

# ANALYSIS OF FACTORS INFLUENCING LABOR IN FLOATING RICE FARMING IN PEMULUTAN ILIR VILLAGE, PEMULUTAN DISTRICT, OGAN ILIR REGENCY

Eka Mulyana 1\*, Sriati 2, M.Yamin 3, Yunita 4

Doctor of Agricultural Sciences Program Students, Faculty of Agriculture,
Universitas Sriwijaya, Indonesia
eka.agri@gmail.com, sriati@unsri.ac.id, yaminsepunsri@yahoo.com
fathursyifa.nita@yahoo.co.id
\*Corresponding author: eka.agri@gmail.com

### **ABSTRACT**

This research is an observation of local wisdom that focuses on floating seeding and examines the factors that affect the outpouring of labor. This analysis uses the independent variables consisting of age, education level, farming experience, and land area, and the dependent variable consists of the outpouring of labor in rice farming. This research was conducted from January to February 2022 with the research sample in the form of rice farmers with a floating seeding system in Pemulutan Ilir Village. Sampling was carried out on 40 research respondents using the snowball sampling method through interviews with the help of a questionnaire. Data analysis was assisted by using the Excel application and SPSS version 25. The results obtained were: (1) local wisdom in rice farming was still present at the stage of land processing, seed procurement, planting, maintenance, and post-harvest, while at the harvest stage, it was no longer available as well as local wisdom using the floating seeding method by utilizing the surrounding natural resources known as "berondong" as a raft and "reamun" as a planting medium; (2) the outpouring of labor used for rice farming is more dominant from outside the family; and (3) the factors that influence the outpouring of labor are age, farming experience, and land area, while the level of education has no significant effect.

Keywords: Factors Affecting, Floating Seeding, Local Wisdom, Outpouring of Labor

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#### INTRODUCTION

One of the food commodities which is the main focus in the agricultural sector is rice. To meet the food needs of various regions in Indonesia, rice is planted, one of which is South Sumatra. South Sumatra is the highest rice producer compared to other Sumatran provinces in Indonesia, namely in 2020, with a rice harvest area of 551.32 thousand ha resulting in total rice production of 2.74 million tons of GKG out of Indonesia's total rice production of 54.65 million tons of GKG from the total area of paddy land reaching 10.65 million ha (Central Agency Statistics, 2020), especially for Ogan Ilir district, which has 16 districts with a harvested area of 53,127 ha and a total production of 205,591 tons/year. Out of a total of 16 sub-districts, there is the Pemulutan sub-district which is one of the sub-districts for withdrawing the yield of Lebak Swamp rice, with the area of rice land in the Pemulutan sub-district in 2019 being 8,605 ha with a total production of 33,930 tons/year (Central Agency Statistics, 2020).

In processing rice fields in rural areas, there is a treatment that farmers always apply in cultivating their farming business from ancient times, and this has become a habit of the surrounding community in cultivating their agricultural land; this habit that is always applied can be called local wisdom. According to (Ridwan, 2016), Local wisdom is the knowledge owned by the community, which is applied as a science for survival. In the neighborhood, by bringing together various aspects ranging from beliefs, norms, and culture. Local wisdom can solve the problems faced in fulfilling people's daily needs by protecting the surrounding environment from the threat of damage. Management of agricultural land based on local wisdom is mostly still widely used by the rural community because of the inherent nature of the villagers, namely upholding the values of past customs and traditions, besides that local wisdom is needed by the community so that the community has an understanding that management in the agricultural sector does not need to destroy nature following the teachings of the ancestors regarding the preservation of nature to maintain balance in the future.

Proper processing of land in farming is necessary, but other factors must also be focused on because they are directly related to rice production. Meanwhile, this factor is labor because labor is the rice harvester itself, so the use of labor must be done appropriately; this is following the opinion of (the Central Statistics Agency, 2015) namely, the allocation of farm labor is important for discussed because 48.23% of the total cost of farming is used for labor costs. Allocation of working time is spent working by farmers and families in productive activities for rice farming and other activities. (Baruwadi, 2012). The outpouring of labor is the effective labor used in running a business. When farming, factors affect the outpouring of labor, such as age, work experience, land area, and so on (Utami, 2015).

Pemulutan Ilir village is one of the villages in the Pemulutan sub-district; in this village, there is an interesting local wisdom to observe, namely rice farming that uses a floating system in its use. Based on the description, researchers are interested in doing a study with the subject matter of "Analysis of Local Wisdom-Based Rice Farming Labor with Floating Seedlings in Pemulutan Ilir Village, Pemulutan District, Ogan Ilir Regency."

Based on the description of the background above, it can be taken several formulations of the problem in the research as follows:

What local wisdom exists in rice farming with floating seeding in Pemulutan Ilir Village, Pemulutan District, Ogan Ilir Regency? How much is the outpouring of labor in rice farming with floating seeding in Pemulutan Ilir Village, Pemulutan District, Ogan Ilir Regency? What factors can affect the outpouring of labor in rice farming with floating seeding in Pemulutan Ilir Village, Pemulutan District, Ogan Ilir Regency?

Identifying the local wisdom of rice farming by floating seeding in Pemulutan Ilir Village, Pemulutan District, Ogan Ilir Regency, Knowing how much labor is expended in rice farming by floating seeding in Pemulutan Ilir Village, Pemulutan District, Ogan Ilir Regency,

Knowing what are the factors that influence the outpouring of labor in farming paddy with floating seeding in Pemulutan Ilir Village, Pemulutan District, Ogan Ilir Regency.

It is hoped that it will be useful for the government and agencies as material for consideration in making policies related to employment and floating seeding in Pemulutan Ilir Village, Pemulutan District, Ogan Ilir Regency, As a source of information for similar research and as a basis for carrying out similar research in a wider scope and benefit the community, As knowledge and experience for writers as well as one of the requirements to obtain a bachelor's degree in the Faculty of Agriculture, Sriwijaya University.

The approach model used in this study is a diagrammatic approach model, which can be seen in Figure 1. The following:

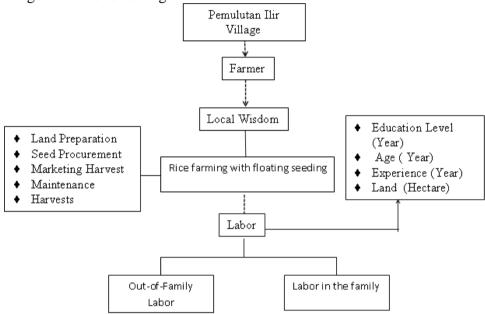


Figure 1. Research Approach Model Description

Yonada Nadia's research (2020) states that several factors influence the outpouring of labor in rice farming, including age, education level, and arable land area, with the results of the coefficient of determination test showing the R value2 from the regression model 0.707 so that these factors affect the time spent working women farmers by 70.7 percent. At the same time, the remaining 29.3 percent is influenced by other variables outside the model. The results obtained for each independent variable, namely the level of education, has a regression coefficient value of 10.779, meaning that each time there is an increase in the average level of education, it will increase the outpouring of farm household labor by 10.779 HKSP. Furthermore, the arable land area variable has a regression coefficient value of 30.652, which means that every time there is an increase in the average arable land area, it will increase the outpouring of farmer household labor by 30.652 HKSP. Finally, the age variable has a regression coefficient of -2.948, which means that every one percent increase in the average age will decrease the farm household workforce by 2.948 HKSP.

Research by Rosalina Berliani (2017) shows that work experience and land area affect the time spent working. First, to acquire skills, you must be armed with experience so that the more experienced you are, the more time you spend working. Likewise, the land area because the higher the land area, the higher the outpouring of working time. Although age and education factors do not dominantly affect the research above, according to (Ukkas, 2017), this factor is influential because the level of education is needed to form quality human

resources as well as age. After all, age is a factor that is closely related to workability in carrying out farming activities so it can affect the amount of labor devoted.

Based on this description, the hypothesis put forward in this study is that it is suspected that the factors of age/education level/work experience/land area have a significant effect on the outpouring of labor in rice farming with floating seeding. Simultaneously the outpouring of labor in rice farming with floating seeding.

### **METHODS**

This research was conducted in Pemulutan Ilir Village, Pemulutan District, Ogan Ilir Regency. With the implementation time being carried out from January 2023 to February 2023. The location selection was deliberately (purposive), considering that the location has agricultural land that cultivates rice commodities by floating seeding.

The method used in this research is a survey method; this method is used to obtain data from farmers where the data represents the area to be studied; this method is carried out by interacting directly with the observed object. The research was carried out by conducting interviews with respondents in Pemulutan Ilir Village and giving questionnaires that contained questions used as a data collection tool to obtain data and information regarding local wisdom and the outpouring of labor in rice farming with floating seeding.

The sampling method used in this study uses nonprobability sampling, i.e., the sampling technique is not randomly selected. The method used in sampling is snowball sampling or the snowball sample, which is a sample determination technique that initially has a small number. This sample chooses its friends to be sampled, and so on, so that the number of samples becomes large. The researcher informed the main sample about the characteristics of the respondents needed so that the main respondent could direct the researcher to the next respondent according to the desired characteristics, namely rice farmers who carry out their rice farming by floating seeding. This continues until the researcher gets the number of respondents according to the researcher's needs.

The research sample required is as many as 40; the number of samples specified uses the rule of thumb or general rules that meet the requirements, namely a minimum sample size of 5-10 times the studied or independent variables (Murti, 2010).

The data used in this study are primary data and secondary data. Primary data is data obtained directly from sources related to the problems to be examined through interviews or filling out questionnaires.

This research's secondary data is obtained from various literature, the results of previous research, and related institutions. Examples of sources used, such as the Central Bureau of Statistics to obtain information regarding the area of paddy fields and their productivity.

Data obtained from the field were processed in tabulation to be analyzed systematically and explained descriptively with the help of Microsoft Excel 2013 and SPSS programs (Statistical Package for Social Science) Version 25. To answer the first problem, namely identifying local wisdom in rice farming with floating seeding from the beginning of land management, seed procurement, planting, maintenance, and harvesting, up to post-harvest. The process of obtaining this data uses descriptive analysis based on a questionnaire given to respondents and also asks for key information, namely the head of the village and the chairman of the village Gapoktan polling Illyrian.

To answer the second problem, namely calculating how much labor is spent on rice farming by floating seeding in Pemulutan Ilir Village, can be answered using the following formula (Hernanto, 1991; Kautsar, Ifrad A. 2018):

 $\sum$  labor  $\mathbf{x} \sum$  work hour  $\mathbf{x}$ 

b0 = Intercept or constant

b1-b4= Interpreter regression coefficient from  $X1 - X4 \epsilon$  =Error

The use of multiple linear regression analysis methods requires classical assumptions which statistically must be met. Processing techniques in this study, namely: The classical assumption test is a statistical test requirement that must be met first in linear regression analysis. The model in this study must be free from classical assumptions, namely normality, multicollinearity, heteroscedasticity. In this research, the classical assumption test is

 $HKP = \sum work hour \mathbf{x} type of workforce$ 

Standard working hours

As for standard working hours, the following are used (Ghozali, Imam. 2011):

The normality test was carried out to have a value of 7 hours. Meanwhile, labor conversion is carried out by comparing the male workforce as a standard measure and other types of workforce converted or equated with men, namely: 1) male workforce has a value of 1 Men's Work Day (HKP); 2) female workers have a value of 0.8 HKP; and 3) machine labor has a value of 3 HKP. (Aswar, 2021).

To answer the third problem, analyze the influence of the factors that influence the outpouring of labor, namely the farmer's age, level of education, work experience, and land area in rice farming using floating seeding using multiple linear regression analysis. Multiple linear regression analysis is used to determine the magnitude of the influence between the independent and dependent variables, the positive or negative relationship between each independent variable, and predict the value of the independent variables. In the multiple linear regression analysis, the dependent variable (Y) is labor outpouring. While the independent variable (X), namely the age of the farmer (X1), level of education (X2), work experience (X3), and land area (X4). The multiple linear regression equation used is:

Y = bO + b1X1 + b2X2 + b3X3 + b4X4 + e

Information:

Y = Outflow of labor (HOK)

X1 = farmer's age (years)

X2 = Education level (Year)

X3 = Work Experience (Years)

X4 = Land area (Ha)

Test whether the residuals (confounding variables) studied are normally distributed. A good regression model is to have a residual value distributed normally. The method used to detect whether the residuals are normally distributed can be done by graphical analysis and statistical tests. On chart analysisNormal P-Plot Test, the residuals are normally distributed if the points follow the diagonal line. From the statistical test with the test Kolmogorov Smirnov, if the sig value <0.05, then the data distribution is not normal; if the sig value>0.05, then the data distribution is normal. Residual normality tests with graphs can only be accurate if one is careful. Visually it looks normal, but statistically, it could be the reverse. Therefore, in addition to using a graphic test, it should be equipped with a statistical test.

The multicollinearity test is used to see whether or not there is a high correlation between the independent variables in a multiple linear regression model. If multicollinearity is high among the independent variables, then the relationship between the independent and dependent variables is disrupted. No symptoms of multicollinearity characterize a good regression model. To find out the results of the multicollinearity test can be seen from the values tolerance and VIF values. With the decision rule, multicollinearity occurs if the value tolerance  $\leq 0.10$  and the VIF value  $\geq 10$ . Otherwise, if the value tolerance  $\geq 0.10$  and the VIF value  $\leq 10$ , then multicollinearity does not occur.

The heteroscedasticity test is used to determine whether there is an unequal residual deviation value due to the size of the value of one of the independent variables. If the

residuals have the same variance, there is homoscedasticity, and if the variances are not the same, there is heteroscedasticity. A good regression equation is if there is no heteroscedasticity. The analysis of the heteroscedasticity test can be seen from the results of the SPSS output via graph scatterplot Antara Z Prediction (ZPRED) for the independent variable, and its residual value (SRESID) is the dependent variable. Heteroscedasticity occurs if, on a scatter plot, the dots have a regular pattern, either narrowing, widening, or wavy.

Analyzing with graph scatterplot has a significant weakness because the number of observations affects the results plotting. The fewer the observations, the more difficult it is to interpret the scatter plot. Therefore a statistical test is needed to guarantee the accuracy of the results. The statistical test glazes with the decision rule if the Sig value < 0.05, then there is a symptom of heteroscedasticity, and vice versa. If the Sig value is > 0.05, there is no heteroscedasticity symptom.

Multiple linear regression testing aims to see the effect between the dependent and independent variables. Tests in this study through the coefficient of determination test (R2), partial test (t test), and simultaneous test (F test).

The coefficient of determination test (R2) measures the magnitude of the relationship between the independent and dependent variables. The magnitude of the coefficient of determination (R2) has a value between 0 to 1 or 1>R>0. The higher the value of a regression's coefficient of determination (R2) or the closer it is to 1, the better the regression will be. Conversely, if the value of the coefficient of determination (R2) in a regression is smaller, it will make the conclusions from the regression unreliable. Value coefficient determination (R2) is generally written in percent form.

The t-test tests how much influence each independent variable has on the dependent variable. The decision rule based on significant value is: If the significance value is less than the error rate (0.05), it means that the independent variable has a significant effect individually on the dependent variable; if the significance value is more than the error rate (0.05) it means there is no real influence or not significant on the independent variables individually to the dependent variable.

The decision rule is based on t-count and t-table values, namely: If t-count <t-table, then Ho is accepted and Ha is rejected, meaning that individually the independent variables have no significant effect on the dependent variable; if t-count> t-table, then Ho is rejected and Ha accepted, meaning that individually the independent variables have a significant effect on the dependent variable.

The F test is used to test the significance of the overall effect of the independent variables (X) on the dependent variable (Y). The decision rule based on significant value is: If the significance value is less than the error rate (0.05), it means that together the independent variables have a significant effect on the dependent variable; if the significance value is more than the error rate (0.05) it means together the independent variable has no significant effect on the dependent variable.

The decision rule is based on the value of f-count and f-table, namely: IfF Count > F Table ( $\alpha = 0.05$ ), then Ho is rejected, and Ha is accepted, meaning together, The independent variable has a significant effect on the dependent variable. IfF Count < F Table ( $\alpha = 0.05$ ), then Ho is accepted, and Ha is rejected, meaning that the independent variables have no significant effect on the dependent variable.

# RESULTS AND DISCUSSION

Characteristics can distinguish a person or a unit from another person or unit. The characteristics of respondents in this study were 40 farmers who carried out rice farming using floating seeding in processing their rice farming. The characteristics of the respondents in this study were classified based on age, education level, farming experience, and land area.

The respondent's age is the age from when the respondent was born until the research was conducted. Age is an important benchmark because age can affect respondents' productivity in farming activities. The age classification is based on (Ministry of Health RI, 2009). The age classification can be seen in Table 1. Below.

Table 1. Respondent Age

Table 1: Respondent rige				
Age Group (years)	total (people)	Percentage (%)		
Late youth (17-25)	0	0,00		
Early adulthood (26-35)	2	5,00		
Late adulthood (36-45)	3	7,50		
Early elderly (46-55)	17	42,50		
Late elderly (56-65)	14	35,00		
Seniors (>65)	4	10,00		
total	40	100,00		

Source: Primary Data, 2022.

Farmers are said to be of productive age when they are 15-50 years old. However, based on the data obtained, non-productive age farmers still continue to do farming. This is done because, in addition to farmers still feeling capable of farming, farmers also need income to fulfill their survival.

The level of education affects a person's mindset in doing his job; the higher the level of education, the better the thinking pattern of that person. The education level of the respondent farmers can be seen in Table 2. The following.

**Table 2. Respondents Education Level** 

<b>Level of education</b>	total (people)	Percentage (%)	
Elementary School	30	75	
Middle/Junior High School	8	20	
Seinor High School	2	5	
Amount	40	100	

Source: Primary Data, 2022

Based on Table 2. The most dominant level of education is at the elementary school (SD) level, with a total of 30 people, with a percentage of 75 percent. With the results obtained, the level of education in Pemulutan Ilir village is still in the fairly low category, with the results proving that more than half have basic education. Even so, all respondents still go through the stages of education.

Farming experience affects the speed and quality of farming done. The farming experience of the respondents can be seen in Table 3. The following.

**Table 3. Respondent's Farming Experience** 

Farming Experience (Years)	total (people)	Percentage (%)
1-15	5	12,50
16-30	14	35,00
31-45	17	42,50
46-60	4	10,00

Amount	40	100,00
	Source: Primary Data, 2022	

Based on Table 3. The study results show that the farming experience is quite high because most of the respondents' farming experience is at 31-45 years old. Farmers with high experience are quite good at organizing and managing farming activities. In my opinion (Eka & Ismail, 2017), the more experienced a farmer is in farming, the higher his expertise in farming will be.

Land area is the area of land that farmers do in farming. The following is the respondent's land area which can be seen in Table 4. The following.

Table 4. Respondent's Land Area

Land area (Ha)	total (people)	Percentage (%)	
0,5	5	12,50	
1,0	19	47,50	
1,5	3	7,50	
2,0	10	25,00	
2,5	1	2,50	
3,0	2	5,00	
total	40	100,00	

Source: Primary Data, 2022

Based on Table 4. Stated that the largest respondent's land area was 1 hectare, totaling 19 people with a percentage of 47.5 percent. If seen from the research results for land ownership, most farmers own their land compared to farmers who rent land. This land lease system is paid in various ways; some use a profit-sharing system, namely from the harvest obtained, and some pay land rental fees in the form of money.

Pemulutan Ilir village is one of the villages in which many farmers focus their income doing rice farming for their daily needs and the survival of their families. The head of the family relies on the rice harvest, and side jobs accompany some because more than the main job is needed; one of the side jobs is being a fisherman.

In carrying out rice cultivation, farmers still apply traditional methods at several stages of their rice farming, and this method has become a hereditary habit that has been applied by previous ancestors or known as local wisdom. The local wisdom contained in Pemulutan Ilir village is adapted to the area's conditions, namely the lebak swamp land side by side with the river. The local wisdom in rice cultivation can be seen in Table 5. The following.

Table 5. Local Wisdom of Rice Farming in Pemulutan Ilir Village.

Stages / Process	Description of Local Wisdom
Land Processing	Starting processing by looking at natural signs, Doing mutual cooperation, Cultivating the land with the help of simple tools such as hoes and sickles.
Seed Procurement	Using seeds from previous crops, Using the floating seeding method with popcorn and reamun

Planting	Using a transplanting system and done manually, namely with the help of simple tools such as Tunjam.
Maintenance	Cleaning of weeds and pests using traditional tools such as sickles and use of ingredients/traditional methods created by farmers.
Harvest	Doing the harvest yourself using traditional tools in the form of sickles.
Post-harvest	Sell the harvest directly in the form of wet/dry grain to middlemen/collectors and set aside some/sufficiently for personal consumption

Source: Primary Data, 2022

Land processing is the initial stage in conducting rice farming. Local wisdom in land management is found at the beginning in determining when to do land processing. Before carrying out land management, farmers first look at natural signs, namely based on water intensity. If the water has stayed mostly the same up and down, it can be concluded that the water is in a stable condition, and it can be determined which month the planting season will take place. So land management is adjusted based on the planting season that will be carried out; when the planting season has been set, then farmers will carry out land processing.

In addition, farmers also carry out processing with the help of traditional tools such as hoes and machetes but only in part of the process because this method is efficient; because of that, many farmers have switched to using machines because they are declared more efficient for farmers. The machine in question is a tractor and hand Traktor, known as a joinder, in the village of Pemulutan Ilir. Some of these machines come from private ownership, but only certain groups own them, and some rent and use them. Most farmers rent machines to cultivate their agricultural land. As for machine rental, it comes from a rice milling company located not far from the village.

Local wisdom in cooperation paid by labor in the village has stopped, more or less, since 2000. Before 2000, farmers implemented a rotational system. For fees or wages given by farmers, the land owner only needed to prepare food in the form of snacks and drinks to be consumed during rest hours and afterward provide energy by helping on the next field until all the farmer's land had been processed. However, this is no longer implemented because it has switched to using machines in the form of tractors. If farmers need other people's labor to carry out the processing, they must provide wages. Therefore most farmers use machines instead of paying wages whose costs are similar; however, they have different efficiency levels.

Procurement or preparation of seeds is an important stage in conducting rice farming; the seeds used will affect the rice seeding process, directly affecting the yields obtained. In selecting seeds, farmers choose the best rice seeds, usually seen from the density of the rice; namely, paddies that contain rice are often chosen by farmers to be used as seeds. As for the procurement of seeds by farmers, there are 2 ways, namely the first method is directly spreading on the seeding media, namely floating seeding, and the second method is seeding from previous harvests; the best is selected, and germination is carried out, namely through seeds soaked 2-3 days. Soaking is done to determine the quality of the seeds taken; if the seeds float, then the quality is not good, and the seeds that sink are used for seeding because

the seeds are denser and of better quality. After that, the seeds are soaked, removed, and left at room temperature under closed conditions for about 4-5 days until the seeds germinate. Local wisdom or the method used for a long time in procuring seeds in Pemulutan Ilir village is that farmers use previous harvests as seeds for the next planting season.

The previous harvest is stored in sacks and will be used in the next planting season. Although most farmers in Pemulutan Ilir village use seeds from previous crops, some farmers still choose to buy new seeds. Farmers who bought new seeds had their reasons; some of them said that the seeds from the previous harvest were not sufficient for the needs of their land, and some said that the yields using new seeds were better than using rice seeds from the previous harvest and farmers who chose to buy new seeds as seeds for further planting come from groups of farmers who have more costs. Meanwhile, the size of the seeds to be used is expressed in cans, namely 1 can of  $\pm$  10-12 kg. If seen from the type of rice in Pemulutan Ilir village, farmers use two types of rice, namely IR 42 and Serang rice.

Planting is the stage after seeding is done. Local wisdom at this stage is transplanting with simple tools known as Tunjam. Tunjam is is a tool used by farmers to make it easier to put rice seeds that have been sown into agricultural land. Usually, rice farmers use tools to help her in planting rice seeds. The difference between the tools is sharp and the characters, which is Tunjam has a sharper side making it easier for farmers to put rice seeds into the muddy soil.

Meanwhile, this replanting was carried out considering that the farmer's land is a swampy area where the water conditions are relatively high and can cause the seeds to be washed away by water if spread directly on the land and can cause failure. If you look at the planting process, the seeds ready for planting that have gone through the seeding process are transferred to the fields with the assistance of Tunjam to put rice seeds into the lebak soil as for the spacing of the plants, most farmers use the size of their fingers, known as kilanan. The distance between these rice plants is around 25-30cm.

Maintenance needs to be done so that the maximum yield is obtained. Paddy maintenance is focused on pest control and fertilization stages. Local wisdom in Pemulutan Ilir village has almost disappeared because most farmers have used chemicals in their land management by spraying and administering poison to control weeds and pests. Usage Farmers consider this chemical more efficient in terms of time and effort to maintain it. Farmers who use chemicals to control their pests usually use a tandem fungicide. Farmers use the fungicide Tandem to control diseases, and it is also said to be able to fertilize plant rice so that rice plants can grow well.

However, even so, local wisdom is still inherent in the village, namely at the pest control stage. Control of these pests using special methods or ingredients created by farmers. Local wisdom in Pemulutan Ilir village is found in animal control through snails and rats. Control for snails is approximately when the rice is about ½ month old; the farmer makes a concoction in the form of mixing soap and gasoline, which is spread on the land; after that, the farmer sprinkles rice bran to lure the snails, and when the snails eat the bran, the snails will die because the snails are also eaten by the herb soap and gasoline mixed with the bran. Besides that, there is also local wisdom in animal control in the form of rats. The local wisdom is that farmers take the afterbirth of a cat that has just given birth, then dry it and mix it with the rice seeds to be used. Trusted farmers and farmers say that rats are identically afraid of cats, so this implementation is required so that mice do not bother agricultural land.

If you look at the fertilization process, farmers no longer use animal dung that is processed by themselves to be used as fertilizer because, in Pemulutan Ilir village, there are no livestock such as cows and buffalo. If they use organic fertilizer, farmers say that the costs incurred will be more expensive because they must buy organic fertilizer that is ready to be used for land. So farmers apply fertilization using chemicals such as pearl NPK fertilizer.

Farmers widely use pearl NPK fertilizer to produce fertile plants and can accelerate crop yields. Its application can be made in two ways: the first is directly sprinkled, and the second is diluting it using water. Most of the fertilization in Pemulutan Ilir village was carried out 1 time of fertilization, and only farmers with more costs did 2 times fertilization.

Harvesting is the stage of taking rice yields. The harvest stage is the stage that farmers have been waiting for because, at this stage, farmers can enjoy the results of the hard work that has been given. Based on the results of research on local wisdom in the form of manual harvesting with a cooperation system, it is no longer applied in Pemulutan Ilir village because all research respondents have used tools Combine Harvester or the designation used in the village is laser; a rice mill company rents out this machine. Machine Combine This is preferred by farmers because, in addition to being efficient in time, the results obtained are more collected cleanly and maximally because when compared to manually using sickles, much grain obtained will be wasted during the harvest process even though in its use farmers have to pay rent for machines, and if you look at the yields, farmers will receive results in the form of sacks where the size of 1 sack of rice is equivalent to 10 kg.

Post-harvest is the last stage in farming. The local wisdom contained in the post-harvest stage is that farmers in Pemulutan Ilir village sell their crops in the form of unprocessed wet unhusked rice and sell it to a rice milling company which acts as a machine tenant as well as a collector trader where the sales proceeds obtained are deducted later to pay the rental fee. The machine so that farmers have to wait for the results. However, some farmers sell dry unhulled rice because the selling value of dry unhusked is higher than wet unhusked. However, farmers must make the extra effort to dry the grain first. The crops are sold in units' pic which is equivalent to 1 kg. Besides being sold, farmers also save for daily consumption; most farmers save for personal consumption as much as ½ ton of the total crop they get. However, this cannot be used as a benchmark because farmers save for personal consumption according to the needs of family members. Local wisdom, such as thanksgiving, is no longer applied in this village, but some farmers still do it for alms, and the amount given depends on the individual farmer.

Floating seeding is one of the local wisdom farmers in Pemulutan Ilir village still use. The community has applied this floating seeding for a long time to adjust the lebak swamp land, which has unpredictable water conditions, and rivers and tributaries around agricultural land, which can cause erratic annual flooding. For small farmers in Pemulutan Ilir village, it is impossible to manage water due to annual flooding that occurs on the land, so farmers cannot sow seeds directly on the land. If they do their farming, farmers will be at risk of experiencing seeding failures because they are submerged and drifting the seeds. Therefore, this floating seeding method was created to deal with this problem.

Based on the results of the research, farmers in Pemulutan IIir village take advantage of the natural resources around them to make floating seeding media. The plants used for floating seeding are weeds such as swamp grass with a Latin nameScleria poaeformis or known in the village as popcorn as a raft for floating seeding besides that it also uses the help of freshwater algae with a Latin name Hydrilla verticillata or known in the village asreamunas a growing medium. Wild grass plants (Scleria poiformis) which are used as rafts for floating seeding are the main weeds in swamps which have almost no economic value, so growth brondong these are plentiful and easy to find. As for freshwater algae with the Latin name (Hydrilla verticillata) which is used as a floating seeding media is usually used as a place to live by small fish and shrimp. Growthreamun in this village is found in certain areas so when from outside the village want to take ream not allowed by the locals. As for plants popcorn which is used as a raft and reamun for planting media can be seen in Figure 2. Following This.



Figure 2. A) Freshwater Algae (Reamun); B) Swamp grass (popcorn)

Based on Figure 2. The pictures A and B are documentation obtained by researchers in the growing habitat for plants used for making floating seedlings. Figure A is a reamun or can be obtained by farmers from streams near the house and creek on the edge river while for image B is a popcorn taken a little far from the village location and the collection varies, some give wages for taking it popcorn with a price of IDR 30,000/bundle there are also those who take it directly by boat. Use popcorn as a floating seeding raft, there is also another alternative, namely using small bamboo with the Latin name "Bambusoideae" or known in the village as boloh/buluh. This bamboo is woven and made into rafts called as prom but only very few farmers use it prom this is because it is difficult to find small bamboo that is the same size even if a farmer wants to use it prom You have to buy the bamboo first, but the benefits are that farmers can use it prom this as a raft for 2-3 uses. As for the view pro can be seen in Figure 3 The following.



Figure 3. Prompang as an Alternative to Rafts in Floating Seeding

Based on Figure 3 prommade as a substitute popcorn used as rafts for floating seeding. Plant replacement popcorn to bamboo does not interfere with its role as a raft in floating seeding but replacement popcorn with bamboo can reduce the benefits for sowing rice seeds, because of the use of plants popcorn does not hinder rice plants in absorbing water, unlike the case with the sturdy bamboo surface, which limits the movement of rice roots. Besides getting popcorn not that hard to get, fools reason popcorn the growth is a lot and easy to find so it doesn't cost a while fools hard to find and will likely cost money to buy. Whereas for reamun can be replaced with other aquatic plants such as water betel (Peperomia transparent) or in the village known as back and forth.

In making floating seeding, the first thing to do is to make a raft made of woven plants brondong. Leaves from scleria poaeformis arranged in a parallel position. Half of the leaves point in one direction and the other half in the opposite direction. According to Lakitan (2019), the laying of leaves from plant scleria poaeformis done opposite so that the leaf midrib which has a spongy bottom is in the same position on both sides so that the condition of the raft that is made will be balanced. The seeding process can be seen in Figure 4. The following.



Figure 4. A) Removal of seeds after the seeds are scattered; B) Process Tanjar after the seeds are removed

Based on figure 4. Is the final stage of seeding. The first thing to do is to make a raft, after the raft is ready to use and the top is leveled using plants Hydrilla verticillata as the planting medium and then the seeds are sprinkled on it. The process of spreading seeds in floating nurseries in the village is known as guilty. After 20 days, the sown seeds will grow as shown in Figure 4. Part A and in the process reamun as a planting medium, nutrients have been absorbed and integrated with the roots of the rice. After that, proceed like the process in Figure 4. Part B, where the process is known in the village asdance/dance, process Tanja this is done by placing the seeds that have been removed to the edge of the land or the front yard of the house for 20 days so that the seeds are not limited in growth. After going through 40 days, namely 20 days of processing guilty and 20 days processing tanjar, then the seeds with an estimated rice seedling height of 30-50 cm are ready to be planted on agricultural land. The floating seeding has a certain limit to be used, which is approximately 1 month before processing Tanjarand if the transfer process from the floating seeding media has not been carried out for more than 1 month, then the existing seedlings cannot be used for planting because the rafts used in floating seeding are made of plants popcorn will undergo decomposition. However, this rarely happens because farmers pay attention to the water conditions in the field before sowing.

Based on the research, it was found that the reason why farmers still apply floating seeding is because the results of the seeds obtained are bigger and more fertile, besides that the use of the seeds can be half as much as using seeds with other seeding methods. Farmers who use floating seeding can use 5-7 cans of seed while farmers who use other seeding can use 10-15 cans for 1 hectare of land with a can of around 10-12 kg in size. This can happen because the floating seeding is not affected by water hydrology, when the water is rising nursery also will follow the water conditions because it floats. Therefore failure rarely occurs, besides that with floating seeding farmers no longer need to do watering and fertilizing because the seeds can easily absorb water and nutrients from the plants reamun and brondong which is decomposed. Even so, farmers who do floating seeding require extra energy in their

implementation because they have to take the plants they need. After that, farmers also need more energy and time to weave plants that will be used as rafts for floating seeding. Namely age, education level, farming experience, and land area. Before processing the data using multiple linear regression analysis, the classical assumption test is carried out first. The classic assumption test is explained as follows.

The classic assumption test consists of (normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test). However, in this study the autocorrelation test was not used because the research did not use data time series. This is reinforced by Basuki's statement (2015), that the autocorrelation test on non-significant data time series will be useless or meaningless. The classic assumption test is as follows:

The normality test is carried out by means of a graph Normal P-Plot Test and test Kolmogorov-Smirnov. The normality test using graphics in this study can be seen in Figure 5. The following.

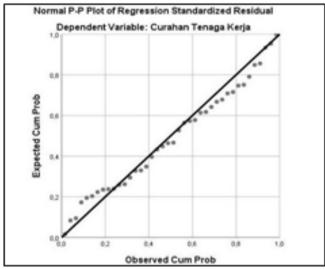


Figure 5. Normality Using the Graphical WayNormal P-Plot Test.

The work time allocation in this study is based on a series of activities, namely the stages of land preparation, seeding, planting, maintenance and harvesting. The outpouring of labor expended by farmers at each stage of activity varies. The stages for the labor allocated by farmers can be seen in Table 6. The following.

Table 6. Outpouring of Rice Farming Labor

	Tuble 6. Outpouring of Rice I arming Lubbi									
		Rice Farming								
Mo	A		TI	KLK			Tl	KDK		
No.	Activity	Male	Female	Machine	HOK/ lg/thn	Male	Female	Machine	HOK/ lg/thn	Total
1.	Land Processing	2,7	0,43	10,59	13,80	1,05	0,45	1,63	3,13	16,93
2.	Seeding	4,35	1,37	0,00	5,72	3,99	1,68	0,00	5,67	11,39
3.	Planting	15,84	7,20	0,00	23,04	1,04	1,08	0,00	2,12	25,16
4.	Maintenance	0,36	0,23	0,00	0,59	1,60	0,57	0,00	2,17	2,76
5.	Harvest	0,00	0,00	8,95	8,95	0,00	0,00	0,00	0,00	8,95
	Amount	23,33	9,23	19,54	52,10	7,68	3,78	1,63	13,07	65,19

Source: Primary Data, 2022 Notes:

# TKLK = Labor Outside the Family; ARDSI = Labor in the Family

Based on Table 6. It can be seen that the use of labor in Pemulutan Ilir Village is divided into male workers, female workers, and machine workers, while there is no child labor because farmers prefer that their children focus on in the field education.

In more detail, in carrying out rice farming at the land processing stage, the use of labor is more dominant assisted by machines such as tractors. This is done because the use of machines is considered to be more efficient in terms of time, so that at this stage it is more dominantly done by machines with a value of 12.22 HOK/lg/year out of a total of 16.93 HOK/lg/year and dominantly done by workers from outside the family Because the tractor that is rented directly together with the person who uses the machine.

Floating seeding requires rafts that need to be woven and more energy to collect wild plants. As for the outpouring of labor for the stages seeding which obtained of 11.39 HOK/lg/year out of a total of 65.19 HOK/lg/year that was poured out. At this stage, many female workers are deployed to do the plaiting of the rafts, while the male workers are more focused on extracting materials that are needed floating seeding. When viewed from the origin of the workforce, more workers come from outside the family, although the ratio is quite thin, namely 0.05 HOK/lg/year.

At the planting stage, male workers dominate because they are considered stronger in terms of stamina, so the process is faster. At this stage, a lot of labor comes from outside the family because the planting process must be done as soon as possible so that the harvest results are obtained simultaneously so that to achieve this, the farmer who cultivates the land hires people to help him complete the planting process quickly. As for this wage, it is paid IDR 30,000/person for both men and women.

At the maintenance stage, farmers do not do it repeatedly, because farmers have used a lot of poisons to control pests and weeds on the land and most of the fertilization is only done once so that at this stage it has the lowest labor outpouring of 2.76 HOK/lg/yr. When viewed from the origin of the workforce, it is more dominantly done from within the family because at this stage farmers and families can still do it.

Finally, the harvest stage, based on the research, showed that the respondents had fully used the machine at the harvest stage so that the results were obtained fully on the use of the machine which is equal to 8.95 HOK/lg/year and on level This is also dominated by workers from outside the family because those who operate the machines come directly from the tenants of the machines.

When viewed from the type of workforce, male workers are more dominant in carrying out rice farming because in Pemulutan Ilir village most of the male workforce focuses on working as rice farmers while women only act as assistants in this rice farming, and for machine power it is only used in the stage of land management and harvesting, but on average each farmer uses it so the value is quite high because it is above the value of female labor but below that of male labor. As for the average, it can be seen in Table 7. The following:

Table 7. Average Outpouring of Labor in Rice Farming

Outpouring of Labor	Rice Farming		
	(HOK/lg/year)	(HOK/ha/year)	
Outside the Family	52,10	39,61	
In family	13,07	11,42	
Amount	65,17	51,03	

Source: Data Primer, 2022

Based on Table 7. The results show that the outpouring of labor from within the family and outside the family has quite a big difference because to be able to adjust the right harvest time, it is impossible for farmers to do their own farming, therefore they need the help of other people.

Analysis of the factors that influence the outpouring of labor in rice farming with floating seeding uses multiple linear regression analysis. The factors studied

Based on Figure 5. It can be seen that the points are scattered and adjacent to a straight line (diagonal). So it can be said that the data is normally distributed. Use of the graphical method Normal P-Plot Test it is possible that researchers experience errors in interpreting the graphs obtained so that to strengthen the results obtained they can use tests Kolmogorov-Smirnov obtained in Table 8 the following.

Table. 8. Normality test by means Kolmogorov-Smirnov

Unstandardized <u>Res</u>	idual	
N		40
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std.	6.96831711
14 - F - D100	Deviation	007
Most Extreme Differences	Absolute	.087
	Positive	.087
	Negative	085
Test Statistic		.087
Asymp. Sig. (2-tailed)		.200 <sup>c,d</sup>

### Test distribution is Normal

Based on Table 8 It can be seen that the value generated by asymp. Sig(2-tailed) is 0.200 which means that the data to be processed is indeed normally distributed. This was concluded according to the statement from Ghozali, Imam (2011), that is, if the value asymp. Sig(2-tailed)  $\geq$  0.05, it can be stated that the data is normally distributed and if asymp. Sig(2-tailed)  $\leq$  0.05 then the data is declared not normally distributed. So it can be concluded that the data is normally distributed.

Test Multicollinearity to detect it can be done by looking at the values tolerance and value VIF. These values are seen in Table 9. The following.

Table 9. Test Multicollinearity with value Tolerance and VIF

Model	Collinearity Statistics		
	Tolerance	VIF	
(Constant)			
age (X1)		.389	2.570
Education Level (X2)		.929	1.077
Farming Experience (X3)		.447	2.236
Land Area (X4)		.815	1.228

a. Dependent Variable: Labor Outflow

Based on Table 9. Value can be seen tolerance in each variable it has a value above 0.10 while the VIF value for each variable has a value below 10. In the opinion of Ghozali,

Imam (2011:107-108), there are no symptoms of multicollinearity, if value tolerance >0.10 and VIF value <10. So it can be concluded that it did not happen on the data to be used.

Heteroscedasticity tests can be done by looking at the test scatterplot and test glazes. As for the test scatterplot can be seen in Figure 6. The following.

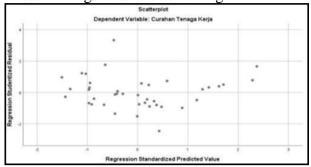


Figure 6. Test Heteroscedasticity Use Scatter Plot

Based on Figure 6. Get the result that the dots describe the data actually spread does not form a certain pattern. According to Ghozali, Imam (2011: 107-108), namely stating that there is no heteroscedasticity if there is no clear pattern (wavy, widened then narrowed) and the dots spread above and below zero (0) on the Y axis on picture scatter plots. So based on the results obtained it can be said that there is no heteroscedasticity. Based on the results of the data by looking at the dots that spread, it is possible that the researcher experienced an error in the interpretation, so a test was carried out to strengthen the results obtained. Test glazes done by regressing the independent (free) variables with their residual absolute values and their values can be seen in Table 10. The following.

Table 10. Test Heteroscedasticity by way of glejser

Model	Sig
(Constant)	,080,
age (X1)	,302
Education Level (X2)	,713
Farming Experience (X3)	,575
Land Area (X4)	,490

a. Dependent Variable: Abs\_Res

Based on Table 10. States that each variable has a significance value (sig) greater than 0.05 and according to Ghozali, Imam (2011) if the significance value (sig) between variables independent (free) with an absolute residual> 0.05, there is no heteroscedasticity problem. So it can be concluded that it is true that the data to be used for research do not experience symptoms of heteroscedasticity.

Regression testing linear multiple can be done because it has passed the classical assumption test. Researchers conducted tests using the SPSS version 25 program to see the factors that were thought to influence the outpouring of labor, namely age, education level, farming experience, and land area through a series of tests, such as the coefficient of determination test, t test, and testF. The results obtained can be seen in Table 11. the following.

Table 11. Results of Regression Analysis of the factors that influence the outpouring of labor in rice farming with floating seeding.

	Activity	Rice Farming								
No		TKLK				TKDK				
110.		Male	Female	Machine	HOK/ lg/thn	Male	Female	Machine	HOK/ lg/thn	Total
1.	Land Processing	2,7	0,43	10,59	13,80	1,05	0,45	1,63	3,13	16,93
2.	Seeding	4,35	1,37	0,00	5,72	3,99	1,68	0,00	5,67	11,39
3.	Planting	15,84	7,20	0,00	23,04	1,04	1,08	0,00	2,12	25,16
4.	Maintenance	0,36	0,23	0,00	0,59	1,60	0,57	0,00	2,17	2,76
5.	Harvest	0,00	0,00	8,95	8,95	0,00	0,00	0,00	0,00	8,95
	Amount	23,33	9,23	19,54	52,10	7,68	3,78	1,63	13,07	65,19

a. dependent variable: outpouring of labor Description:

 $S = \text{significant at}\alpha = 0.05$ ; TS = not significant

The value of the coefficient of determination (R<sup>2</sup>) can be seen from the R square value in the summary model in the SPSS application. Based on this research, the coefficient of determination (R<sup>2</sup>) of 0.713 or 71.3%. Because the value obtained is quite large, it can be said that the research conducted has been good, which means that the independent variables are the age of the farmer, level of education, experience farming and land area have an influence of 71.3% on the outpouring of rice farming labor by floating seeding in Pemulutan Ilir Village. Meanwhile the remaining 28.7% is explained by other variables outside the study.

The t test was carried out by looking at the effect of the dependent variable on the independent variables partially. According to Ghozali's statement, Imam (2011: 101), if the sig value <0.05 then there is a real influence. Apart from looking at the significance value, you can also look at the existing t-count and t-table values. According to Sujarweni, V. Wiratna (2014: 154) if the value of t-count>t-table then the independent variables affect the independent variables. Based on the results of the t-table research with the independent variable (k) totaling 4 and the sample (n) totaling 40. Based on the t-table test formula, namely ( $\alpha/2$ ; n-k-1), the results for the t-table test (0.025; 34) have a value of 2.032. If seen from the results of research using the SPSS version 25 program, the regression model for rice farming with floating seeding is obtained as follows:

 $Y = 95,847 - 0,535X_1 + 0,766X_2 - 0,460X_3 - 4,635X_4 + \epsilon$ 

Farmer age (X1) shows a significance value of 0.016 where the significance value is less than 0.05 (<0.05) and the t-count (–) 2.538 > t-table 2.032. Hypothesis results show that reject Ho, where partially the age of the farmer has a significant effect on the outpouring of labor in rice farming with floating seeding.

Based on the regression results, the regression coefficient for the farmer's age variable is -0.535, so there is a negative/opposite relationship, which means that every 1 year the farmer's age increases will reduce the outpouring of farmer labor (Y) by 0.535 HOK/ha/year. This can happen because the majority of respondent farmers are aged 46-55 years and 56-65 years old who are classified as old and the higher the farmer's age, the lower the manpower he devotes due to the reduced physical ability of the farmer.

Level education (X2) shows a significance value of 0.087 where the significance value is greater than 0.05 (<0.05) and the t-count value is 1.763 <t-table 2.032. Hypothesis results show that except Ho, where partially the level of education has no significant effect on the outpouring of labor in rice farming with floating seeding.

Experience farming (X3) shows a significance value of 0.014 where the significance value is less than 0.05 (<0.05) and the t-count (-) 2.577 > t-table 2.032. Hypothesis results show that reject Ho, where partially farming experience has a significant effect on the outpouring of labor in rice farming with floating seeding.

Based on the regression results, the regression coefficient for the variable farming experience is -0.460, so there is a negative/opposite relationship, which means that each additional 1 year of farming experience will reduce the outpouring of farmer labor (Y) by 0.460 HOK/ha/year. This can happen because experienced farmers will take advantage of their experience in cultivating their agriculture in the next period and regarding previous problems experienced by farmers can be anticipated so that there is no waste of energy expended. This is in line with the statement (Sugiantara, 2019) Farming experience is a real situation experienced by farmers by learning from experience, a person will be able to do the job faster and better than those who are less experienced Land area (X4) shows a significance value of 0.025 where the value the significance is smaller than 0.05 (<0.05) and the t-count (-) 2.345 > t-table 2.032. Hypothesis results show that rejecting Ho, where partially the area of land has a significant effect on the outpouring of labor in rice farming with floating seeding. Based on the regression results, the regression coefficient for the variable land area is -4.635, so there is a negative/opposite relationship, which means that for every 1 hectare increase in land area, the outpouring of farmer labor (Y) is 4.635 HOK/ha/year. This can happen because the farmer's land area is large, the farmer only works on 1 commodity, namely rice, so that the energy needed does not vary enough, therefore the more land the farmer has, the less labor he will provide.

The F test was conducted to see the overall (simultaneous) effect of the independent variables on the dependent variable. The independent variable can be said to have a joint effect on the dependent variable if it has a significant value <0.05. This is an appropriate statement by Ghozali, Imam (2011: 101), if the sig value <0.05 means that the independent variable (X) simultaneously affects the dependent variable (Y). Based on data processing with the SPSS application version 25, for rice farming with drying floats acquire value significance (sig) of 0.000 which is smaller than the requirement of 0.05.

Apart from looking at the significance value, you can also look at the existing F-count and F-table values. According to Sujarweni, V. Wiratna (2014: 154) if the value of F-count>F-table then the independent variables are simultaneously influential to the independent variable. Based on the results of the F-table research with 4 independent variables (k) and 40 samples (n). Based on the F-table test formula, namely (k; n-k), the results for the F-table test (4; 36) have a value of 2.63. Meanwhile, when viewed from mark F-count has a value of 21.774 from the regression results in the ANOVA section. So it can be concluded that F-count > F-table, namely 21.774> 2.63. So it was concluded that they rejected Ho, which means the factors of age, education level, farming experience, and land area simultaneously affect the outpouring of labor in rice farming with floating seeding.

### **CONCLUSION**

Based on the results of the analysis carried out in this study, the conclusions that can be drawn are: The first existing local wisdom is at the stage of land management which begins by looking at natural signs first, namely by looking at the state of the water. Second, in procuring seeds using seeds from previous harvests. Third, at the planting stage, namely using a simple tool: of Tunjamand transplanting. Fourth, during the maintenance stage, farmers use special methods and ingredients to repel snails and rats and fertilize them once. Fifth, at the post-harvest stage, farmers sell directly by size pic(1 kg) to collectors who also act as provider machine tools for personal consumption. While at the harvest stage, there is no local wisdom because farmers already use machines. The local wisdom that is the focus of

the research is floating seeding that utilizes the surrounding natural resources in the form of swamp grass (popcorn) with the latin name Scleria poaeformis, which are used as rafts and freshwater algae (reamun) with the latin name Hydrilla verticillata which is used as a planting medium, rice farmers in Pemulutan Ilir Village tend to use outside labor. The outpouring of labor for rice farming with floating seeding in Pemulutan Ilir village has a yield of 65.17 HOK/lg/year or 51.03 HOK/ha/year, namely for the outpouring of labor from outside the family of 52.10 HOK/lg/year or 39.61 HOK/ha/year while for the outpouring of labor from within, it is 13.07 HOK/lg/year or 11.42 HOK/ha/year. The factors influencing the outpouring of labor in rice farming with floating seeding are the farmer's age, education level, farming experience, and land area. Get the result that simultaneously, all four variables significantly affect the outpouring of labor. Meanwhile, of the four variables, only the level of education has no significant effect.

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