average, Farmer's Exchange Rate (NTP) of 100.72, meaning that the sample of rice farmers are in a break even condition because the price they receive is the same as the price paid by the farmers.

3. The average income of farmers from lowland rice farming in Tategger Village, Angkola Muara Tais District, South Tapanuli Regency is Rp. 7,366,626 per planting season.

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