

INFLUENCE FACTORS INCOME OF JENGKOL FARMERS IN MANGGENG DISTRICT

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Abstract

The purpose of this research is to know the cost and income of jengkol farming in Manggeng District and to know the factors that influence it. The number of samples was 30 people who were jengkol farmers in Padang Village, Manggeng District. Results (t-test analysis at level $\alpha = 0.05\%$) the cost of pesticides and workers' wages are socio-economic variables that have a significant effect on the income level of jengkol farmers. The variables of education level (X_1), farming experience (X_2), amount of production (X_3) and fertilizing costs (X_4) did not have a significant effect on the level of income of jengkol farmers in Padang Village, Manggeng District. With the value of the coefficient of determination (R^2) obtained, which is equal to 0.648, it means that 64.8% of the income of jengkol farmers is influenced by the variable level of education (X_1), farming experience (X_2), total production (X_3) fertilizer costs (X_4) pesticide costs (X_5) and labor wages (X_6). While 37.2% is influenced by variables outside the model in this study.

Keywords: *Income, Farming, Jengkol*

1. INTRODUCTION

Indonesia is an agricultural country, where agriculture plays an important role in the development of a region. Agriculture is the primary sector in the Indonesian economy. This means that the agricultural sector is the main sector which accounts for almost half of the Indonesian economy (Dewi, 2017)

Agricultural development can be achieved through sustainable agricultural development. Agricultural development in Indonesia is directed at fulfilling the objectives to be achieved, namely increasing the welfare of the farming community which is more equitable. To achieve this goal, it can be done by increasing production, labor productivity, land and capital. Sustainable agricultural development is characterized by continuous production that provides benefits and freedom for farmers to make the best choices in farming (Agus and Tety, 2017). In addition, the agricultural sector also acts as a cog for other sectors by exploiting the potential of the agricultural sector, in this case agricultural raw materials.

Jengkol commodity is one of the local commodities in Indonesia. The national production of this commodity reached 66,064.80 tons in 2017 and in certain seasons, the price of this commodity can soar (Cipto, 2019). Economically, jengkol is a non-timber forest product (HHBK) plant that has the highest economic value (Pardede et., al, 2018). Based on statistical data, geographically, these commodities are located in the western region and parts of the central region of Indonesia. These areas are Java, Sumatra and Kalimantan. Petai production in Java and Sumatra reached 82.44% and 13.69% of national production, respectively. As for jengkol in Java and Sumatra, 25.51% and 57.43% respectively of the national production.

Southwest Aceh Regency is one of the districts in the South West region of Aceh Province which cultivates this jengkol commodity, which is now one of the prima donna crops for most

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farmers, especially in the Manggeng sub-district where the average jengkol farmer has farming experience of 8-11 years with an average average ownership of >36 trees per person (Teuku and Aswin, 2021). Jengkol plants grown and cultivated in this area with ages over 10 years are capable of producing 0.5 – 1 ton/tree/year while in other areas it only reaches 0.3 tons per tree, so that the jengkol commodity in Southwest Aceh District this has been patented and has a license from the central government (Antaranews, 2021).

This promising economic potential can make the jengkol commodity a generator of the people's economy. The high production of jengkol and high prices certainly increase income and profits for farmers. Income is the level of a person's ability to meet his material needs in a certain time unit. With income, it means that a business is worth maintaining even though in fact there are still a number of things other than income that can be taken into consideration for continuing a business (Angga, 2019). This is in line with the opinion (Nurul et., al, 2014) Income is also often used as a benchmark in measuring the level of welfare of a society and the success of a country's economy.

To maintain or increase the production and income of jengkol farmers in Manggeng District, it is necessary to know the detailed description of farming and the influential socio-economic factors. The influential socio-economic factors differ between the agricultural commodities cultivated and the socio-economic factors themselves. The development of the agricultural sector can be carried out through an approach with factors that include; land use, fertilization, seeds, plant cultivation and plant protection. While social factors in the form; workforce, education level of farmers and institutions. Economic factors in the form; capital, farmer income, interest rates, inflation and development factors in the form of roads and irrigation facilities (Hottden et., al 2016).

Besides that, other socio-economic factors such as the education level of farmers, farming experience, and selling prices are also factors in describing the influence exerted on farmer income (Dudi et., al, 2022). However, (Sarno and Eko, 2022) also stated that there are several socio-economic factors that affect farmer income, including the age of the farmer, income earned, number of family dependents, land area and amount of production.

Other socio-economic factors that affect the income of tobacco farmers include the amount of production, land rent, production costs, labor costs, and selling prices (Dudi et., al, 2022). (Sarno and Eko, 2021) in their research also stated that age is the only socio-economic variable that has a significant effect on the income level of farmers. Meanwhile, family dependents, land area, and production did not have a significant effect on income levels.

2. IMPLEMENTATION METHOD

The number of samples was 30 people who were jengkol farmers in Padang Village, Manggeng District. The research location was carried out in Padang Village, Manggeng District, Southwest Aceh District. Data collection was carried out by observing and approaching individually through direct observation activities in the field to identify farmers who are trying to farm jengkol. Data analysis was carried out by analyzing farmers' income using the equation

$$\pi = TR - TC$$

Information :

- π = Revenue/Profit
- TR = TotalRevenues

tc = Total Cost

As for the analysis of the influence of social factors on the income of jengkol farmers using the analysis of Multiple Linear Regression data in general, the regression model is as follows:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6$$

Where:

- Y = Income of jengkol farmers
 $b_0, b_1, b_2, b_3, b_4, b_5, b_6$ = Regression coefficient
 X_1 = Level of education
 X_2 = Farming experience
 X_3 = Production amount
 X_4 = Fertilizer costs
 X_5 = Pesticide costs
 X_6 = Worker wages

Testing the hypothesis on socio-economic factors that affect the level of income of jengkol farmers is analyzed through partial and simultaneous testing. According to Bowo (2010), Widarjono (2007) in Sarno and Eko (2021) the test is a partial hypothesis test (t-test) and simultaneous hypothesis testing (F-Test) and the Coefficient of Determination (R^2).

3. RESULTS AND DISCUSSION

Southwest Aceh District is one of 23 regencies/cities in Aceh Province which was the result of division of South Aceh District. Geographically it is located between $96^{\circ} 34' 57''$ - $97^{\circ} 09' 19''$ East Longitude and $3^{\circ} 34' 24''$ - $4^{\circ} 05' 37''$ North Latitude. Based on the results of the GIS (Geographic Information System) digitization calculation on the SPOT image map, the area of Southwest Aceh District is 1,882.05 km² or 188,205.02 Ha.

The air temperature in Southwest Aceh District ranges from 29.5°C - 26.2°C . In coastal areas, the air temperature can reach 25.6°C - 27.7°C , while in mountainous areas with an altitude of 400-1,350 meters above sea level, temperatures can reach up to 22°C - 26°C with humidity levels ranging from 87- 90%. Of the area of 1,882.05 km², around 66.5 percent is fertile lowland. Of the total fertile plains, 62.75 percent consists of clay soil which is filled with community forests, state forests, rice fields, fields and other gardens.

Soil types in Aceh Barat Daya District are dominated by inceptisols which are located in the North and South parts of Aceh Barat Daya District or to be precise in Tangan-Tangan District and a small part in Manggeng District. The effective depth of soil in the area of Aceh Barat Daya District is more than 90 cm (Qanun Aceh Barat Daya, 2016). This shows that Southwest Aceh has the potential to be developed into a jengkol cultivation area.

Jengkol plants grown and cultivated in this area with ages over 10 years are capable of producing 0.5 – 1 ton/tree/year while in other areas it only reaches 0.3 tons per tree, so that the jengkol commodity in Southwest Aceh district this has been patented and has a license from the central government (Antaranews, 2021).

3.1 Description of Respondents

1. Age

Age distribution of respondents can be seen in the following table.

Table 1 Age of Respondents in the Study Area

No	Age	Amount	Percentage
1	≤30	3	10%
2	31-59	25	83%
3	≥60	2	7%
Total		30	100%

Source: Primary Data (processed), 2022

Table 1 shows that there are more farmers with an age range of 31-59 years with a percentage of 83%, farmers aged ≥ 7 years have a percentage of 7%, and farmers aged ≤ 30 years only have a percentage of 10%. The average age of farmers in the study area is between 31-59 years, which means they are of productive age to work.

2. Level of education

The level of education the respondent has taken can be seen in the following table.

Table 2 Respondents' Education Level in the Study Area

No	Education	Amount	Percentage
1	SD	3	10%
2	Middle-High School	17	57%
3	>high school	10	33%
Total		30	100%

Source: Primary data processed in 2022

Based on Table 2, it can be seen that the education level of the respondents is mostly SMP-SMA, namely 17 people or 57%, while those > SMA are 10 people or 33%. This reflects that the respondent's education is moderate. The level of education can be said to be the last formal education such as elementary, junior high, high school and college that a person has ever taken. Education can have a big influence on a person's mindset.

3. Work

The main occupation of the respondents can be seen in the following table.

Table 3 Main Occupation of Respondents in the Study Area

No	Work	Amount	Percentage
1	Peasants/Laborers	13	43%
2	Self-employed	9	30%
3	civil servant	8	27%
Total		30	100%

Source: Primary data processed in 2022.

Based on Table 3, it can be seen that most of the respondents' main occupations were crop farmers/workers, namely 13 people or 43%, entrepreneurs as many as 9 people or 30%, while those who worked as civil servants were 8 people or 27% SMA. Work on agricultural land does not require farmers to be on their farm every day. Farmers can take advantage of their free time by working in other sectors if they still want to increase their income (Indah et.al, 2018).

4. The number of dependents

The number of dependent family members of the respondents can be seen in the following table.

Table 4 Number of Dependents of Respondents in the Study Area

No	dependents	Amount	Percentage
1	≤1	5	17%
2	2-3	17	57%
3	≥4	8	27%
Total		30	100%

Source: Primary data processed in 2022

Based on Table 4, it can be seen that the largest number of dependents is 2-3 0 people or 57% while dependents ≥ 4 are 5 people or 27%. The large number of dependents will certainly affect expenses. The large number of dependents of respondents will result in farmers having to increase the amount of production to meet all household needs. Thus the production of farmers can meet all the needs of their families (Arlis 2016).

5. Farming Experience

The percentage of farmers based on farming experience is presented in the following table.

Table 5 Respondents' Experience in the Research Area

No	Farming time	Amount	Percentage
1	≤5	3	10%
2	5-15	24	80%
3	≥15	3	10%
Total		30	100%

Source: Primary data processed in 2022

Based on Table 5, it shows that farmers in Padang Village, Manggeng District, have various farming experiences, ranging from under 5 years to ≥ 15 years. There are 27 farmers who have experience in farming for more than \geq years, which is 90% of the total 30 respondents. Agatha & Wulandari, (2018) dama Irganov et., al (2021) which states that farmers who have been involved in farming activities for a long time will be more selective and precise in choosing the types of innovations that are applied, and be more careful in the decision-making process in carrying out farming activities. farming, but conversely for farmers who are less experienced will usually be quicker to make decisions because usually they will bear more risks.

3.2 Farm income analysis

1. Cost Analysis

The results of the analysis of costs incurred for jengkol farming in Padang Village, Manggeng District, analysis data can be seen in the following table.

Table 6 Equipment used in Jengkol farming

No	Name of goods	Price
1	Machete	72,917
2	Hoe	21,819
3	Kerambit	24,792
4	Splash	29,863
Total		149,390

Source: Primary data processed in 2022

Based on Table 6, the average cost incurred by farmers for equipment is Rp. 149,390, - these costs were spent on the purchase of an average of 3 Parang farmers, an average of 2 purchases of hoes, 3 purchases of Kerambit and an average purchase of 1 sprayer tank. Fixed costs can be defined as costs that are relatively fixed in amount, and continue to be incurred even if a lot or a little production is obtained (Aril et., al 2021).

Table 7 Cost analysis results

No	Description	Amount (IDR)
1	Fertilizer	333,667
2	Pesticide	253,000
3	Labor costs	
	Land clearing	3,497,833
	Fertilization	354,238
	Harvesting	10,358,889
4	Gunny sack	476,667
5	Transportation to land	2,076,000
6	The cost of transporting the harvest	1,906,667
Total		19,256,960

Source: Primary Data (processed) 2022

Based on Table 7, it can be seen that the total consumable costs incurred by farmers for labor are Rp. 19,256,960,- This includes the cost of materials, labor and transportation. The total cost incurred for the purchase of materials which includes the cost of fertilizer is Rp. 333,667, pesticide costs Rp. 253,000 and the cost of buying gunny sacks is Rp. 476,667.

The labor used includes land clearing Rp.3,497,833, fertilizer workers Rp. 354,238. Labor costs for land clearing and fertilizing are calculated by the number of workers multiplied by the number of working days (HOK), the labor for harvesting is Rp. 10,358,889 issued the amount of production (Kg) multiplied by wages (wages/kg Rp.1,000) and transportation costs carried out at harvest time, which is Rp. 1,906,667 and 2,076,000 land transportation costs/year. All total expenses start from fixed costs and consumable costs per year (2 times production).

2. Revenue Analysis

Farmers' income analysis is the result of subtracting the total income received by rice farmers per harvest and the total costs incurred by these jengkol farmers per year (2 harvests).

Table 8 Results of Jengkol Farming Income Analysis

No	Description	Amount
1	Total expenses	19,406,351
2	Yields	9,400
3	Selling price	7,556
4	Income	71,027,244
5	Profit	51,620,893

Source: Primary data processed in 2022

Based on Table 8 it can be seen that the average total income of jengkol farmers per year (2 harvests) is Rp. 51,620,893,- (average 1.337 m² or 1.33 ha). This farmer's income is the farmer's net income or it can also be said as an advantage for farmers in running their jengkol farming business.

3.3 The Effect of Social Factors on Farmers' Income

The factors that affect the income of jengkol farmers are (X₁) education (X₂) farming experience (X₃) production (X₄) fertilizer costs (X₅) pesticide costs and (X₆) labor wages. These variables were analyzed using a multiple linear regression model.

Independent variables that have a negative sign include the variables X₁ and X₄. These two variables are variables that reflect the education level of farmers and fertilizer costs. These variables have a relationship with the variable farm income with a negative sign. If there is an

increase in the age of the farmer and the amount of land, it will reduce the value of the income earned by the farmer. From the results of data analysis, the regression equation can be obtained as follows:

$$Y = -3918184.244 - 788665.535X_1 + 19067.524X_2 + 249580.742X_3 - 2.772X_4 + 79.882X_5 + 20.708X_6$$

1) Analysis of the coefficient of determination

The coefficient of determination is used to determine the level of influence of independent variables such as education level (X_1), farming experience (X_2), amount of production (X_3), fertilization costs (X_4), pesticide costs (X_5) and worker wages (X_6) affect the dependent variable. income level (Y) of jengkol farmers. The results of the analysis of the coefficient of determination are clearly presented in the following table.

Table 9 Determination coefficient value

Model	R	R Square	Adjusted R Square	std. Error of the Estimate
1	.804a	.646	.553	17691075.27016

Source: SPSS-26 Analysis Results (2022)

Based on Table 9 it can be explained that the accuracy of the regression model used can be shown by the value of the coefficient of determination (R^2) obtained which is equal to 0.648, meaning that 64.8% of the income of jengkol farmers is influenced by the variable level of education (X_1), farming experience (X_2), total production (X_3) fertilization costs (X_4) pesticide costs (X_5) and workers' wages (X_6). While 37.2% is influenced by variables outside the model in this study. Coefficient of determination (R^2)

2) t-test

This analysis is used to see the effect of each independent variable individually on the dependent variable which can be seen in the following table.

Table 10 T-test results

Variable	coefficient	Q	Sig
Y's income	23869335.811	-0.164	0.871
Farmer education X_1	4535564.006	-0.174	0.863
X_2 farming experience	1284710.377	0.015	0.988
Number of production X_3	339032074	0.736	0.469
X_4 fertilization costs	17,091	-0.162	0.873
Cost of pesticides X_5	33,284	2,400	0.025
X_6 worker wages	5,467	3,788	0.001

Source: SPSS-26 Analysis Results (2022)

Based on Table 10, it can be explained that some of the t-test results that have an individual effect are as follows.

- Farmer Education (X_1) Based on Table 10, the significance value for the effect of X_1 on Y is $0.863 > 0.05$ and the t-count value is $-0.174 < t\text{-table } 1.713$. Because $t\text{-count} < t\text{-table}$, then H_0 is accepted and H_1 is rejected. This shows that the education variable of farmers has no significant effect on the level of income of jengkol farmers in Padang Village, Manggeng District. The regression coefficient value is negative, meaning that the farmer education variable (X_1) has an inverse effect on the income variable (Y). This means that formal education does not affect income, because farmers need more non-formal education, such as counseling and through demonstration plots. According to Mulyono (2001), farmer development is influenced by how often farmers participate in farming activities.
- Farming experience (X_2), Based on Table 10, the significance value for the effect of X_2 on Y is $0.988 > 0.05$ and the t-count value is $0.015 < t\text{-table } 1.713$. Because $t\text{-count} < t\text{-table}$, then H_0 is accepted and H_1 is rejected. This means that the farming experience variable (X_2) has no significant effect on the income level variable (Y) of jengkol farmers in Padang

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- Village, Manggeng District. The regression coefficient value is positive, meaning that the farming experience variable (X_2) has an inverse effect on the income variable (Y).
- c. Number of production (X_3), Based on Table 10, the significance value for the effect of X_3 on Y is $0.469 > 0.05$ and the t-count value is $0.736 < t\text{-table } 1.713$. Because $t\text{-count} < t\text{-table}$, then H_0 is accepted and H_1 is rejected. This means that the total production variable (X_3) has no significant effect on the income level variable (Y) of jengkol farmers in Padang Village, Manggeng District. The regression coefficient value is positive, meaning that the total production variable (X_3) has an inverse effect on the income variable (Y).
 - d. Fertilizer costs (X_4), Based on Table 10, the significance value for the effect of X_4 on Y is $0.873 > 0.05$ and the t-count is $-0.162 < t\text{-table } 1.713$. Because $t\text{-count} < t\text{-table}$, then H_0 is accepted and H_1 is rejected. This shows that the variable cost of fertilizing farmers has no significant effect on the level of income of jengkol farmers in Padang Village, Manggeng District. The regression coefficient value is negative, meaning that the fertilizer cost variable (X_4) has an inverse effect on the income variable (Y). Nutrient availability must be monitored because of the “luxury consumption” phenomenon (*luxury consumption*), in which plants absorb more nutrients than are required for optimal growth (Tisdale et al. 1985). Excess nutrients absorbed by plants are less useful for increasing growth/yield, so waste will occur. Therefore, the soil sample plays an important role. Suyamto (2002) describes the fertilization steps and the strategy for applying site-specific balanced fertilization based on soil tests.
 - e. Pesticide costs (X_5), Based on Table 10, the significance value for the effect of X_5 on Y is $0.025 > 0.05$ and the t-count value is $2.400 > t\text{-table } 1.713$. Because $t\text{-count} > t\text{-table}$, then H_0 is rejected and H_1 is accepted. This means that the variable cost of pesticides has a significant effect on the income of jengkol farmers in Padang Village, Manggeng District. The regression coefficient value is positive, meaning that the pesticide cost variable (X_5) has an effect on the income variable (Y). High The cost of using pesticides will affect the income of jengkol farmers.
 - f. Labor wages (X_6), Based on Table 10, the significance value for the effect of X_6 on Y is $0.001 > 0.05$ and the t-count value is $3.788 > t\text{-table } 1.71$. Because $t\text{-count} > t\text{-table}$, then H_0 is rejected and H_1 is accepted. This means that the variable cost of pesticides has a significant effect on the income of jengkol farmers in Padang Village, Manggeng District. The regression coefficient value is positive, meaning that the wage variable (X_6) has an effect on the income variable (Y). High The cost of using pesticides will affect the income of jengkol farmers.

3) F-Test Results

F-Test Results Significance values for the influence of Variables $X_1, X_2, X_3, X_4, X_5,$ and X_6 on Variable Y can be seen in the following table.

Table 11 F-test results

Model	Sum of Squares	df	MeanSquare	F	Sig.
Regression	13119094683063786.000	6	2186515780510631000	6,986	.000b
residual	7198405316936214000	23	312974144214618000		
Total	2031750000000000.000	29			

Source: SPSS-26 Analysis Results (2022)

Based on the output of the F-test results, it is known that the significance value for the influence of $X_1, X_2, X_3, X_4, X_5,$ and X_6 simultaneously on Y is $6.98 > 2.53$ with a value ($\alpha = 0.05$) This value implies all the independent variables are simultaneously stated to have a significant influence on the income of jengkol farmers.

4. CONCLUSION

Jengkol farming in Manggeng District averages two harvests a year, with an average profit of Rp. 51,620,893 / year. Variables Cost of pesticides and workers' wages have a significant effect on the level of income of jengkol farmers. The coefficient of determination (R^2) obtained is 0.648, meaning that 64.8% of the income of jengkol farmers is influenced by the variable level of education (X_1), farming experience (X_2), amount of production (X_3) fertilization costs (X_4) pesticide costs (X_5) and workers' wages (X_6). While 37.2% is influenced by variables outside the model in this study.

REFERENCES

- Agus, S & Tetty, W. 2017. Faktor-Faktor Sosial Ekonomi yang Memotivasi Petani Melakukan Usahatani Padi Sawah (*Oryza sativa* L.) di Kelurahan Bukuan Kecamatan Palkaran Kota Samarinda, *Jurnal Ekonomi Pertanian & Pembangunan* Volume 14 No.2
- Antaraneews.com. 2021. Bupati: Jengkol Abdy lebih unggul dari Lampung. Diakses (12 November 2022).
- Angga F. 2014. Analisis Faktor-Faktor Sosial Ekonomi Terhadap Pendapatan Usaha Tani Padi Ladang Dalam Perspektif Ekonomi Islam. Fakultas Ekonomi Dan Bisnis Islam Universitas Islam Negeri Raden Intan Lampung. [Skripsi]
- Aril, M., Yuriko, B & Yuliana, B. 2021. Analisis Pendapatan Usahatani Cengkeh Di Desa Iloheluma Kecamatan Posigadan Kabupaten Bolaang Mongondow Selatan. *AGRINESIA* Vol. 5 No. 2
- Arlis. 2016. Hubungan Karakteristik Petani Dengan Produksi Padi Sawah Di Desa Rambah Tengah Barat Kecamatan Rambah Kabupaten Rokan Huluprogram. *Studi Agribisnis Fakultas Pertanian Universitas Pasir Pengaraian Rokan Hulu*
- Cipto H. (2013). Harga Jengkol Di Makassar Rp 25.000 Per Ons. Diunduh Dari [Http://Regional.Kompas.Com](http://Regional.Kompas.Com)
- Dinas Pertanian dan Perkebunan Propinsi Aceh Tahun 2020
- Dudi S., Lalu S., Pande K S. 2022. Pengaruh faktor sosial ekonomi terhadap pendapatan petani tembakau (studi kasus di Kecamatan Suralaga Kabupaten Lombok Timur) *Jurnal Agrotek SINTA accredited* Volume 9, NO 2, 2022
- Evy Linda, & Yosefina, M. F. 2017. Pengaruh Faktor Sosial Ekonomi Petani Terhadap Produksi Usahatani Jagung di Desa Badarai Kecamatan Wewiku Kabupaten Malaka. *Jurnal Agribisnis Lahan*, 36-38
- Hodden, I. N & Johdikson, A. 2016. Pengaruh Factor Social dan Ekonomi Terhadap Pendapan Petani Padi Sawah Dalam System Irigasi di kecamatan Lintong Nihuta Kabupaten Humbang Hasudutan, *Jurnal Agrifo* Vol1 No 2
- Indah, N. D., San, A. A., Wahyu, A & Priyono, S. 2018. Karakteristik Petani dan Kontribusi Hutan Kemasyarakatan (HKm) Terhadap Pendapatan Petani di Kulon Progo *Jurnal Ilmu Kehutanan* No 2. 86-98
- Irganov, M. Gusti., Siwi, G & Agus, S. P. 2021. Pengaruh Umur, Tingkat Pendidikan dan Lama Bertani terhadap Pengetahuan Petani Mengenai Manfaat dan Cara Penggunaan Kartu Tani di Kecamatan Parakan *Jurnal Litbang Provinsi Jawa Tengah* Vol. 19, No. 2, hal. 209 – 221
- Kementerian Pertanian. 2019. Statistik Pertanian 2018. Kementerian Pertanian RI. Jakarta
- Nurul, I., Ketut, K, & Wayan, S. 2014. Pengaruh Kredit Modal Kerja Terhadap Pendapatan Bersih Usaha Kecil Dan Menengah (Ukm) Sektor Formal”, *E-Journal* Volume 2 Hal.5
- Qanun Kabupaten Aceh Barat Daya Tahun 2016
- Rifaldi, R., R., Zulkarnain, Z., Usman, M. 2021. Analisis Faktor-Faktor Yang Mempengaruhi Volume Ekspor Ikan Tuna Indonesia. *Jurnal Ilmiah Mahasiswa*, Vol 5 No 2, Hal 180-191. DOI: <https://doi.org/10.17969/jimfp.v5i2.14676>

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- Sarno & Eko A. 2021. Analisis Pengaruh Faktor Sosial Ekonomi Terhadap Tingkat Pendapatan Kelompok Wanita Tani Singkong Desa Majalengka Kecamatan Bawang Banjarnegara Jurnal Ekonomi Pertanian dan Agribisnis (JEPA) Volume 5, Nomor 1: 125-134
- Sartini, S., Bagio, B. 2021. Faktor-Faktor Yang Mempengaruhi Permintaan Beras di Kabupaten Aceh Singkil. Jurnal Agrisepe Vol 22 No 2. Hal 47-53. Program Studi Agribisnis, Fakultas Pertanian, Universitas Syiah Kuala. DOI: <https://doi.org/10.17969/agrisepe.v22i2.24027>
- Suyamto. 2002. Strategi dan Implementasi Pemupukan Rasional Spesifik Lokasi. Orasi Pengukuhan Ahli Peneliti Utama. Badan Penelitian dan Pengembangan Pertanian, Jakarta. 57 hlm
- Teuku, A. M & Aswin, N. 2021. Terdampakkah Petani Jengkol Pada Pandemi Covid19 (Studi Di Kecamatan Manggeng Kabupaten Aceh Barat Daya) Journal Agribusiness Sciences Volume 05 No 02.
- Tisdale, S.L., W.L. Nelson, and J.D. Beaton. 1985. Soil Fertility and Fertilizer. MacMillan Publ. Co. Inc., New York. 754 pp.