

**Affecting Factors of Shallots Production Level in Wanasari
Sub-District Brebes Regency**

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Abstract

Shallots are vegetables that are included in the staple food classification. Therefore, it should be controlled in order to prevent an economic problem among them such as surge in price or price instability of shallots that can trigger imports and it could be harmful to farmers. Wanasari sub-district is one of the shallots centers located in Brebes regency of Central Java, the last five years has decreased production. The purpose of this research is to know the effect of asset, land area, labor, seedlings, fertilizers, and pesticides factors against the level of production of shallots. The data in this study used primary and secondary data with samples of 70 farmers. The analysis method in this study was the multiple linear regressions.

Keywords: *production, production factor, shallots*

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INTRODUCTION

Many countries in the world have their own characteristics in processing opportunities developing their respective economic sectors based on natural conditions and other resources. Indonesia country has an advantage because it is located in the tropical climate area so it is suitable to develop the agricultural sector and being supported with good soil and weather conditions.

The development of agriculture sector in Indonesia for each production center has been facilitated by, APBN, APBD and the society. The development of a well-developed horticulture and much in demand by farmers is the shallot (Elfia, 2015). There are several types of plants in Indonesia that become the choice of farmers, from the many horticultural crops, the researcher drawn on one agricultural commodity that is a daily cooking ingredient and can be used as a high-efficacy herbal medicine, namely shallots.

According to Listianawati (2014) The commodities of shallot are the most wanted by society regardless of social status. Shallots have various advantages ranging from opening business opportunities to the ability to become a good export commodity, so that shallots have a bright future in agriculture in Indonesia.

Many Indonesian islands become the center of the production of shallots, and scattered in almost all the large islands in Indonesia. Central Java province is one of the centers of shallots production.

The largest Province shallots production in Indonesia is Central Java with a production average of 447,952.75 tons per year. Central Java province in producing

shallots each year tends to increase. Although in 2015 the production decreased by 48,187 tons from the year 2014 whose production reached 519,356 tons.

According to Yuni Astuti (2018) head of the provincial Agricultural and food office of Central Java, the potential land of Central Java Province in developing the production of shallots is adequate. Central Java province in 2017 was able to produce 476,337 tons of shallots which cover 32% for this national production making Central Java the largest producer of shallots in Indonesia.

Central Java province is not separated from the role of the regional centers producing shallots scattered in various regions in Central Java, namely Brebes Regency. The development of shallots Agriculture in Brebes Regency created several centers that are scattered in various sub-districts, and the sub-district with the highest production is Wanasari Sub district. the development of shallot production in Brebes Regency can be seen in the table that contains the data of onion production of Brebes regency. Here is a table of shallot production in each Sub district in Brebes regency in 2016-2018:

Table 1.1 Production of shallot Per-sub-district year 2016-2018

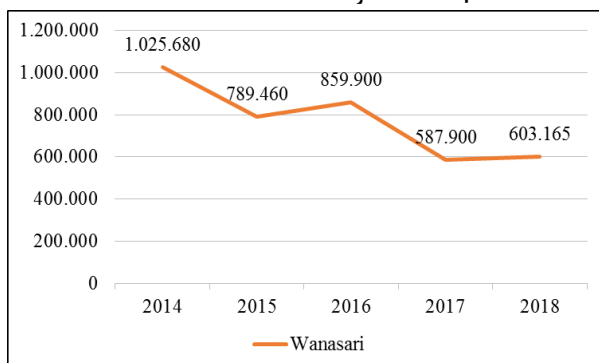
| Sub District | Production (Kw) | | |
|--------------|-----------------|---------|---------|
| | 2016 | 2017 | 2018 |
| Salem | | 0 | 0 |
| Bantarkawung | 16,031 | 10,686 | 14,941 |
| Bumiayu | 0 | 0 | 0 |
| Paguyangan | 0 | 0 | 0 |
| Sirampog | 0 | 0 | 0 |
| Tonjong | 0 | 0 | 0 |
| Larangan | 846,630 | 490,419 | 654,404 |
| Ketanggungan | 249,750 | 244,804 | 224,125 |

| Sub District | Production (Kw) | | |
|--------------|-----------------|---------|---------|
| | 2016 | 2017 | 2018 |
| Banjarharjo | 13,033 | 14,597 | 12,299 |
| Losari | 66,695 | 119,728 | 67,966 |
| Tanjung | 399,785 | 206,512 | 148,023 |
| Kersana | 91,805 | 65,277 | 115,153 |
| Bulakamba | 291,932 | 341,321 | 432,511 |
| Wanasari | 859,900 | 587,900 | 603,165 |
| Songgom | 119,676 | 115,563 | 79,848 |
| Jatibarang | 172,625 | 220,337 | 186,860 |
| Brebes | 386,885 | 318,555 | 409,788 |

Source: DPKP Kab. Brebes, 2019

Based on the data above, the production of shallots can be seen that from 17 sub-districts in Brebes there are 12 sub-districts producing shallots. From the data we know that, Wanasari sub district is the region is the highest production of onion 3,866,105 quintals. Despite having the highest production among other sub-districts, the trend of shallots production in Wanasari sub-district in the last 5 years tends to decline. In the year 2015, for example, there was a decline in production reached 33% or amounted 236,220 quintals. Below is the diagram that shows the trend of shallot production in Wanasari sub-district in 2014-2018:

Picture 1.1 Shallot Production Chart in Wanasari sub-district year 2014-2018



Source: DPKP Kab. Brebes, 2019

From the data above , the researchers are interested in doing research in Wanasari sub-district to find out what factors make shallot production in Wanasari Sub district tend to have decreased and especially what factors can increase the production of shallot in Wanasari subdistrict efficiently.

RESEARCH METHOD

In this study used seven variables. There was one dependent variable and six independent variables. The level of shallots production of Wanasari sub-district in Brebes regency is a dependent variable in this study. For independent variables on this research is the business capital, area of agricultural land, the amount of labor, the number of seedlings, the amount of fertilizer, and the amount of pesticides.

This research needs data that matches the focus and purpose of the research. Furthermore, the data is sought, collected and analyzed in accordance with the existing theory so that it can draw conclusions from the research results. In this study used the primary and secondary data.

A double linear regression analysis is a method used to analyze the data of the shallot production rate. While conducting such analysis, it is necessary to test data including F-test, t-test, determinant test, and classic assumption test which includes autocorrelation test, heteroskedastisity test, multicollinearity test, and normality test.

To be able to explain the factors that have a real relationship and no real relationship to the level of production of shallots in Wanasari sub-district Brebes regency, the researcher used a method of analysis of multiple linear regressions.

The method of double linear regression analysis is that independent variables are explained by more than one variable in order to explain independent variables, although there are still other variables overlooked (Hasan, 2008).

RESULTS AND DISCUSSION

Wanasari subdistrict is located in Brebes regency of Central Java province and Klampok village is the center of his government. The boundary of Wanasari Sub-district in the west is bordered by Bulakamba Sub-district, the south is bordered by larangan and Jatibarang sub-districts, in the north bordered by the North Sea of Java. Wanasari is an area with sub-district of government form which have 20 villages, this sub-district have 7444.42 ha land area that consist of 3926.24 ha rice field and 3.518,18 ha others field.

The results of research shown, the characteristics of shallots farmers in Wanasari sub-district can be seen in data that classifies respondents based on education, age, and experienced. Characteristics of the shallot farmer respondents in Wanasari sub-district can be seen in the table below:

Table 3.1. Respondent Characteristics

| No. | Karakteristik | Jumlah | Persentase |
|-----|---------------|--------|------------|
| 1 | Usia (th) | | |
| | 20-30 | 5 | 7,14 % |
| | 31-40 | 17 | 24,29 % |
| | 41-50 | 25 | 35,71 % |
| | 51-60 | 15 | 21,43 % |
| | >60 | 8 | 11,49 % |
| | Jumlah | 70 | 100 % |
| 2 | Pendidikan | | |
| | Tidak Sekolah | 2 | 2,86 % |
| | SD | 13 | 18,57 % |

| No. | Karakteristik | Jumlah | Persentase |
|-----|-----------------|--------|------------|
| | SMP | 32 | 45,71 % |
| | SMA | 21 | 30 % |
| | S-1 | 2 | 2,86 % |
| | Jumlah | 70 | 100 % |
| 3 | Pengalaman (th) | | |
| | 1-10 | 9 | 12,86 % |
| | 11-20 | 40 | 57,14 % |
| | 21-30 | 12 | 17,14 % |
| | 31-40 | 5 | 7,14 % |
| | 41-50 | 3 | 4,29 % |
| | >50 | 1 | 1,49 % |
| | Jumlah | 70 | 100 % |

Source: Data hasil penelitian, 2019

From the table above, it can be seen that the shallot farmers of Wanasari sub-district showed a range in the productive age indicated by the age range of 41-50 years as much as 25 respondents or at 35.71%. The background of respondents' education is still low because they took brief education, the data showed, most farmers in Wanasari sub-district only graduated up to Junior high school, which is 32 respondents or 45.71%, in terms of the pattern of think and decision making is strongly influenced by the quality of human resources with the education qualifications that have been taken.

Based on farming experience, the number of respondents with 11-20-year farming experience of 40 respondents or 57.14%. This means that the cultivation of shallots and shallots farming is a legacy until now. In fact, so many successful shallots farms in Brebes regency whether from independent farming or legacy.

The use of descriptive statistic is intended to see the spread of values of all variables on the research model. In this

descriptive statistic examine the analysis results which include the mean, minimum value, maximum value and standard deviation of each variable.

For the capital variables, the average information of capital is Rp. 28,481,714, with the minimum capital of Rp. 10,056,000 and the maximum Rp. 83,232,000 with standard deviation Rp. 12,110,448.

The land area variable, it is obtained the average information area of farmers planting shallots is 0.30 Ha. Meanwhile, the smallest or minimum onion area is 0.03 Ha. And the maximum land area reaches 0.69 Ha, a standard deviation of 0.15 Ha. While the labor variables obtained the labor average is 127.21 HOK minimum 29.00 HOK, maximum 347.00 HOK with standard deviation 57.60 HOK. For seed variable obtained average seedlings 488.80 Kg minimum 56.00 Kg maximum 838.00 Kg with standard deviation 184.80 Kg. For fertilizer variables obtained the average description of fertilizer 137.36 kg minimum 44.00 kg maximum 478.00 kg with standard deviation 68.54 kg. The variable pesticide obtained average information 0.36 LT pesticide minimum 0.04 maximum 1.31 LT, standard deviation of 0.20 Lt. While the production variable, obtained average production of 28.86 quintals, minimum production 10 quintals, maximum production 57 quintals with standard deviation 10.79 quintals.

Multiple Regression Analysis

In order to explain the factors that have a real connection or not to the level of production of shallots in the Wanasari sub-district, Brebes regency, then used a method of analysis of multiple linear regression. The following are the results of multiple linear

regression analyses on this research model in the table below:

Table 3.2. Multiple Regression Analysis

| Variable | Coeff. | Std. Error | t-Statistic | Prob. |
|--------------------|---------|----------------------|-------------|--------|
| C | 2.7588 | 3.3710 | 0.8184 | 0.41 |
| X1 | 3.06E-7 | 9.25E-08 | 3.3027 | 0.00 |
| X2 | 18.999 | 5.9110 | 3.2142 | 0.00 |
| X3 | 0.0128 | 0.0177 | 0.7236 | 0.47 |
| X4 | 0.0184 | 0.0062 | 2.9479 | 0.00 |
| X5 | 0.0137 | 0.0132 | 1.0395 | 0.30 |
| X6 | -2.3440 | 4.1400 | -0.5661 | 0.57 |
| R-squared | 0.6308 | Mean dep. var | | 28.857 |
| Adj. R-squared | 0.5956 | S.D. dep. var | | 10.792 |
| S.E. of regression | 6.8623 | Akaike info crit. | | 6.7846 |
| Sum squared resid | 2966.8 | Schwarz criterion | | 7.0094 |
| Log LH | -230.46 | Hannan-Quinn criter. | | 6.8739 |
| F-stat | 17.942 | Durbin-Watson stat | | 1.9283 |
| Prob | 0.0000 | | | |

Source : Output olah data E-views

Based of the above table is derived from the results of multiple regression equations in the study written as below:

$$Y = 2.759 + (3, 06E-07) X_1 + 18.999 X_2 + 0.013 X_3 + 0.018 X_4 + 0.014 X_5 + (- 2.344) X_6$$

$$Y = 2.759 + 0.00000306 \text{ capital} + 18.999 \text{ land area} + 0.013 \text{ Labor} + 0.018 \text{ seedlings} + 0.014 \text{ fertilizer} - 2.344 \text{ Pesticides}$$

Based on the equation above, a constant value is 2.759. The value of the constants means that the production of shallots has a value 2.759 if the value of all the variables affecting equals zero.

While other variables, there is also a value of each coefficient, which determines the value of the variable in case of change. In X_1 variable that is assets. The assets variable has a coefficient value of 3.06×10^{-7} or 0.00000306 . This means if the assets variable rises by one rupiahs, while the value of land area, labor, seedlings, fertilizers, pesticides fixed, it will cause the addition of production of 0.00000306 quintal or with a capital increase of Rp. 1 million then will increase the production rate by 0.306 quintal.

Furthermore the area variable land (X_2) has a coefficient value of 18.999 . This means that if the area variable rises by one hectare, while another variable is fixed it will increase the production factor by 18.999 quintal. For a Labor variable (X_3), it has a coefficient value 0.013 . If the labor level rises by 1 HOK, while another variable remains, it will raise the production factor of 0.013 quintal.

The seed variable (X_4) has a coefficient value of 0.018 . That is, if the seed level has increased by one kilogram of seedlings, while other variables remain, it results in a production increase of 0.018 quintal.

The next variable is fertilizer (X_5) has a coefficient value of 0.014 positive values. This indicates an influence that is directly proportional between fertilizer and shallot production. That is, if the level of fertilizer has increased by 1 kg, while another variable remains, it will result in a production rate up by 0.014 quintal.

The pesticide variable (X_6) has a coefficient value of -2.344 . Negative value, this indicates there is an influence that is inversely proportional between pesticides and the production of shallots. That is, if the number of pesticides increased by 1 LT, while other

variables remained, the production rate dropped by 2.344 quintal.

Hypothesis Testing

Simultaneous hypothesis testing (test-F)

The F-test tests are used to describe the influence of all independent variables against an independent variable that can then draw conclusions of significant or insignificant influence.

From the F-test used hypotheses as follows:

H_0 : No effect of independent variables on dependent variables

H_a : Exposure of free variables to bound variables

While the criteria for decision making are:

If $F_{counts} \leq F_{table}$ or $sig \geq 5\%$ then H_0 received

If $F_{counts} > F_{table}$ and $sig < 5\%$ then H_a received. With $n = 70$, $k = 6$, acquired F table = 2.244

Below is a table of results from the output software E-Views describing the test calculation F as follows:

Table 3.3. Anova

| | |
|--------------------|----------|
| F-statistik | 17.94253 |
| Prob (F-statistik) | 0.000000 |

Source: Output olah data E-views

In the table of Anova F value obtained $17.942 > 2,244$ and probability $0.000 < 0.05$ which means independent variables that include asset, land size, labor, seedlings, fertilizers, and pesticides simultaneously have a significant effect on the dependent variable of production. Then it can be said independent

variables that include asset, land area, labor, seedlings, fertilizers, and pesticides are able to explain the magnitude of the dependent variable that is the result of production.

Partial hypothesis testing (test-T)

The comparison between T-count and T-table is the way it is used to perform individual tests (T-test) or commonly called partial tests. The results of the T-Test can be described in the table summarized below:

Table 3.4. Partial Hypothesis Testing

| Variabel | Koef. | Std. Error | t-Statistic | Prob. |
|----------|----------|------------|-------------|--------|
| C | 2.7588 | 3.371033 | 0.818404 | 0.4162 |
| X1 | 3.06E-07 | 9.25E-08 | 3.302701 | 0.0016 |
| X2 | 18.999 | 5.911028 | 3.214299 | 0.0021 |
| X3 | 0.0128 | 0.017724 | 0.723615 | 0.4720 |
| X4 | 0.0184 | 0.006262 | 2.947976 | 0.0045 |
| X5 | 0.0137 | 0.013242 | 1.039535 | 0.3025 |
| X6 | -2.3440 | 4.140047 | -0.566177 | 0.5733 |

Source: Output olah data E-views

Based on the table above, the hypothesis was:

Ho: there was no impact between independent variables and dependent variables.

Ha: there is a impact between independent variables and dependent variables.

To be able to describe the hypothesis, the the criteria for for decision making are as follows:

At a trust level of 95% or in other words = 0.05. With the degree of freedom (DF) = $n-k = 70-6 = 64$, obtain a Ttable value of 1.998.

If T-count \leq T-table or sig \geq 5% then Ho received

If the T-table < T-Count or sig is < 5% then the Ho is rejected

a. Assets variable

Based on the results of statistical testing with Eviews, the asset variable obtained the value of T-count by 3.303 probability 0.002 =

0.20% < 5% then Ho rejected. That is, the asset variables have a significant influence on the production level.

b. land area variable

Based on the results of a statistical test with Eviews, a variable area of land acquired a value of T-count of 3.214 with probability 0.005 = 0.50% < 5% then Ho rejected. It means, land wide variables have a significant effect on the production level.

c. Labor variables

Based on the results of statistical testing with Eviews, a variable area of land acquired a value of Tcount of 0.724 with probability 0.472 = 47.20% > 5% then Ho accepted. It means, the labor variables do not have a significant effect on the production level.

d. Seed variables

Based on the results of statistical testing with Eviews, a variable area of land acquired a value of Tcount of 2.948 with probability 0.004 = 0.45% of < 5% then Ho rejected. That is, the seed variable has a significant influence on the production level.

e. The fertilizer variable

based on the results of statistical testing with Eviews, a variable area of land obtained 0.3025 the 1.039 value of That is, the fertilizer variables do not have a significant effect on the production level.

f. Pesticide variables

Based on the results of statistical testing with Eviews, a variable area of land acquired a value of Tcount of 0.566 with probability 0.573 = 57.33% > 5% then Ho accepted. That is, pesticide variables do not have a significant effect on production levels.

Coefficient of determinant (R^2)

The use of this testing determinant aimed to see the size of the capability of free variables covering assets, land area, labor, seedlings,

fertilizers, and pesticides, on a research model to explain the dependent variables that are production levels. Result of the test coefficient of determinant in this study could be explained in the table below:

Table 3.5. Determinant Test

| | |
|--------------------|----------|
| R-squared | 0.630834 |
| Adjusted R-squared | 0.595676 |

Source: Output olah data E-views

According to the table above R^2 gets a value of $0.631 = 63.1\%$. Therefore, it can be concluded that the magnitude of the influence of free variables covering the capital factors, land area, labor, seeds, fertilizer, and pesticides to dependent variable is 63.1% . This means that changes in the production rate of shallot in Wanasari sub-district can be explained by the variable on the model, the remaining 36.9% is affected by other variables that are not present in the variables in this model of research.

From the statistic testing described above, it was known that the coefficient of determinant (R^2) In this study has a value of 0.631 which means 63.1% of the rate of production of onions in the district of Wanasari Brebes District is influenced by capital factors, land size, labor, seedlings, fertilizers, and pesticides. The rest of it 36.9% of shallot production rate in Wanasari sub-district is affected by other factors other than the factors in this research.

Viewed from F-test, the regression model used in this study is worth $F_{count} 17.943$ which is greater than f_{table} . That is, it shows that the entire variable is free on the regression model affecting simultaneously against the level of production of shallot Wanasari subdistrict. Furthermore, based on the results of the T-test

previously described, factors that have a significant influence on the level of production of shallots are Capital factors, land area, and seedlings. Meanwhile, other factors (labor, fertilizer, pesticides) do not have significant influence on the level of production of shallots. The analysis of each variable can be explained as follows:

The Effect of assets on shallot production (X_1)

Asset factors can be interpreted as one of the important factors in the production of shallot plants. The asset in this research can be explained as some money used to manage and finance the production of shallots. Capital has a unit of rupiah (RP) in this study.

Based on the results of multiple regression calculations with a confidence rate of 95% the capital factor has significant effect and has a coefficient value of 0.000000306 . In other words if the capital is increased by Rp. 1, while other independent factor values remain, it can result in the production of shallots up by 0.000000306 quintal.

The result of the calculation is in line with the theory expressed Manurung (2007), stating that asset is needed in building a business. asset is a important part in business, because without asset, business could not develop or even be bankrupt.

Therefore, the addition of asset in the effort to increase the production of shallots in Wanasari subdistrict need to be improved. However, the addition of capital need to be accompanied by the management of a good farmer business to increase the production of shallots more effectively.

Land area effect on shallot production (X₂)

In producing shallots, the broad factor of land is measured in hectares (Ha) units. Based on the results of multiple regression calculations with a trust rate of 95% significant factors of land influence and have a coefficient value of 18.999 in other words if land area rises by one hectare, while other independent factor values remain, resulting in the production of shallots increased by 18.999 quintal.

The results of this calculation are in line with the research conducted by Awami (2018), Elfia (2015), Listianawati (2014), and Nurcahyaningtyas (2013). According to Soekartawi (1993), the result of agricultural efforts will be efficient or not influenced by the scale of the business in which there is a broad factor of agricultural land. Generally, agricultural businesses that have a wider area of land have a low level of efficient and rather the narrower the agricultural land in an agricultural business will be more efficient. Nevertheless, if the land area is too narrow then the farmer's business tends to be inefficient anyway.

Considering this explanation, the area of shallots farmland in Wanasari subdistrict needs to be improved. However, in fact with the addition of land area should also look at soil fertility conditions. Based on the data in the field, the condition of soil fertility in one of the villages in Wanasari Sub District, Klampok Village, has a lower fertility rate characterized by the addition of fertilizer by farmers who complain of the high demand for fertilizer to achieve increased production of shallots.

The effect of Labour on shallots Production (X₃)

The labour factor can be interpreted as many farmers who play a role inThe process of

shallot production is either a family member or not a family of its own and is outlined in the Working People's Day (HOK). HOK is a unit of manpower gained by multiplying the number of people working/labor with the number of working days and the number of working hours per day is divided into 8 hours (the standard of labor working time in a day).

Based on the outcome of multiple regression calculations by having a confidence level of 95% The labor factor is worth a coefficient of 0.013 while probability 0.472 then does not affect the production rate significantly. The results of this study in accordance with the research of Awami (2018), and Listianawati (2014) which states the labor factor has no real and significant effect.

The small work of labor is correlated with the resulting agricultural produce. Further, the growing farming effort, it will require a lot of labor. Conversely, the growing farming will require more labor and with good skill. If the farmer's business grows, it will require labor with a daily wage. This occurs on a large scale of agriculture, but in today's freelance workforce can be penetrated on small-scale farming. This is due to structural changes (Daniel, 2002).

Effect Of Seedlings On Shallot Production (X₄)

The explanation of the seed factor in this study is the number of shallots used for the production of shallots in one growing season. Based on the calculation results of multiple linear regression with a confidence rate of 95% seed factor has a coefficient value of 0.018 In other words if the number of seedlings has increased by one kilogram, while other independent factor values are equal, then the production rate of shallots rises by 0.018 kwintal. While the value of probability is 0.0045 which indicates a significant influence

between seedling factor to the level of production of shallots in Wanasari sub-district.

This is in line with the research conducted by Awami (2018) and Nurcahyaningtyas (2013) which is the result of a significant seed factor on the production of shallots.

The addition of seedlings should be increased to increase the production rate of shallots. However, in fact, based on the results of the researchers with the respondents farmers tend not to use superior seeds but rather choose to use seeds from their own crops so that the production level is less than maximum. This is because the farmers want to reduce the cost of production, some other reasoned not enough capital, which basically if you want to use a good seed, it should have a capital that is not minimal, but the result will also increase the production so that the farm business will be more maximal.

The Effect of fertilizer on shallot production (X5)

Fertilizer is a material made from chemical and natural that serves to fertilize farmland or crops. The fertilizer factor in this study has a kilogram (Kg) unit.

Based on the results of the calculation of multiple regression analyses with a confidence rate of 95% fertilizer factor has a coefficient value of 0.014 in other words if the amount of fertilizer increased by one kilogram, while other independent factor values are equal or fixed, then the production of shallots increased by 0.014 kwintal.

Nevertheless, the fertilizer factor has a high probability value of 0.303 which means that fertilizer has no significant effect on the level of production of shallots.

This is in line with the research results that have been done by Listianawati (2014) that the fertilizer has no significant effect on the level of production of shallots.

In line with the development of the shallot, the increase in onion production is also increased. However, the use of improper or excessive fertilizers instead makes the plant not grow properly alresults resulting in decreased production.

Effect of pesticides on production of shallots (X6)

Pesticide factor is the sum of all pesticides used by farmers in the treatment activities of the liquid-shaped shallots measured using liter units (Lt). Based on the results of multiple regression calculations with a confidence level of 95% of the pesticide factor in this study is worth a coefficient-2.344 so inversely proportional to the production rate of shallots, in other words if the number of pesticides increased by 1 liter, while other independent factor values do not change, then the production of shallots decreased by 2.344 kwintal

The pesticide factor has a high probability value of 0.573 so it has no significant effect on the level of production of shallots. This is in line with the research results that have been done by Awami (2013) and Listianawati (2014) that pesticides have no real and significant effect on the level of production of shallots.

CONCLUSION

Based on the results and the discussion described above, the conclusion that can be withdrawn from the study is as follows: 1) Assets factor is real and significant to the level of production of shallots in Wanasari sub-district; 2) The land area factor is the most noticeable real and significant compared to other factors on the level of shallot production in Wanasari sub-district; 3) The labor factor has no real and significant effect on the level of production of shallots in Wanasari sub-district; 4) Seedlings factor is real and significant to the level of production of shallots in Wanasari sub-district; 5) Fertilizer factor does not affect the real and significant to the level of production of shallots in Wanasari sub-district; 6) Pesticide factor has no real and significant effect on the rate of production of shallots in Wanasari sub-district.

Based on the results and the discussion described above, the advice are: 1) We encourage farmers to focus on increasing the land area along with seedlings and capital to increase the production of shallots more effectively and efficiently; 2) Production process should be more attentive to the number of manpower used to make production and profit can be maximised; 3) Excessive use of fertilizers can affect soil fertility or crop damage. What if the fertilizer is a chemical fertilizer. Then you should avoid excessive use of fertilizers; 4) Fighting Onion Pest One of them is caterpillar. But without realizing it, the provision of excessive pesticides resulted in the development of plants is not maximal and even lowered the production level. Therefore, it is necessary to study deeply about the provision of pesticides that are not excessive in order to be more efficient.

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