Agroland: The Agriculture Science Journal, 2015 December 2(2) : 81 – 90 **ISSN : 2407 - 7585**
E-ISSN : 2407 - 7593

ANALYSIS OF RICE PRODUCTION IN KARAWANA VILLAGE DOLO SUB - DISTRICT SIGI

Delly Sriyati[1)], Max Nur Alam[2)], Yulianti Kalaba[2)]

[1)] Postgraduate Student of Agribusiness at University of Tadulako Postgraduate. Palu.
[2)] Lecturer and Researcher at Department of Agribusiness Faculty of Agriculture, University of Tadulako. Palu.

ABSTRACT

This study aims to determine the effect of land area, number of seeds, labor, fertilizer, and pesticides on rice production in the Village Karawana Sub District Dolo. The population in this study are all farmers who cultivate rice farming rice fields totaling 417 farmers, farm consisting of 279 people using certified seeds and 138 people who use the seed is not certified, with a sample size of 60 people that is considered representative of the population, of which 40 people who use certified rice seeds and 20 people use rice seed is not certified. Data were analyzed using multiple linear analysis Doglass Cobb. The results of the production analyzes show that the independent variable ($X_{i)}$ jointly significant effect on the dependent variable (Y) it is indicated the value of the F-count equal to 96.734> F-table 2.034. the coefficient of determination (R^2Adj sq) of 0.925, meaning 92.5% of the variation rice production that use certified rice seeds (Y) can be explained by the variable land area (X1), seeds (X2), labor (X3) fertilizer (X4), and pesticides (X5), while the other 7.5% can be explained other models. Area of land, seed, labor, fertilizer, and pesticides simultaneously can affect the production of paddy rice farming that use certified rice seeds in the Village Karawana District of Dolo. T-test results showed independent variables (land area (X, labor (X3), fertilizers (X4), and pesticides (X5), very significant effect on production (Y), except for number of seeds (X2) had no significant effect. While for seed which is not certified the results of production analysis showed that the independent variable ($X_{i)}$ jointly significant effect on the dependent variable (Y) it is indicated the value of the F-count equal to 84.902> F-table 2.009, the coefficient of determination (R^2Adj sq) of 0.957, meaning 95.70% variation of rice production that use certified rice seeds (Y) can be explained by the variable land area (X1), seeds (X2), labor (X3), fertilizers (X4), and pesticides (X5), while the other 4.3% can be explained other models. The land, seed, labor, fertilizer, and pesticides simultaneously may affect rice production which uses rice seed is not certified in the Village Karawana District of Dolo, the t-test results shows the independent variables (land area (X1), the number of seeds (X2), labor (X3), fertilizers (X4), and pesticides (X5), very significant effect on output (Y). Rice production that use certified seed significantly different compared to rice production which uses seeds were not certified in the Village Karawana District of Dolo.

Key Words : Certified Seed, Certified Seed photo and production.

INTRODUCTION

Agricultural of food crops, especially rice crops have strategic value. Food crops are the backbone of food security and the livelihood of the population of Indonesia, because rice is the staple food for the majority of Indonesian people who act as meeting basic needs carbohydrates for the population. Rice is still considered a strategic commodity that is dominant in the economy of Indonesia, because it is a staple food for most people of Indonesia, with regard to monetary policy and concerning social and political issues, in relation to the cost of living index, rice demand is still very dominant (Adiratma, 2004).

Province Central Sulawesi today continues to increase agricultural production, especially of food crops, are encouraged to support local autonomy, one of the government's efforts to help farmers to increase production and income of farming is to provide assistance in the form of certified seeds, it is expected to assist farmers in improving production and farming income. Achievement of rice production in 2014 amounted to 57816.07 tons harvested area of 15110.75 ha.

Sigi is one region of the central areas of rice production in the province of Central Sulawesi, which occupies the third position from the 11 Districts. Total rice production in 2014 reached 144.199 tons with an area of 32.320 ha and provitas harvest reached 4.61 tons/ha exceeds the average productivity of Central Sulawesi province which only reaches 4:17 tons/ha. Subdistrict Dolo is one of the districts paddy rice production centers with a total production reached 2,425 tons in 2014 with an area of 5,318 ha harvest reached. Dolo sub-district has 10 villages cultivate farmland to paddy fields, one of which is the village of karawana. Karawana village is the sala of the village centers of rice production and ranks second after the village Soulowe. Potential rice production reached 1,154 tons of harvested area of 261 ha and productivity of 4.42 tonnes/ha.

Achievement of rice production have been obtained from most farmers use certified seeds and some of that comes from sources certified seed, besides the availability of certified seed farmer level is still very limited, and the use of production factors of land is relatively small, the use of fertilizer, labor, and which has not as directed. This phenomenon affects the quantity and quality of production is yet to expectations.

One of the aspects that have an important role in improving farm productivityis the use of certified seed. Certified rice seeds is one of the innovations which to date continues to be developed to farmers, the use of certified rice seeds intended transform and increase the production of rice farming, and ultimately aims to increase production and income of farmers. In connection with these conditions, the researchers conducted a study analysis of rice production in the village Karawana with the aim to determine the effect of land area, number of seeds, labor, fertilizer, and pesticides on rice production in the village Karawana.

METHODOLOGY

This research will be conducted in the village of Karawana Subdistrict Dolo Sigi. The location determination is done intentionally *(purposive)* with Karawana consideration that the village is one of the villages where some community use of certified seed, potentially in increased production of paddy rice farming.

The population in this study were all farmers who cultivate paddy rice farming totaling 417 farmers, farm consisting of 279 people using certified seeds and 138 people who use uncertified seed, with the number of a sample of 60 people is considered representative of the population, where 40 people who use certified rice seeds and 20 people using non-certified rice seeds.

The sample in this study was performed using simple random method *(simple random* sampling). The method used to determine the number of samples is to use the formula Slovin (Sevila in Kurniasari *et al.*, 2011), as follows:

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

Description:
n : Number of samples,
N : Number of population,
e : The percentage of the limit of tolerance errors (error tolerance).

Techniques for determining the amount of rice farmers rice using certified seed and that does not use certified seed carried stratified proportional simple random *(proportional stratified random* Sampling) (Sugiono, 2013) with the formula :

$$\text{Proportional} = \frac{\sum \text{Population}}{\sum \text{Total Population}} \text{ x Sample}$$

Thus obtained sample of paddy rice farmers using certified seed as many as 40 people and the number of samples of rice farmers who do not use certified seed as many as 20 farmers of paddy. This study uses data collection method Interview with tools in the form of a list of questions (quisioner) and the study of literature and documentation.

The Data Analysis Method.

1. Using multiple linear analysis Cobb Doglass by the equation Cobb-Douglass mathematical functions are as follows:

$$y = b_0 \sum_{i=1}^{n} \text{x1}^{\text{bi}}\, e$$

Or Y= $b0\ x1^{b1}$, $x_{2\ b2}$, $x_{3\ b3}.e^{\mu}$

Classical Assumption Test. Classic assumption test carried out in multiple linear regression for the results to be obtained more valid or more accurate and close to or the same as the reality.

The assumptions basic regression is known as the classical assumptions of linear regression as follows:

1. Homoskedastisitas mean variant of the independent variables are the same constant for any particular value of the variable other free or residual variation same for all observations.
2. Non auto korelasi, meaning there is no influence of variables in the model through an interval or does not happen correlation between error randomnya.
3. Non multikolineritas, means between independent variables with one another free others in the regression model did not happen relations near-perfect or perfect relationship.
4. The distribution errors (error) is normal.
5. The average value of the error (errors) population on the model of the stokastik is equal to zero.
6. The independent variable has a value that is constant at each time experiments conducted repeatedly (variable non stokastik).

The Coefficient of Determination (R2). The coefficient of determination ($R^{2)}$ is used to determine the extent of any provision or the suitability of the regression line which is formed in the data representing the results of observation. The coefficient of determination describing part of the total variation can be explained by the model. The larger the value of R^2 (close to 1), then the writ is said to be getting better. The nature of the coefficient of determination are:

1. Value R^2 is always positive because it is the ratio of the sum of squares:

$$\text{Value of } R^2 = \frac{\text{JK regression}}{\text{JK Total Correlated}}$$

2. Value $0 \leq R^2 \leq 1$
   R^2 = 0, means there is no relationship between X and Y, or a regression model that forms is not appropriate to predict Y.
   R^2 = 1, the regression line which is formed can predict Y perfectly.

Fisher Test (F-test). F-test basically indicates whether all the independent variables included in the model have influence together on the dependent variable. Statistically formulation F-test are as follows:

$$\text{Value of } R^2 = \frac{R^2 / (k-1)}{(1- R2)/ (Nk)}$$

When F$count >$ F table at a rate of 5% and a degree of rejection given confidence level or probability value is significantly smaller than 0.05 then Ho is rejected, which means that the independent variables jointly affect the dependent variable (Gujarati, 2006).

Student Test (t - test). t-test is basically indicates how far the influence of the individual explanatory variables in influencing the dependent variable. Is an independent variable is a significant explanatory or no significant effect on the dependent variable, the statistics can be searched by formula (Gujarati, 2006).

$$t = \frac{Bi}{Se\ (\beta i)}$$

Description:

t = Value sought
βi = Regression coefficient
Se = Standard error of regression coefficient.

If t>t table the rejection rate of 5% or a significant probability value less than 0.05 (5% significance level) then H0 is rejected in other words independent variables significantly influence the dependent variable.

Comparative Analysis of Rice Production. Analysis differences rice production in the village Karawana done by differentiating the average rice production with the use of certified seed rice production that does not use certified seeds. used t-test (t-test) is expressed by Usman *et al.* (1995):

$$\text{t } t - test) = \frac{X1-X2}{S^2Gab\sqrt{\frac{1}{n1}+\frac{1}{n2}}}$$

where $S^2Gab = \frac{(n1-1)S1^2+(n2-1)S2^2}{n1+n2-2}$

$$S1^2 = \frac{n1\sum X1^2 - (\sum X1)^2}{n1(n1-1)}$$

$$S2^2 = \frac{n2\sum X2^2 - (\sum X2)\ 5^2}{n2(n2-1)}$$

free Degrees (db) = $n_1 + n_2$-2 at level α5% where t = the value of the critical region.

Description:

X1 = Average rice production which uses seeds certified
X2 = Average rice production that does not use certified seed
S_{Gab} = Standard deviation of the sample combined
n_1 = Total sample farmers using certified seed
n_2 = Total sample farmers who do not use certified seeds
S_1 = Standard deviation of a sample of certified seed
S_2 = The standard deviation is not certified seed samples
Db = Degreesfree.

ShapeH0:

$X_1 = X_2$ = Means that there is no difference between the production of paddy rice by the use of certified seeds are not certified
H1: $X_{1>}X_2$ = Means paddy rice production between the use of certified seeds is greater than the production of paddy rice that does not use certified seed

Testing the hypothesis by using criteria as follows:

1. If $t_{\text{arithmetic}} \leq t_{\text{the table}}$ was :H0: means there is no difference between production

the rice use of certified seeds to those without use of certified seeds

2. If $t_{count} > t_{the\ table}$ was : H0: there is no difference between the means of production paddy rice using certified seeds to those not using certified seed

RESULTS AND DISCUSSION

Results.

Characteristics of Respondents. Based on observations and interviews with rice farmers in the village of Karawana District of Dolo, the obtained characteristics of the respondents include: age, education level, number of dependents, experience farming and land area.

1. Age Respondents

   on average farmers respondent was 45 years of age ranges between 25 and 75 years, while the average age of the respondent farmers using rice seed is not certified is 44 years of age ranges between 22 to 70 years. The highest percentage (42.50%) in the 38-45 year age range of respondents farmers using certified seeds and the lowest (2.50%) in the 70-77 year age range of respondents, while the farmers who do not use certified seed the highest percentage (35%) in age range 30-37 years and 62-69 years the lowest (0.0%).

2. The Education Level of

   The highest educational level of farmers percentage of respondents who use certified rice seeds is a junior at (35%) and the percentage of the lowest educational level is SD (32.50%) and high school (32.50%). While the level of education that is owned by farmers to respondents who are not certified rice seeds, the percentage of junior high education level (40%) and the lowest percentage of high school education level (25%). This indicates that the level of education in the village of Dolo Karawana District of relative levels of education is still low. Thus indirectly affect the adoption of new technologies is relatively little too late, however, this condition can be improved through training technology deficits improve rice production.

3. The Number of Dependents

   Total tanggungan family is the number of members in the family farmers who are the responsibility of the head of household, may indirectly result in additional costs to be borne by farmers as head of the household to meet all the needs of family life. The percentage of the number of dependents of farmers of respondents who use certified rice seeds in the village of Karawana the highest in the range of 3-4 people (70%) and the lowest percentage of the number of dependents ranges from 5-6 people (5%). The highest percentage of respondents the number of dependents of farmers who do not use certified seeds ranged between 3-4 as much as 55% and the lowest percentage ranging between 5-6 people (5%).

   This situation illustrates that the greater number of dependents living costs higher and conversely the Fewer number of dependents cost less and less, thus indirectly most of the income earned from the results of farming can be used as capital for the development of his farm and can even be partially saved for the survival of farmers in the future so that the welfare of farmers can improve.

4. Experience Farming

   Experience of farmer respondents in rice paddy farming in the village Karawana have quite a varied experience. The highest percentage of the number of

farmers farming experience of respondents who use the seed certifiedin the range of 5-18 years amounted to 82.50% and the number of the lowest percentage in the range of 33-46 years of experience 2.50%. The highest percentage of respondents farmer farming experience that does not use certified seeds in the range of 5-18 years 55% and the lowest in the range of 33-48 years by 20%

Analysis of Production Input. Multiple linear regression analysis of the use of production inputs paddy rice using certified seed it can be seen the value of the coefficient of determination adjusted (R^2adj) of 0925 for the use of production inputs paddy rice using certified seeds This means that the diversity or variation of the rise and fall of independent variables *(independent)* (Xi) in the form of land area, number of seeds, the amount of fertilizer, labor and pesticide 92,5% simultaneously influences the production of *(dependent)* (Y) of paddy in the village of Karawana District of Dolo and the remaining 7.5% is influenced by other factors outside the model analysis. F-test (F-test) values obtained the F-count of 96.734 (sig.0,000) is greater than the value of 2,034 F-table so that the simultaneous use of factors of production (land area, number of seeds, labor, the amount of fertilizer and pesticides tested significantly affected rice production that use of certified seeds in the village Karawana District of Dolo on the level of 95%, thus HO rejected and H1 accepted, meaning that rice production is influenced by the factors of production (land area, number of seeds, labor, the number of fertilizers, and pesticides). Real effect on the confidence level of 95%. the estimated multiple regression equation Cobb-Douglass by transforming the data into the natural logarithm (ln) as follows:

$$\ln Y = 4.022 + 0.405 \ln x_1 + 0.126 \ln x_{to\ 0.108} 2\ln x_3 + 0.474 \ln x_4 + 0.207 \ln x_5 + \varepsilon$$

The results of the analysis of Cobb-Douglass against rice production that does not use certified seeds can know the coefficient of determination adjusted (R^2adj) of 0.957. This means that the diversity or variation of the rise and fall of independent variables *(independent)* (Xi) in the form of land area, number of seeds, labor, the amount of fertilizer and pesticides by 95.7% simultaneously influences the production of *(dependent)* (Y) of paddy in the village Karawana Subdistrict Dolo and the remaining 4.50% are influenced by other factors outside the model analysis. F-test (F-test) the F value is calculated at 84.902 greater than the value of 2.09 F-table so that the simultaneous use of factors of production (land area, number of seeds, labor, the amount of fertilizers and pesticides are tested influential highly significant rice production that does not use certified seeds in the village Karawana at the level of 95%, thereby Ho refused and H1 accepted, meaning that rice production is influenced by the factors of production (land area, number of seeds, labor, the amount of fertilizer and pesticides). the independent variables (Xi), the land area ($X_{1)}$, number of seeds ($X_{2)}$, Labor ($X_{3)}$, Total Fertilizer ($X_{4)}$ and Pesticides ($X_{5)}$ real effect on the 95% confidence level, estimation of multiple regression equation Cobb-Douglass paddy rice that does not use certified seeds in the village Karawana using data transformation natural logarithm (Ln) as follows:

$$\ln Y = 4.316 + 0.680 \ln x_{to\ 0.328} 1\ln x_2 + 0{,}384 \ln x_3 + 0.454 \ln x_4 - 0.158 + \varepsilon$$

Discussion.

Production Factor Land (X1). The land area ($X_{1)}$ very significantly positive *(positive highly* significant) towards the production

of paddy (Y) that use of certified seed and that does not use certified seeds at 95% confidence level. T-count value respectively (3.116; 004) > t-table (2.031) to paddy rice using certified seeds and t-count equal to (3.966; 0.001) > t-table (2.093) to paddy rice do not use certified seeds, so Ho rejected and H_1 accepted.

Elasticity ($b_{1)}$ land area ($X_{1)}$ to paddy rice using certified seeds of 0.405 indicates that an increase in production input a land area of 1% can provide improved rice production paddy amounting to 0.405% by assuming that other production factors held constant *(citerisparibus).* Value intercept (elasticity) ($b_{1)}$to paddy rice fields that do not use certified seeds of 0.680 indicates that an increase in production input a land area of 1% can provide improved rice production amounted to 0.680% on the assumption that other production factors held constant *(citerisparibus*). Thus the increase in land area positive effect of increasing rice production in the village of Karawana District of Dolo.

Observations and data collection in the study site information was obtained on average land rice farming rice using certified seed and that does not use certified seeds is relatively broad, namely 1,38 ha for certified seed and 1.13 ha for which no use of certified seeds with the production achievement average of 2178.14 kg of rice/1.38 ha. The average production of paddy rice that does not use certified seeds of 1411.75 kg of rice/1.13 ha, it does show that rice farming rice using certified seeds can increase rice yield by 766.39 kg of rice/1.38 ha (54.29%) ha.

Total Seed Production Factor (X2). Results obtained by analysis of the number of seeds ($X_{2)}$no real effect on the production (Y) certified seed paddy rice at the level of 95%, (significant 0.128) with t- calculate the amount of (1.561) < t-table (2.031), so that H_0 is received and H_1 rejected. While the results of the analysis of the use of a number of seeds (X2) on paddy rice that does not use certified seeds are very real negative effect on rice production at a level of 95% (significant 0.023). With a t-count value of (-2.542) > t-table (2.093), so that H_1 accepted and H_0 rejected.

Elasticity or regression coefficient ($b_{2)}$ the number of seeds ($X_{2)}$ of paddy fields that are not certified by - 0.328 indicates that the addition of inputs number of seeds at 1% can lower rice production that does not use certified seeds of 0.328%, assuming other factors of production are considered constant *(citerisparibus).* The results of observation in the study site obtained information that the average use of seeds by farmers of certified seed paddy rice respondents as 34,8 kg/1.38 ha or 25.27 kg/ha obtained the total average production of 2178.14 kg of rice/1, 38 ha or rice 1578.21 kg/ha. Furthermore, the use of seeds by farmers' paddy rice respondents are not certified as 47.25 kg/1.13 ha or 42 kg/ha obtained the total production of 1,411 kg/1.13 ha or 1,254 kg of rice/ha.

Labor Production Factor (X_3). The results of the analysis of labor ($X_{3)}$ significant *(significant)* to increase rice production (Y) that use of certified seed and that does not use certified seeds at 95% confidence level, with a t-count value of (-2.579) (Sig.0,014) > t-table (2.031) to paddy rice using certified seeds and t count (4.112) (Sig.0,001) > t-table (2,093) for paddy rice farming that does not use certified seeds so that Ho refused and H_1 accepted.

Elasticity ($b_{3)}$ workforce ($X_{3)}$ of -0.108 indicates that the addition of labor inputs by 1% can reduce rice production that use certified seeds 0.108%, assuming other factors of production are considered

constant (*ceteris*paribus). As for rice farming rice fields that do not use certified seeds elasticity value ($b_{3)}$ workforce ($X_{3)}$of 0,384 showed that the increase in inputs of labor by 1% provide additional rice production amounted to 0,384%, assuming other factors of production are considered constant (*ceteris*paribus).

Based on these results that the addition of labor a negative effect on the increase in rice production in the village Karawana the use of certified seeds, so that should be a reduction in the amount of labor used. Based on the results of research into the use of labor for paddy rice farming that use of certified seeds of 94.6 HOK/HOK 1.38 ha or 88.82/ha. As for paddy rice farming that does not use certified seeds in the Village District of Dolo Karawana obtained employment positive effect. Thus, it means that the use of labor still needs to be improved to obtain higher production. The average labor paddy rice farming that does not use certified seeds in the village Karawana in one production by 69.15 HOK/HOK 1.13 ha or 61.47/ha.

Total Fertilizer Production Factor (X4). Based on the results the amount of fertilizer ($X_{4)}$ significantly positively to the increase in rice production *(Y)* seed certified and non certified at the level of 95%, it can be seen from t-count value respectively (4.876) (sig.0,000) > t-table (2031) for certified seed farm and to farm are not certified by the value t count (2.556) (sig.0,023) > t-table (2.093), so Ho rejected and H_1 accepted.

Elasticity ($b_{4)}$ the amount of fertilizer ($X_{4)}$ for paddy rice farming that use of certified seeds of 0.474 indicates that the addition of production inputs of fertilizers 1% can increase rice production is certified by 0.474% with the assumption that other production factors held constant *(ceterisparibus),* whereas for rice farming rice fields that do not use certified seeds for-0.454 indicate that the addition of inputs number of seeds at 1% did not give additional production even decreased production of 0.454%.

In general the dose range can be used for urea fertilizer 100 kg-250 kg, 50kg SP-36 -200 kg per ha and KCL 0-100 kg per ha. The use of fertilizers is effective and efficient will be very helpful in the process of plant growth and development, the better the growth and development of rice crops, indirectly will provide or generate maximum production. The results of observation in the study site obtained information that the average use of fertilizers by farmers paddy rice farming respondents who use certified seed as much as 705.30 kg/ha or 512.01 1.38 kg/ha obtained the total rice production 2170.04 kg rice/1.38 ha or rice 1578.21 kg/ha of fertilizer use by farmers of respondents who use uncertified seed the average amount of fertilizer as much as 505.00 kg/1.13 or 448.89 kg/ha. The frequency of fertilizer by farmers as much as three times the first time Fertilization fertilizer application 0-14 days after planting (DAP) as much as 1/3 of the recommended doses, the second fertilization 30-35 days after planting (DAP) of ± 1/3 section and third fertilization 45-50 days after planting.

Pesticides (X5) of. Results analysis of pesticide use ($X_{5)}$ significant *(significant) positive* to increase rice production (Y) that use certified seed or not using certified seed at the 95% confidence level, with each value t count the amount of (2.791) (Sig.0,009) <t-table (2.031) for certified seed and t-test (-2.789) (Sig.0,014) > t-table (2,093) for seed that is not certified, so that H_0 is rejected and H_1 accepted.

Elasticity ($b_{5)}$ of pesticides ($X_{5)}$ certified seed of (0.207) indicates that the addition of inputs of pesticides by 1%

can sustain rice production is certified by 0.207% with the assumption that other production factors held constant *(ceterisparibus)*, and the value of elasticity ($b_{5)}$ of pesticides ($X_{5)}$ that are not certified by (-0.158) showed that the addition of 1% pesticide will reduce the quality of rice production that is not certified by 0.158% assuming other production factors held constant *(ceteris*paribus).

The results of this study show that the addition of pesticides affect the resilience of rice production in the village of Karawana District of Dolo. The average use of pesticides by farmers whose paddy rice using certified seed as much as 11.3 liters/ha to 1.38 or 8.19 liters/ha, and for paddy rice farmers who do not use certified seeds average pesticide use as much as 8.25 liter/1.13 ha or 7.33 liters/ha. Not influential variable pesticide is assumed that at the time the research was conducted infrequent or no crop pests and diseases, and if there are pests and diseases are still within the threshold economical, so the use of pesticides is only done for a preventive action and anticipation of pests and diseases. The use of pesticides is one of the factors that determine the management of rice farming field either in the amount, manner of applications, dosage and time of application.

Analysis of Differences in Average Production. Observations average production of rice farmers rice using certified seeds during the first time the production process rice is 2170.04 kg/ha or 1578.21 1.38 kg of rice/ha. Average production of paddy rice farmers who do not use the seed rice production is 1,411 kg/ha or 1.13 1254 kg rice/ha. The result of a comparative analysis of the average production and output analysis Compare Independent samples T-test of two groups of respondents unpaired showed no difference between the production of paddy rice using certified seeds to those not using certified seed at the rate of 95% Results of homogeneity test of variance p value = 0,000 (sig. 0.000) is smaller than α (5%), which means that H_0 is rejected (there is a difference between the average production of paddy rice using certified seeds with rice farming rice fields that do not use seeds certified. Furthermore, from the results of the analysis looks value t count for the assumption of variance is not the same *(Equelvariaces not* assumed) was 4.016. This value is greater than t-table (4.016 > 2.031) means that H_0 is rejected or there is a real difference between the production of rice using certified seeds T (respondents 1) with rice farming rice fields that do not use certified seeds (respondent 2) in the village of Karawana Sub Dolo.

The difference in the average farm production of paddy farmers of respondents who use certified seeds to farmers who do not use certified seeds in the village Karawana caused by differences in land management, crop and application of technology production and rice cultivation, which has not been optimal to do.

CONCLUSION AND RECOMMENDATIONS

Conclusion

Factors of production land area, number of seeds, labor, the amount of fertilizer and pesticides very significant effect on rice production that use of certified seed and that does not use certified seeds, except for the use of seeds had no significant effect for paddy rice that use certified seed.

Comparison of paddy rice production that use certified seed significantly different than paddy rice seed production that does not use certified seeds in the 5% significance level α.

Suggestions

The use of production inputs, especially seeds certified by farmers to be further optimized through the application of technology and seed selection and availability of improved seed certified.

The government support either through increased infrastructure availability of improved seed, fertilizers and others, including the assistance of agricultural extension field so farmers could managing rice paddy farming properly, through counseling or training on the importance of the use of improved seed technology or the use of another paddy rice cultivation so that the technology can be applied in getting more optimal.

REFERENCES

Darmasetiawan dan Wicaksono, 2012. *Pengaruh Faktor Internal Petani terhadap Peningkatan Mutu Tembakau di Desa Pacekelan Kecamatan Purworejo Kabupaten Purwarejo.* J. Surya Agritama. Vol. 1. No. 1. Edisi Maret 2012. Diterbitkan oleh Fakultas Pertanian Program Studi Agribisnis Universitas Muhammadiyah Purworejo.

Dewi, N., Yudono P., Jamhari., 2013. *Tingkat Adopsi Petani terhadap Benih Padi* (*Oryza Sativa* L.) *Bersertifikat dan Non-Sertifikat di Kecamatan Kalasan Kabupaten Sleman.* J. ugm.ac.id/index. php/jbp/article/view. 2417. Vol II(2). Diakses pada Hari Senin Tanggal 23 Desember 2015. 1-15.

Endrizal dan Jumakir, 2008. *Kajian Produktivitas Beberapa Varietas Unggul Baru Padi Sawah Melalui Pendekatan Pengelolaan Tanaman Terpadu (PTT) di Lahan Sawah Semi Intensif Jambi*. J. Balai Pengkajian Teknologi Pertanian Jambi. 1-16.

Gujarati, Damodar, N., 2006. *Dasar-Dasar Ekonometrika.* Terjemahan Julius A Mulyadi. Erlangga. Jakarta.

Mudakir, B., 2011. *Produktivitas Lahan dan Distribusi Pendapatan Berdasarkan Status Penguasaan Lahan pada Usahatani Padi (Kasus di Kabupaten Kendal Propinsi Jawa Tengah).* J. Dinamika Ekonomi Pembangunan. Vol. 1. No. 1. Juli 2011. Fakultas Ekonomika dan Bisnis Universitas Diponegoro Semarang.

Muzdalifah. 2011. *Analisis Produksi dan Efisiensi Usahatani di Kabupaten Banjar*. J. Agribisnis Pedesaan Fakultas Pertanian Universitas Lampung Mangkurat. Vol. 1. No. 4: 256-266.

Prsaetyo. 2002. *Budidaya Padi Sawah TOT*. Kanisius. Yogyakarta.

Rachman B, I. Wayan Rusastra dan Ketut Kariyasa., 2000. *Sistem Pemasaran Benih dan Pupuk serta Pembiayaan Usahatani.* Pusat Penelitian dan Pengembangan Sosial Ekonomi Pertanian. Bogor.

Soekartawi, 2002. *Ilmu Usahatani.* PT. Raja Grafindo Persada. Jakarta.

Sutopo, L., 2003. *Teknologi Benih.* Rajawali. Jakarta.

Sugiyono. 2013. Metode Penelitian Kuantitatif Kualitatif dan R&D. Bandung. Alfabeta. Cetakan ke-19. Oktober 2013.