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## **VARIOUS SOURCES OF RICE FARMERS INCOME AND ITS CONTRIBUTION TO THE LEBAK SWAMP RICE FARMING HOUSEHOLD INCOME**

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### **ABSTRACT**

Poverty is closely related to the profession of society as a farmer. Many farmers in Indonesia are still low-income and not yet prosperous. Another study states that the variety of farmer's income is one of the factors for the welfare of the farmer's household. Therefore, this study aims to look at the various types of farmers' income sources and their contributions to the lebak swam rice farming household income in Rantau Panjang and Pegayut villages. The results showed that: (1) sources of income for farmers can be classified into several categories, namely, sources of income derived from swampy swamp farming activities, sources of income from non-swamp farming activities (such as gardening of annual crops, fruit or vegetables, sources of income derived from agricultural activities). non-farming and sources of income from family members; (2) From the various sources of income, it is known that the largest contribution to household income comes from lebak swamp farming activities and non-farming activities, each of which provides a moderate contribution of 35%.

### **KEY WORDS**

Source of income, farmer's income, income contribution.

Poverty has always been a major concern in Indonesia (Rahmawati, 2020). Throughout 2021 the percentage of poor people in Indonesia has increased as of March 2021, which is 10.14 percent, or an increase of about 0.36 percent compared to March 2020. The increase in poverty occurs both in urban and rural areas. The data shows that the percentage of poverty in rural areas tends to be higher than in urban areas. To measure poverty, the concept of the ability to meet basic needs (basic needs approach) is used, which refers to the Handbook on Poverty and Inequality published by the World Bank. With this approach, poverty is seen as an economic inability to meet basic food and non-food needs as measured from the expenditure side. A population is categorized as poor if it has an average monthly per capita expenditure below the poverty line.

According to Suryawati (2014) poverty can also be interpreted as a condition of the inability of income to meet basic needs so that it is less able to ensure survival. The ability of income to meet basic needs based on certain price standards is low so that it does not guarantee the fulfillment of quality of life standards in general. Based on this understanding, poverty is generally defined as a condition of the inability of income to meet basic needs and other needs that can guarantee the fulfillment of quality standards of life.

As an agricultural country, poverty in Indonesia is very closes related to farmers. This is also supported by references related to the existing criteria for poor households, which state that farmers with a land area of 500m, farm laborers, fishermen, construction workers, plantation workers and/or other occupations with incomes below Rp 600,000 per month are included in the household category poor. The results showed that the poverty of rice farmers was caused by the mental attitude of the farmers themselves, the lack of agricultural production facilities and the lack of a government incentive system, so that the production and quality of crop yields continued to decline which in turn would lead to low incomes for the farmers. The Secretary General of the National Economic Committee (KEN) Aviliani (2018) also stated that the low level of income of the farmers was due to the low economic level of farming activities.

Suharyanto (2004) argues that farmers' income is generally divided into two meanings, namely: (1) gross income, meaning all farmers' income in farming which can be calculated



from sales which are valued in rupiah based on the price per unit weight at the time of harvesting the results, (2) net income, meaning all income earned minus production costs during the production process. Production costs include the real costs of the means of production. Diversification of income sources of farmer households is one of the factors that can affect the welfare of farmer households. Most commonly, the world's rural poor are concentrated in areas where population density is high and farms are small, growing food crops at a low-to-medium level of intensity. Often, off-farm income represents an important source of household livelihood (Food Agricultural Organization, 2021). Research conducted by Prasetyo (2017) states that in general, the income of lowland agriculture still dominates the contribution of total farm household income (40.85%), but in the higher income class, the contribution of agricultural income is lower. This is also reinforced by the results of research conducted by Bhatti et. al (2021) which states that the diversity of income resources for the farming household community is very important because it can improve livelihood. The welfare of farmers will indirectly affect the reduction of poverty in rural areas (Rahmawati, 2021).

Ogan Ilir Regency is one of the regencies with a low percentage of poor people in South Sumatra Province, which is 13.89% per year 2021. On the other hand, most of the population in Ogan Ilir Regency are farmers. With the description of the background above, the researcher wishes to examine the sources of farmers' income and its contributions to farmers' household incomes.

## METHODS OF RESEARCH

The research aims to analyze the various sources of farmers' income and their contribution to the household income of lebak swamp rice farmers. It was conducted in two villages, namely Pegayut Village and Rantau Panjang. The research activity lasted for one month from April to May 2021. The sampling method used in the study consisted of two techniques, namely simple random sampling and snowball sampling. Simple random sampling method used to determine respondents in the study (Lebak swamp rice farmers spread over two sub-districts of Ogan Ilir Regency). The sample used in the study was 100 people from the total population of rice farmers in the Lebak swamp rice sub-districts of Rantau Panjang and Pegayut. While the snowball sampling method is used as an approach to find key informants (Nurdiani. 2014). Key Informant is an individual who has a lot of information related to the object of the research. The existence of key informants is expected to provide an overview or information about the potential of villages and local wisdom in two sub-districts in Ogan Ilir Regency. The data collection using primary and secondary data. Primary data obtained from the results of surveys and interviews with respondents. While secondary data obtained from various agencies and related literature.

To find out the various sources of income for Lebak swamp rice farmers, it will be explained descriptively. Furthermore, to determine the contribution of each source of income, the following formula will be used:

$$I = \frac{A}{B} \times 100\%$$

Where: I - Side income contribution; A - The amount of side income; B - The amount of total rice farming household income.

There are three criteria in decision making, which are as follows (Fauziah and Soejono, 2019):

- $I < 35\%$ , It means the side income have a low contribution to the rice farming household income;
- $35\% \leq I \leq 70\%$ , It means the side income have a moderate contribution to the rice farming household income;
- $I > 70\%$ , It means the side income have a high contribution to the rice farming household income.



## RESULTS AND DISCUSSION

Lebak swamp farming income is a source of income obtained from farming activities in lowland swamp land. Farming activities in the Lebak swamp are usually consist of rice farming and fish farming activities. For more details, details of costs can be seen below.

Table 1 Fixed Cost of Rice Farming

Tools	Price (IDR)	Age (Year)	Despreciation (IDR)
Hoe	800,000	5	160,000
Sickle	250,000	5	50,000
Matchete	500,000	5	100,000
<i>Penojoh</i>	250,000	5	50,000
Total			360,000

Source: Primary Data, 2021.

Based on Table 1 it can be seen that the total fixed costs incurred by each farmer in rice farming are IDR 360,000 at once production. The biggest expense is on the hoe. Even though there are now many modern tools, the community as lebak swamp farmers still uses hoes in carrying out rice farming activities. Next is a description of the variable costs that exist in lebak swamp rice farming activities. Variable costs are costs that are used up in one production or one planting season for lebak swamp rice farming. Variable costs consist of various kinds, ranging from costs for land rent, use of fertilizers, pesticides and rental of combine harvester machines. For more details on the amount of variable costs can be seen in Table 2.

Table 2 – Variable Cost of Rice Farming

Component	IDR/Year	Average (IDR/year)
Land Rent	366,300,000	3,663,000
Fertilizer	25,325,000	253,250
Pesticide	12,375,000	123,750
Machine Rental	172,575,000	1,725,750
Total	576,575,000	5,765,750

Source: Primary Data, 2021.

Based on Table 2 it can be seen that the total variable costs incurred by all rice farmers in Rantau Panjang Ilir Village are a total of IDR 576,575,000 or the average expenditure of farmers to meet variable costs is IDR 5,765,750. The allocation of the largest expenditure is on land rent. Most of people (farmers) in Rantau Panjang and Pegayut doesn't have much area for farming activities, therefore they need to pay for renting land to carry out rice farming activities. From the details of fixed costs and variable costs above, it can be seen that the total costs incurred by each farmer in carrying out swamp rice farming activities are as follows:

Table 3 – Total Cost of Rice Farming

Component	Total (IDR/Year)	Average (IDR/KK/year)
Fix Cost	-	360,000
Variable Cost	576,575,000	5,765,750
Total		6,125,750

Source: Primary Data, 2021.

Based on Table 3. it can be seen that the total cost incurred by each farmer per year is IDR 6,125,750. This amount of expenditure is considered quite large, because farming activities in the Lebak swamp can only be carried out once a year. Given the swamp conditions that do not allow rice to be planted twice a year.

In contrast to rice farming, fish cultivation costs is cheaper than rice farming cost. It's



because of farmers still use makeshift tools in fish cultivation. In Table 4. it was clearly detailed the amount of fixed costs of fish cultivation. Based on Table 4. it can be seen that the total fixed costs incurred in fish cultivation are IDR 50,000/year. The use of nets is one of the local wisdoms still used by local people to carry out fish farming activities in the Lebak swamp land. The use of nets is usually combined with bamboo to make a lebak lebung framework.

Table 4 – Fixed Costs of Fish Cultivation

Tool	Price (Rp)	Age (year)	Despreciation (Rp/year)
Net	100,000	2	50,000
Total			50,000

Source: Primary Data, 2021.

After knowing the amount of fixed costs, then calculate the amount of variable costs. Variable costs incurred by farmers are generally only in the form of feed. For details, see Table 4. below. Based on Table 5 below, it is known that the amount of variable costs incurred by each farmer to carry out fish cultivation activities in lebak swamp land is IDR 220,000.

Table 5 – Variable Cost of Fish Cultivation

Component	Rp/KK/year
Fish Feed	220,000
Total	220,000

Source: Primary Data, 2021.

Based on the available data relating to the details of the fixed costs and variable costs of fish farming activities in the Lebak swamp land, then it can be seen the details of the total expenses that must be incurred by farmers for a year to carry out fish farming activities in the Lebak swamp land. The following details can be seen in Table 6. below:

Table 6 – Total Cost of Fish Cultivation

Component	IDR/KK/Year
Fix Cost	50,000
Variable Cost	220,000
Total	270,000

Source: Primary Data, 2021.

Based on Table 6. it can be seen that the total cost incurred in carrying out fish cultivation in Rantau Panjang Ilir Village is IDR 270,000 per year. The total costs incurred tend to be very cheap when compared to rice farming activities. In reality, fish cultivation activities are not the main activity for farmers' livelihoods. It is only a side activity or a side business to meet household needs, because in certain months the swamp land will be flooded so that farmers cannot do rice cultivation.

The next step is calculate lebak swamp farming income, it can be seen in detail about the amount of lebak swamp farming revenue in Rantau Panjang Ilir Village in Table 7.

Table 7 – Lebak Swamp Farming Revenue

Revenue	Total (IDR/Year)	Respondent	Average (IDR/KK/Year)
Rice Farming	1,069,650,000	100	10,696,500
Fish Cultivation	19,080,000	20	954,000
Total	1,088,730,000		10,887,300

Source: Primary Data, 2021.



Based on Table 7. it can be seen that the total revenue from the lebak swamp farming in Rantau Panjang Ilir Village is Rp. 1,088,730,000 per year. This amount is obtained from the total revenue from rice farming and fish cultivation. The total income from rice farming itself is IDR 1,069,650,000 per year or IDR 10,887,300 (KK/year). This result is obtained from the result of multiplying the total rice production by the selling price. The total rice production of farmers in Rantau Panjang Ilir Village is about 23,770 cans with the selling price per can of IDR 45,000. One can is equivalent to 16 kilograms of grain. However, if it has been ground into rice, then one can is equivalent to 11 kilograms of rice. In Rantau Panjang Ilir Village, farmers sell their crops in the form of grain, not in the form of rice. Meanwhile, the total revenue from fish farming is IDR 19,080,000 per year. The amount of fish farming revenue is less than rice farming because not many farmers are doing fish farming. After receiving farming results obtained, the next step is to calculate farm income. For more details, see Table 8.

Table 8 – Lebak Swamp Farming Income

Component	Expenditure (Rp/kk/year)	Revenue (Rp/kk/year)	Income (Rp/kk/year)
Rice Farming	6,125,750	10,696,750	4,570,750
Fish Cultivation	270,000	954,000	684,000
Total	6,395,750	11,650,500	5,254,000

Source: Primary Data, 2021.

Based on Table 8. above, it can be seen that the average total income of farmers from lebak swamp business in the form of rice farming and fish farming activities is IDR 5,254,000 per year. The largest contribution is still sourced from the lebak swamp rice farming activities.

Non-swamp farming income is income derived from farming activities but not on low-swamp land based. Based on the results of research in Rantau Panjang Ilir Village, non-swamp farming activities that are mostly carried out by farmers are rubber, key oranges, oranges and *embam* farming activities. This activity is not the main farming activity, it is because the main farming activities are in the swampy areas of Lebak with rice cultivation. So it causes non-swamp farming income obtained also not large. In Table 9. it can be seen that the total income of non-swamp farming in Rantau Panjang Ilir Village can be seen.

Table 9 – Non-Swamp Farming Income

Component	Total (IDR/year)	Average (IDR/kk/year)
Rubber	40,200,000	402,000
Orange	45,000,000	450,000
Embam	10,800,000	108,000
Key Citrus	4,200,000	42,000
Vegetable (Tomatoes, Eggplants, Long Beans)	2,400,000	24,000
Total	102,600,000	1,026,000

Source: Primary Data, 2021.

Based on Table 9. above, it can be seen that the total income of non-swamp farming in Rantau Panjang Ilir Village is IDR 102,600,000/year or an average of around IDR 1.026,000/family/year by the total income, citrus plantations have the highest total income, which is IDR 45,000,000. While the lowest income is obtained by other income such as vegetable gardens which is IDR 2,400,000. The total income of non-swamp farming in Lebak is not greater than the total income of rice farming. This is because rice farming is the main farming activity in Rantau Panjang Ilir Village.

Non-farming income is income derived from non-farming activities such as laborers, civil servants (PNS), traders, household assistants, and village officials. In Rantau Panjang Ilir Village, non-farming activities carried out by farmers are trading, daily labor and net bracelet makers. They carry out non-farming activities in order to increase their income. The total non-farming income in Rantau Panjang Ilir Village is IDR 527,640,000 per year. The



average non-farming income earned by farmers is IDR 5,276,400 per head of family per year. The amount obtained is greater than the total income of rice farming. It is because farmers only sell part of the harvest. While the rest of the rice is for personal consumption. So, to buy other household needs, farmers get money from non-swamp farming activities and non-farming activities.

Household income is the income earned by one family which in this case is the sum of the income of lowland swamp farming, non lebak swamp farming income, and other income such as dependent income. Based on the data in Figure 1, it is known that most of the contribution of household income comes from farming and non-farming activities. Farming activities include rice and fish cultivation, while non-farming activities include civil servants, traders, household members and village officials. The total income of farmer households in Rantau Panjang Ilir Village can be seen in detail in Figure 1. below:

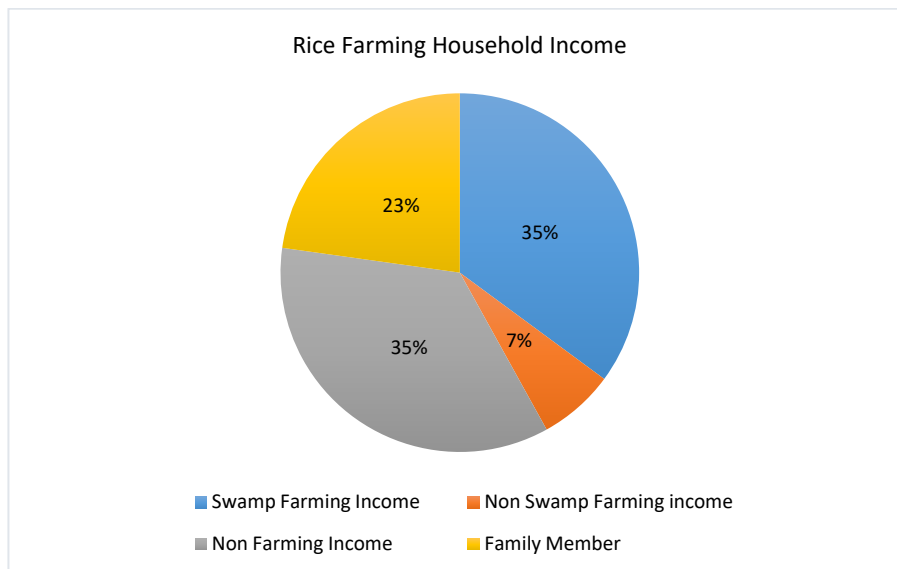


Figure 1 – Source Income Contribution (Source: Primary Data, 2021)

Based on the data in Figure 1. Above, indicating that most of the household income contribution comes from outside rice farming activities. The income consists of non-farm income from lowland swamp farming, non-farming income and other family members' income. It is important for farmers to have other sources of income because the results obtained from rice and fish farming activities in the Lebak swamp land have not been able to meet the needs of farmers' households. It is also important to improve the welfare of farming families.

## CONCLUSION

Based on the results of the research that has been done, it can be concluded into several things as follows:

1. All lebak swamp rice farmers in Pegayut and Rantau Panjang villages have a variety of jobs outside of farming activities. Various sources of income for farmers' households include the following: fish farming, non-swamp farming activities (such as rubber, vegetable and fruit gardening) as well as other activities outside of farming such as working as daily laborers, trading and working as civil servants (civil servants). Various activities are carried out by farmers with the aim of increasing household income, because income from rice farming activities alone has not been able to meet the needs of farmer households;
2. The contribution of farmers' income outside of swamp farming is still greater than the contribution of swamp farming income (rice and fish) this is due to the situation and condition of swamp land which can only be planted with rice once a year.



## REFERENCES

1. Badan Pusat Statistika. 2021. Berita Resmi Statistik. <https://www.bps.go.id/brs.html> (Diakses pada Tanggal 1 Desember 2021).
2. Badan Pusat Statistika Sumatera Selatan.2021. Persentase Penduduk Miskin per Kabupaten Tahun 2009-2021.
3. Bhatti, et.al. 2021. Diversity of Sources of Income for Smallholder Farming Communities in Malawi: Importance for Improved Livelihood. Sustainability. Vol (13).
4. Fauziah, F.R., dan Soejono, D. 2019. Analisis Pendapatan Usahatani Jamur Merang dan Kontribusinya terhadap Pendapatan Rumah Tangga Petani Di Kelurahan Sempusari Kecamatan Kaliwates Kabupaten Jember. SEPA, 15 (2), 172-179.
5. Food Agricultural Organization.2021. <https://www.fao.org/3/y1860e/y1860e11.htm> (Diakses pada tanggal 29 November 2021).
6. Liputan 6. 2013. (Artikel) Kenapa Petani Indonesia Berpenghasilan Rendah. Sumber: <https://www.liputan6.com/bisnis/read/766442/kenapa-petani-indonesia-berpenghasilan-rendah> (Diakses pada tanggal 8 Desember 2021).
7. Suharyanto. 2004. Analisis Pendapatan dan Distribusi Pendapatan Tanaman Perkebunan Berbasis Kelapa di Kabupaten Tabanan. Jurnal pengkajian dan Pengembangan Teknologi Pertanian. Puslitbang Sosial Ekonomi Pertanian. Bogor.
8. Suryawati. 2004. Teori Ekonomi Mikro. UPP. AMP YKPN. Yogyakarta: Jarnasy.
9. Prasetyo, D. 2017. Kontribusi Keragaman Sumber Pendapatan Petani Terhadap Total Pendapatan Rumah Tangga Petani di Desa Banjararum Kecamatan Kalibawang.
10. Rahmawati, R. 2020. Pengaruh kesejahteraan petani Terhadap Kemiskinan di pedesaan. JIEP-Vol. 20, No 1.