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# COMPARISON OF BUSINESS INCOME ON TAJUK AND MANJUNG SHORT ONION FARMING IN TANDE VILLAGE MAJENE REGENCY WEST SULAWESI

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**Abstract**

*Red onion is a vegetable commodity that has high economic value in terms of fulfilling national consumption and sources of income. There are 2 types of shallots planted by farmers in the Tande Village, namely Tajuk and Manjung. There fore we want to see which variety is more profitable. This study aims: (1) to compare the productivity of Tajuk and Manjung shallot farming in Tande Village, East Banggae District, East Banggae Regency (2) to determine the comparison of Tajuk and Manjung shallot farming income in Tande Village, East Banggae District, East Banggae Regency. The research method used is by means of purposive sampling by way of consideration that is having a lot of farmer groups. The samples in this study were 20 farmers of the Tajuk variety and 20 samples of the Manjung variety of shallot farmers. The results showed that (1) the average shallot productivity for the Tajuk variety (Sipatuo Farmers Group) on a 3.40 ha land area was 3.42 tons/ha with an average production of 11.53 tons, and on a 1 ha land area the average the average productivity is 8.50 tons/ha with a total production of 8.50 tons. Whereas for the Manjung variety (Lestari Green Farming Group) the average productivity on a land area of 3.25 Ha is 3.18 Tons/Ha with a total production of 10.32 Tons, - the average shallot productivity on 1 Ha land is 7.90 Tons /Ha with total production of 7.90 tons. (2) the average income of Tajuk shallot farmers is greater than the average income of Manjung shallot farmers. The average income of shallot crowns on a land area of 3.40 Ha is Rp. 79,694,286 the average income of farmers on 1 Ha of land is Rp. 132,486,668. Whereas for the Manjung variety, the average income on a land area of 3.25 is Rp. 63,679,020, - the average income of farmers on 1 Ha of land is Rp. 120,517,501.*

Keywords: ***Red onion, Income, Crown Variety, Manjung Variety***

## 1. INTRODUCTION

red onion is a vegetable commodity that has high economic value in terms of meeting national consumption, sources of income for farmers, and its potential as the largest contributor to foreign exchange because national production reaches 1.47 million tons with a total net weight of 6.48 thousand tons and export value of 8.81 million US $. (BPS Statistics Indonesia, 2017).

According to the BPS (Badan Pusat Statistik) and the Directorate General of Horticulture in 2012, the average national red onion productivity has only reached 9.69 tons/ha and in West Sulawesi it is around 4.72 tons/ha. The productivity of shallot yields is seen as still low because the yield potential of red onions based on research results from the Vegetable Crops Research Institute can reach 12-15 tonnes/ha. There is still a great opportunity to increase shallot productivity through the application of appropriate cultivation technology (Cicu et al, 2016).

Data from the Department of Agriculture of West Sulawesi Province, Majene Regency stated that red onion productivity has increased from 2017 to 2019. In the shallot sector in 2017 it produced 797 tonnes/ha at a market price of Rp. 20,000 - Rp. 21,000/Kg. Whereas in 2019 shallot productivity reached 860 tonnes/ha with an increased selling price of Rp. 30,000-Rp. 32,000/Kg. Banggae Timur District in 2019 noted that shallots planted with a land area of 49 hectares could produce farmers' production of 413 tons, especially in the Tande Village which cultivates shallots, there are 3 Farmer Groups consisting of Sipatuo, Hijau Lestari and Sipatokkong. Farmer groups carry out shallot farming activities by planting twice a year using Tajuk and Manjung varieties.

Red onion farmers initially received assistance from the government through the Agriculture, Livestock and Plantation Service (DISTANAKBUN) in the form of shallot seed varieties of canopy and manjung varieties. The seeds were distributed to all farmer groups in the Tande Village. In making this planting program a success, the farmers continued to work closely with the field supervisors (PPL). Then the farmers plant in the mountain hills by taking turns because the farmers want to see which varieties are more profitable in terms of income and maintenance, but the planting system is relatively the same.

From the explanation above, this research will be conducted on the Sipatuo farmer group and the Hijau Lestari farmer group who cultivate the Tajuk and Manjung varieties of shallots to determine the comparison of production and productivity, so that it can be known which variety provides the greater profit and superiority of these varieties.

## 2. IMPLEMENTATION METHOD

Data analysis used in this research is descriptive quantitative analysis so that it can provide an overview and explain the costs and income of farmers which are presented in tabular form and followed by referring to the formula for calculating costs, revenues and income. The data collected includes primary data and secondary data. Primary data can be obtained from red onion farmers by interview and questionnaire methods that have been provided. Secondary data was obtained from related agencies in the research such as the Agricultural Extension Center of East Banggae District, the Agriculture Service, journals, theses, the internet and other literature.

The farmers who will be sampled in this study are farmers who cultivate Tajuk and Manjung red onion. The samples taken in this study were 20 farmers who cultivated the Tajuk variety of red onions under the name of the Sipatuo farmer group and 20 samples of

farmers who cultivated the Manjung variety of red onions under the name of the Green Lestari farmer group. These two farmer groups were taken as the research sample because these two groups could represent the three existing farmer groups besides that this farmer group was a homogeneous farmer group and the majority still cultivated red onions.

The stages of data analysis in this study are as follows:

### 2.1 Production Cost Analysis

The use of the two factors of production is calculated as costs that must be incurred, hereinafter referred to as production costs. Production costs are divided into two, namely fixed costs and variable costs.

$$\mathbf{TC = TFC + TVC}$$

Information :

TC = Total Cost (Rp)
TFC = Total Fixed Cost (Rp)
TVC = Total Variabel Cost (Rp)

### 2.2 Business Acceptance Analysis

According to (Suratiyah, 2015), revenue or production value is the amount of production multiplied by the production price in rupiah units.

$$\mathbf{TR = P \times Q}$$

Information :

TR = Total *Revenue* (Rp)

P = Price (Rp)

Q = Total Production (kg)

### 2.3 Business Revenue Analysis

To obtain the income received by farmers, the following formula is used:

$$\boldsymbol{\pi = TR - TC}$$

Information :

$\pi$ = Farming income or profit (Rp)

TR = Total *revenue* (Rp)

TC = Total *Cost* (Rp)

## 3. RESULT AND DISCUSSION

### Production Cost of Red Onion Farming

Production costs incurred by farmers to obtain production inputs that will be used in managing farming to produce production output. Production costs in this study consist of fixed costs and variable costs during one growing season. According to (Mulyadi, 2015) Variable costs are costs whose total changes are proportional to changes in the volume of activity. Examples of variable costs in shallot farming are the costs of seeds, fertilizers, pesticides, labor, and tool rental in one growing season.

### 3.1. Variable cost

**Table 1.** Average Seed Needs and Costs of Farmers in Shallot Farming Business (Sipatuo Farmers Group)

| Descrip | Price / Kg (Rp) | Total Seeds (Kg) | | Total Cost (Rp) | |
|---|---|---|---|---|---|
| | | 3.40 Ha | 1 Ha | 3.40 Ha | 1 Ha |
| Seeds | 20.000 | 3.180 | 900 | 63.600.000 | 18.000.000 |
| **Total** | | **3.180** | **900** | **63.600.000** | **18.000.000** |

*Source : Processed Primary Data, 2023*

Based on table 1. above, it explains that the total land area of the Sipatuo farmer group which consists of 20 people is 3.40 Ha, the number of seeds needed is 3,180 Kg at a cost of Rp. 63,600,000, - and if the farmer has a land area of 1 hectare, the required seed needs can reach 900 kg with a total price of Rp. 18,000,000.

**Table 2.** Average Seed Needs and Costs of Farmers in Manjung Shallot Farming (Sustainable Green Farmers Group)

| Descrip | Price / Kg (Rp) | Total Seeds (Kg) | | Total Cost (Rp) | |
|---|---|---|---|---|---|
| | | 3.25 Ha | 1 Ha | 3.25 Ha | 1 Ha |
| Seeds | 20.000 | 2.960 | 900 | 59.200.000 | 18.000.000 |
| **Total** | | **2.960** | **900** | **59.200.000** | **18.000.000** |

*Source : Processed Primary Data, 2023*

Based on table 2 above explains that the total area of the Green Lestari farmer group with 20 members is 3.25 Ha, so the number of seeds required is 2,960 kg at a cost of Rp. 59,200,000, - and if the farmer has a land area of 1 ha, the required seed needs are 900 kg with a total price of Rp. 18,000,000.

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**Table 3.** Average Fertilizer Use and Cost in Sample Farmers of Canopy Variety Red Onion Farming

| No | Fertilizer Type | Price/Kg (Rp) | Total Seeds (Kg) | | Total Cost (Rp) | |
|---|---|---|---|---|---|---|
| | | | 3.40 Ha | 1 Ha | 3.40 Ha | 1 Ha |
| 1. | NPK Ponska | 2.300 | 2.000 | 600 | 4.600.000 | 1.380.000 |
| 2. | ZA | 1.400 | 1.360 | 600 | 1.904.000 | 840.000 |
| 3. | Compost | 1.000 | 17.600 | 5000 | 17.600.000 | 5.000.000 |
| **Total** | | | **20.960** | **6200** | **24.104.000** | **7.220.000** |

*Source : Processed Primary Data, 2023*

Based on table 13 above, it can be explained that the respondent farmers for the Tajuk variety, the average use of NPK Ponska fertilizer in one planting season with a land area of 3.40 Ha is 2,000 Kg at a cost of Rp. 4,600,000, - and for a land area of 1 Ha, it takes 600 Kg at a cost of Rp. 1,380,000 -, and the respondent farmers also use Za fertilizer with the use of the same land area of 3.40 Ha as much as 1,360 Kg at a cost of Rp. 1,904,000, - while the land area of 1 Ha is 600 Kg at a cost of Rp. 840,000.

The use of organic fertilizer (compost) with a land area of 3.40 Ha is 317,600 Kg at a cost of Rp. 17,600,000, - while the average number of respondents per hectare uses compost as much as 5000 kg at a cost of Rp. 5,000,000.

**Tabel 4.** Average Use and Cost of Fertilizer in Sample Farmers of Manjung Variety Shallot Farming

| No | Fertilizer Type | Price/Kg (Rp) | Total Seeds (Kg) | | Total Cost (Rp) | |
|---|---|---|---|---|---|---|
| | | | 3.25 Ha | 1 Ha | 3.25 Ha | 1 Ha |
| 1. | NPK Ponska | 2.300 | 1.840 | 500 | 4.232.000 | 1.150.000 |
| 2. | ZA | 1.400 | 1.640 | 450 | 2.436.000 | 630.000 |
| 3. | Compost | 1.000 | 16.400 | 5000 | 16.400.000 | 5.000.000 |
| **Total** | | | **19.880** | **850** | **23.068.000** | **6.780.000** |

*Source : Processed Primary Data, 2023*

Based on Table 4. above, it can be explained that the average use of NPK Ponska fertilizer in one planting season on 3.25 Ha land is 1,840 Kg at a cost of Rp. 4,232,000, - and for 1 Ha of land, 500 Kg is needed at a cost of Rp. 1,150,000, - farmers also use Za fertilizer with the use of the same land area of 3.25 Ha as much as 1,640 Kg at a cost of Rp. 2,436,000, - while 1 Ha of land is 450 Kg at a cost of Rp. 630,000.

The use of organic fertilizer (compost) with a land area of 3.25 Ha is 16,400 kg at a cost of Rp. 16,400,000, - while the average number of respondents per hectare uses compost as much as 5000 kg at a cost of Rp. 5,000,000.

The conclusion explains what is expected in the Introduction section, as well as conclusions from the Results and Discussion *section*. Conclusions can also be added to the development plan for the implementation of future service.

**Table 5.** Average Use of Labor and Costs for Sample Farmers of Shallot Farming of Canopy Variety (KT. Sipatuo)

| No | Description of activities | HOK fee (Rp) | Total HOK (Person) | | Total Cost HOK (Rp) | |
|---|---|---|---|---|---|---|
| | | | 3.40 Ha | 1 Ha | 3.40 Ha | 1 Ha |
| 1. | Land Processing | 80.000 | 76 | 17 | 6.080.000 | 1.360.000 |
| 2. | Planting | 80.000 | 103 | 17 | 8.240.000 | 1.360.000 |
| 3. | Weeding | 80.000 | 66 | 13 | 5.280.000 | 1.040.000 |
| 4. | Fertilization | 80.000 | 75 | 15 | 6.000.000 | 1.200.000 |
| 5. | Sprinkling | 80.000 | 48 | 10 | 3.840.000 | 800.000 |
| 6. | Spraying | 80.000 | 36 | 15 | 2.280.000 | 1.200.000 |
| 7. | Harvesting | 80.000 | 102 | 15 | 8.160.000 | 1.200.000 |
| 8. | freight | 80.000 | 73 | 15 | 5.840.000 | 1.200.000 |
| 9. | Drying | 80.000 | 63 | 10 | 5.040.000 | 800.000 |
| **Total** | | | **642** | **127** | **51.360.000** | **10.160.000** |

*Source : Processed Primary Data, 2023*

Based on Table 5. above, it is explained that the respondent farmers in cultivating shallots certainly need labor in managing the land. The Sipatuo Farmer Group has a total land area of 3.40 Ha with a total workforce of up to 642 HOK with a total cost of Rp. 51,360,000 in one planting season, - whereas if the respondent farmer has a land area of 1 Ha, the number of workers needed is 127 HOK with a total expenditure of Rp. 10,160,000.

### 3.2. Fixed Costs

The equipment used to carry out the production process of shallot farming also has a depreciation value that is classified as depreciation cost. The depreciation of equipment costs which is calculated includes depreciation of equipment consisting of tarpaulins, sacks, forks, tanks, machetes and rulers. Depreciation costs for shallot farming equipment can be seen in Table 6. below.

**Table 6.** Average Cost of Depreciation of Equipment for Respondent Farmers on Red Onion Farming of Canopy Varieties

| No | Description | Average Total Depreciation Cost (Rp) | |
|---|---|---|---|
| | | 3.40 Ha | 1 Ha |
| 1. | Tarpaulin | 975.664 | 128.333 |
| 2. | Bag | 969.895 | 80.000 |
| 3. | Fork | 629.163 | 83.333 |
| 4. | Tank | 2.144.998 | 240.000 |

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| | | | |
|---|---|---|---|
| 5. | Machete | 793.332 | 100.000 |
| 6. | Ruler | 199.162 | 26.666 |
| **Total** | | **5.712.214** | **658.332** |

*Source : Processed Primary Data, 2023*

Based on Table 6. above, it can be explained that the total cost of depreciation on a 3.40 Ha land area is Rp. 5,712,214 and for 1 Ha land is Rp. 658,332.

**Table 7.** Average Equipment Depreciation Costs for Respondent Farmers of the Manjung Variety Red Onion Farming

| No | Description | Average Total Depreciation Cost (Rp) | |
|---|---|---|---|
| | | 3.25 Ha | 1 Ha |
| 1. | Tarpaulin | 651.660 | 68.333 |
| 2. | Bag | 996.331 | 69.000 |
| 3. | Fork | 545.829 | 83.333 |
| 4. | Tank | 2.160.000 | 170.000 |
| 5. | Machete | 713.331 | 90.000 |
| 6. | Ruler | 270.829 | 26.666 |
| **Total** | | **5.337.980** | **507.332** |

*Source : Processed Primary Data, 2023*

Based on Table 20. above, it can be explained that the average total depreciation cost for Manjung shallot farming on a land area of 3.25 Ha is Rp. 5,337,980 and for a land area of 1 Ha of Rp. 507,332.

### 3.3. Total Cost of Production

The total cost of production is the total cost that must be incurred by the respondent farmer to buy all the necessities while cultivating shallots. The costs calculated are the total fixed costs and variable costs, the sum of these two costs becomes the production cost of shallot farming, the average production cost of which can be seen in Table 8 below:

**Table 8.** The Average Cost of Production for Respondent Farmers of Tajung Variety Shallot Farming

| Description | Average Total Cost (Rp) | |
|---|---|---|
| | 3.40 Ha | 1 Ha |
| Total Cost of Production | 151.005.714 | 37.513.332 |

*Source : Processed Primary Data, 2023*

Based on Table 8. above, it can be explained that the average total production cost on a land area of 3.40 Ha is Rp. 151,005,714, - whereas if the land area is 1 Ha, the average total production issued is Rp. 37,513,332.

**Table 9.** Average Cost of Production for Respondent Farmers of the Manjung Variety Shallot Farming

| No | Description | Average Total Cost (Rp) | |
|---|---|---|---|
| | | 3.25 Ha | 1 Ha |
| 1. | Total Cost of Production | 142.820.980 | 37.482.499 |

*Source : Processed Primary Data, 2023*

Based on Table 9. it can be explained that the average total production costs incurred in cultivating shallots on a land area of 3.25 Ha is Rp. 142,820,980, - and for a 1 Ha land area of Rp. 37,482,499.

### 3.4. Revenue Analysis

Income is the net result obtained by farmers from their farming activities. In addition, income also provides an overview of the benefits obtained by the respondent farmers. the average total cost of production, receipts, and income earned by respondent farmers of shallot crowns and manjungs can be seen in table 10. below:

**Table 10.** Average Total Cost of Production, Revenue, and Respondent Farmer's Income of Canopy Shallot Farming

| No | Uraian | Total Value (Rp) | Total Value (Rp) | Average Value (Rp) |
|---|---|---|---|---|
| 1. | Land area | 3.40 Ha | 1 Ha | 0.17 Ha |
| 2. | Variable Cost | | | |
| | -Seeds | 63.600.000 | 18.000.000 | 3.180.000 |
| | -Fertilizer | 24.104.000 | 7.220.000 | 1.205.200 |
| | -Pesticides | 5.080.000 | 1.310.000 | 254.000 |
| | -Labor | 51.360.000 | 10.160.000 | 2.568.000 |
| | -Rent a Cultivator | 660.000 | 100.000 | 33.000 |
| 3. | **Total Variable Cost** | **144.804.000** | **36.790.000** | **7.240.200** |
| 4. | Fixed cost | | | |
| | - Tool Shrinkage | 5.712.214 | 658.611 | 285.332 |
| | - Land Tax | 489.500 | 65.000 | 24.475 |
| 5. | **Total Fixed Cost** | **6.201.714** | **723.332** | **310.086** |
| 6. | **Total Cost (VC + FC)** | **151.005.714** | **37.513.332** | **7.550.286** |
| 7. | **Total Revenue** | **230.700.000** | **170.000.000** | **11.535.000** |
| 8. | **Income (TR-TC)** | **79.694.286** | **132.486.668** | **3.984.714** |

*Source : Processed Primary Data, 2023*

Based on Table 10. explains that the total costs incurred by the respondent farmers in cultivating the Tajuk variety shallots in one planting season amounted to Rp. 151,005,714/3.40 Ha and for land area 1 it was Rp. 37,513,332 with an average farming

expenditure of Rp. 7,550,286, - while the total income received by the respondent farmers on a land area of 3.40 Ha is Rp. 230,700,000 and for a 1 Ha land area of Rp. 170,000,000, - with an average respondent farmer income of Rp. 11,535,000, - while the total income of farmers on a land area of 3.40 hectares is Rp. 79,694,286, - for 1 Ha of land amounting to Rp. 132,486,668 and the average income of the respondent farmers is Rp. 3,984,714.

**Table 11.** Average Total Cost of Production, Revenue, and Respondent Farmer Income Manjung Shallot Farming

| No | Uraian | Total Nilai (Rp) | Total Nilai (Rp) | Nilai Rata-Rata (Rp) |
|---|---|---|---|---|
| 1. | Luas Lahan | 3.25 Ha | 1 Ha | 0.16 Ha |
| 2. | Variable Cost | | | |
| | -Seeds | 59.200.000 | 18.000.000 | 2.960.000 |
| | -Fertilizer | 23.068.000 | 6.780.000 | 1.153.400 |
| | -Pesticides | 5.280.000 | 1.850.000 | 264.000 |
| | -Labor | 48.800.000 | 10.000.000 | 2.440.000 |
| | -Rent a Cultivator | 630.000 | 100.000 | 31.500 |
| 3. | **Total Variable Cost** | **136.978.000** | **36.730.000** | **6.848.900** |
| 4. | Fixed cost | | | |
| | - Tool Shrinkage | 5.337.980 | 507.332 | 266.899 |
| | - Land Tax | 505.000 | 63.000 | 25.250 |
| 5. | **Total Fixed Cost** | **5.842.980** | **772.499** | **292.149** |
| 6. | **Total Cost (VC + FC)** | **142.820.980** | **37.482.499** | **7.141.049** |
| 7. | **Total Revenue** | **206.500.000** | **158.000.000** | **10.325.000** |
| 8. | **Income (TR-TC)** | **63.679.020** | **120.517.501** | **3.183.951** |

*Source : Processed Primary Data, 2023*

Based on Table 12. it explains that the total costs incurred by the Green Lestari farmer group on a land area of 3.25 Ha amounted to Rp. 142,820,980, and if the respondent farmers had a land area of 1 Ha, the total costs that had to be incurred were an average of Rp. 37,482,499, - and the average per farmer on a land area of 0.16 is Rp. 7,141,049, - while the total income received by the respondent farmers on a land area of 3.25 Ha is Rp. 206,500,000 and for a land area of 1 Ha is Rp. 158,000,000, - with an average respondent farmer income of Rp. 10,325,000. while the income of the respondent farmers on a land area of 3.25 Ha is Rp. 63,679,020, - 1 Ha land area of Rp. 120,517,501 and the average income per farmer is Rp. 3,183,951.

## 4. CONCLUSION

Based on the research that has been done regarding the analysis of shallot farming income of crown and manjung varieties in the study area, the following conclusions are obtained:

1. The average shallot productivity for the Tajuk variety (Sipatuo Farmers Group) on a 3.40 ha land area is 3.42 tons/ha with an average production of 11.53 tons, and on a 1 ha land area the average productivity is 8.50 tons /Ha with total production of 8.50 tons. Whereas for the Manjung variety (Green Farmers Group Lestari) the average productivity on a land area of 6.10 Ha is 1.61 tons/ha with a total production of 9.8 tons, - the average shallot productivity on 1 ha of land is 2.25 tons /Ha with a total production of 2.25 Tons, - and the average productivity of shallot farmers is 1.58 Tons/Ha with a total production of 490 Kg.

2. The average income of shallot crowns on a land area of 3.40 Ha is Rp. 79,694,286 the average income of farmers on 1 Ha of land is Rp. 132,486,668. Whereas for the Manjung variety, the average income on a land area of 3.25 is Rp. 63,679,020, - the average income of farmers on 1 Ha of land is Rp. 120,517,501. The income earned by shallot crown farmers is greater when compared to the income of manjung shallot farming.

## REFERENCES

Andrew K. J. N.K Dumais Juachim. A Pangemanan. P. (2016). Comparison of Mixed Farming Income Based on Grouping of Plant Types. *Jurnal Agri-Sosioekonomi Unsrat* 12(2).

Cicu. Andriani Ida. Andri, K.B. (2010). *Technical Instructions for Cultivating Chili, Shallots and Oranges.* Center for the Study and Development of Agricultural Technology. West Sulawesi.

Danang, Sunyoto. (2012). Human Resource Management. Jakarta PT Buku.

Indonesia, B. P. S. (2021). Statistical official news. Indonesia Economic Growth Quarterly II, 60(08).

Novitasari. (2017). *Income Analysis and Factors Influencing the Production of Shallots (Allium Ascalonicum L) in the Highlands, Pangalengan District, Bandung Regency. (Skripsi).* Program Studi Agribisnis, Fakultas Ekonomi dan Manajemen, Institut Pertanian Bogor.

Sugiyono. (2016). Quantitative, Qualitative and R&D research methods. Alfabeta.