



## FARMING BUSINESS WITH ORGANIC VEGETABLE SYSTEM

(Usaha Tani Sayuran Organik Sistim Tumpangsari)

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### Abstract

Agricultural land needs to be protected so that the supply of food needs is maintained. In Indonesia, protection of agricultural land is stated in Law No. 41 of 2009 on Sustainable Food Agricultural Land. Sustainable Food Agricultural Land is a field of agricultural land designated to be protected and developed consistently in order to produce staple food for national food independence, security and sovereignty. The objectives of this study were as follows: 1) To analyze the amount of revenue and income of organic vegetable farming in Namlea District, Buru Regency, Maluku Province. 2) To determine the management of Organic Vegetables and non-organic vegetables in Namlea District, Buru Regency, Maluku Province. The type of data used in this study is divided into two based on grouping, namely: 1) Primary data, data obtained directly from the field either through interviews with related parties, questionnaires and direct observation, 2) Secondary Data, data that has been processed and obtained from local government or from related parties, such as data on the general description of the research location, population and number of Horticultural (vegetable) farmers in Namlea District. Primary data and secondary data were obtained first and tabulated and presented in tabular form. Then analyzed according to research objectives. Answering research objectives 1 and 3 descriptively, while answering research objectives 2 are: According to Soekartawi (2005), net income can be calculated by the following formula: 1) Total Revenue, 2) Depreciation Costs, 3) Production Costs, 4) Farming Efficiency Analysis. The results showed that the fixed cost for the average land area obtained was Rp. 1,009,841 and variable costs of Rp. 7,543,333 so that the total cost is Rp. 8,533,174. and the cost of revenue for an average of several land areas of Rp. 84,296,667, the larger the land the greater the cost of revenue and the Return Cost Ratio in this study is said to be feasible because it is obtained at 8.66.

**Keywords:** Farming Business, Organic Vegetables, Buru Island

### Abstrak

Lahan pertanian perlu dilindungi agar pasokan kebutuhan pangan tetap terjaga di Indonesia, perlindungan terhadap lahan pertanian tercantum dalam UU No 41 Tahun 2009 tentang Lahan Pertanian Pangan Berkelanjutan. Lahan Pertanian Pangan Berkelanjutan adalah bidang lahan pertanian yang ditetapkan untuk dilindungi dan dikembangkan secara konsisten guna menghasilkan pangan pokok bagi kemandirian, ketahanan, dan kedaulatan pangan nasional. Tujuan penelitian ini adalah sebagai berikut : 1) Untuk menganalisis jumlah penerimaan dan pendapatan usahatani Sayuran Organik di Kecamatan Namlea, Kabupaten Buru, Provinsi Maluku. 2) Untuk mengetahui manajemen usahatani Sayuran Organik dan sayuran non organik di Kecamatan Namlea, Kabupaten Buru, Provinsi Maluku. Jenis data yang digunakan dalam penelitian ini terbagi menjadi dua berdasarkan pada pengelompokannya yaitu: 1) Data primer, data yang diperoleh langsung dari lapangan baik melalui wawancara dengan pihak terkait, kuisioner dan observasi langsung, 2) Data Sekunder, data yang telah diolah dan diperoleh dari pemerintah setempat atau dari pihak-pihak yang terkait, seperti data mengenai gambaran umum lokasi penelitian, jumlah penduduk dan jumlah petani Hortikultura (sayuran) yang ada di Kecamatan Namlea. Data primer dan data sekunder diperoleh terlebih dahulu dan ditabulasikan serta disajikan

didalam bentuk tabel.Selanjutnya dianalisis sesuai dengan tujuan penelitian. Menjawab tujuan penelitian 1 dan 3 secara deskriptif, sedangkanmenjawab tujuan penelitian 2 adalah:Menurut Soekartawi (2005),penerimaan bersih dapat dihitung dengan rumusdi bawah ini: 1) Total Penerimaan, 2) Biaya Penyusutan, 3) Biaya Produksi, 4) Analisis Efisiensi Usahatani. Hasil Penelitian Menunjukkan bahwa Biaya tetap untuk rata-ran beberapa luas lahan yang didapatkan adalah Rp. 1.009.841 dan biaya variable sebesar Rp. 7.543.333 sehingga total biaya sebesar Rp. 8.533.174. dan Biaya Penerimaan untuk rata-ran beberapa luas lahan sebesar Rp. 84.296.667, makin besar lahan makin besar biaya penerimaannya serta Return Cost Ratio pada penelitian ini dikatakan layak karena didapatkan sebesar 8.66.

**Kata Kunci;** Usaha Tani, Sayuran Organik, Pulau Buru

## INTRODUCTION

Agricultural land needs to be protected so that the supply of food needs is maintained. In Indonesia, protection of agricultural land is stated in Law No. 41 of 2009 on Sustainable Food Agricultural Land. Sustainable Food Agricultural Land is a field of agricultural land designated to be protected and developed consistently in order to produce staple food for national food independence, resilience and sovereignty. Availability of land for agricultural business is an absolute requirement to realize the role of the agricultural sector in a sustainable manner, especially in its role of realizing independence, resilience and national food sovereignty. in a sustainable manner.

The problem currently faced is the high pressure on land. This is due to an increase in the population which is still around 1.49 percent per year, while the existing land area is relatively constant, the productivity of food agriculture land is leveling off as well as competition for land use for development, including the expansion of the province and district / city, so that the land is at risk to meet the national food sufficiency is threatened. The average control of food agricultural land by farmers is getting narrower due to the inheritance of land ownership, there is also unbalanced competition in land use, especially between the agricultural and non-agricultural sectors. In a situation like this, the paradigm and point of view of stakeholders in spatial use planning only focuses on the economic value of land rent, so there is no balance between agricultural development and other sector

development. This situation will affect the decline in the carrying capacity of land and the environment belindaat.al 2019. Simatupang in Gatoet Sroe Hardono, et al. (2004) in Subroto and Susetyo (2016), explain that the conversion of agricultural land is a serious threat to food security and security. Food security is a condition for the fulfillment of food for households which includes sufficient food availability, both in quantity and of quality, safe, evenly distributed and affordable. Food Sovereignty is the right of the state and nation which can independently determine its food policy, which has the right to food for its people and gives the people the right to determine a food agri-food system that is in accordance with the potential of local resources. The conversion of land into non-agricultural land from 2008 to 2012 covering an area of 110,000 hectares / year. In 2008, the total area of agricultural land in Indonesia was 40,031,166 ha, but in 2012 the agricultural land area in Indonesia was only 39,594,536 [4]. The problems raised in this research are: 1) How is the process of transition from inorganic farming to organic farming in Namlea District, Buru Regency, Maluku Province? 2) How is the income and income of organic vegetable farming in Namlea District, Buru Regency, Maluku Province? 3) How is the management of organic vegetable farming in Namlea District, Buru Regency, Maluku Province? The objectives of this study were as follows: 1) To analyze the amount of revenue and income of organic vegetable farming in Namlea District, Buru Regency, Maluku Province. 2) To see the management of Organic

Vegetable and non-organic vegetable farming in Namlea District, Buru Regency, Maluku Province. As a database and information for related agencies for the development of Sustainable District Agriculture in general as well as the development of Sustainable Agriculture Districts in particular.

## RESEARCH METHOD

This research was conducted in Namlea Subdistrict Village, Buru Regency, Maluku Province. Starting from December 2017 to February 2018 which includes the preparation of proposals, initial surveys, data collection and data processing and writing. The location of this study was determined purposively with the consideration that in the village of Namlea District, Buru Regency is a center for the development of vegetable horticulture. The type of data used in this study is divided into two based on grouping, namely: 1) Primary data, data obtained directly from the field either through interviews with related parties, questionnaires and direct observation, 2) Secondary Data, data that has been processed and obtained from local government or from related parties, such as data on the general description of the research location, population and number of Horticultural (vegetable) farmers in Namlea District. The data obtained in this study were carried out using the following techniques: 1) Interview, namely a technique with a dialogue carried out by the interviewer (interviewer) to obtain information from the interviewee (resource person). Used by researchers to assess vegetable horticulture farming. 2) Observation, namely the technique used as a complement to data and to see and observe directly the place to be researched. 3) Documentation is a technique that looks at documents and reports that have a relationship with the one being investigated. 4) Open questionnaires, namely questions that provide open response options to the respondent. Primary data and

secondary data were obtained first and tabulated and presented in tabular form. Then analyzed according to research objectives. Answering research objectives 1 and 3 descriptively, while answering research objectives 2 are: According to Soekartawi (2005), net income can be calculated by the formula below: 1) Total Revenue, 2) Depreciation Costs, 3) Production Costs, 4) Farming Efficiency Analysis.

## DISCUSSION

### Research Location Overview

#### *Geographical Situation*

Namlea sub-district is one of the five sub-districts in Buru district, whose entire territory is on Buru Island. This sub-district is located between 2°25' - 2°55' south latitude and 121°21' - 125°21' east longitude. Namlea District in the north is bordered by Seram Sea, in the south is bordered by Waeapo District, Bata Bual District in the east and Waplau District in the west. The administrative area of Namlea District is 226.55 km<sup>2</sup>, with the largest village being Jamilu Village with an area of 85.62 km<sup>2</sup>, while the smallest is Siahoni Village with an area of 0.05 km<sup>2</sup>. The capital of Namlea District is located in Namlea Village. Sanleko Village is the farthest village from the subdistrict capital, which is as far as 20 Km<sup>2</sup>. Namlea sub-district consists of seven villages namely Namlea, Lala, Batu boy, Jamilu, Sihoni, Karang Jaya, and Sanleko which are all located on one island, namely Buru Island.

The population of Namlea District in 2016 was 34,326 people, consisting of 17,457 men and 16,869 women. Based on the age group, the largest population was aged 0-4 with a total of 4,157 people or 12.11 percent of the total population of Namlea District, while the smallest population was in the 60-64 years age group with 526 people or 1.53 percent (BPS 2017).

### **Climatic conditions**

Air temperature in a place, among others, is influenced by the height of the place to sea level and its distance from the coast. All villages in Namlea sub-district are coastal villages so the air temperature is relatively high. Rainfall in one place is influenced by climatic conditions, topographical conditions, and air currents. Therefore, the amount of rainfall varies by month. The condition of air temperature, rainfall and wind conditions in Namlea sub-district cannot be displayed specifically, because meteorological stations cannot be displayed specifically, because meteorological stations only present in the average range for all areas in Buru and Buru Selatan districts (BPS 2013).

### **Respondent Character**

The characteristics of respondents who undertake the production of intercropping vegetables in the research area in question are gender, age group and education level of Vegetable Horticulture producers in the research area which may be 30 people with various land areas including land area of 2500 m<sup>2</sup>, 5000 m<sup>2</sup> and land area of 1 hectare. or 10000 m<sup>2</sup>. With commodities in the form of water spinach, mustard greens, tomatoes, cayenne pepper, green beans and long beans.

Table 1. Tumpangsari Vegetable Farmers by Land Area

Commodity	Number of Respondents (Person)	Land area
Kale	13	2500
Sawi		
Tomato	13	5000
Cayenne pepper		
Bean	4	10000
Long beans		
amount	30	3

Source: Primary Data, 2017 (processed)

### **Production cost**

Production costs incurred by vegetable Horticultural farmers are variable costs and fixed costs. Variable costs include

seeds or seeds, fertilizers, and medicines. While the fixed cost is depreciation of tools. The cost of horticultural farming of vegetables of respondents farmers in Namlea District, Buru Regency can be seen in the following table:

The table below shows that the production costs incurred by respondent farmers in Namlea District, Buru Regency. Fixed costs incurred also vary, for a land area of 2500 m<sup>2</sup> the fixed costs are Rp. 580,952, respondents with a land area of 5000 m<sup>2</sup> of Rp. 1,286,071, respondents with a land area of 10,000 m<sup>2</sup> of Rp. 1,162,500, then the total fixed costs total Rp. 3,029,523. and total average - bring Rp. 1,009,841

Table 2. Total Production Costs of Vegetable Horticultural Respondents by Land Area in Namlea District.

Land Area	fixed cost (Rp)	Variable costs (Rp)	Total Cost(Rp)
2500	580.952	1.820.000	2.400.952
5000	1.286.071	6.265.000	7.551.071
10000	1.162.500	14.545.000	15.707.500
amount	3.029.523	22.630.000	25.659.523
Average	1.009.841	7.543.333	8.553.174

The variable costs incurred by the respondent farmers also vary, for a land area of 2500 m<sup>2</sup> of IDR 1,820,000, an area of 5,000 m<sup>2</sup> of IDR. 6,265,000, and an area of 10,000 m<sup>2</sup> of Rp. 14,545,000, the total variable cost according to land area is Rp. 22,630,000, and the total average is Rp. 7,543,300.

### **Reception**

Respondent acceptance of vegetable farmers in Namlea sub-district based on land area and commodity can be seen in the following table:

Table 3. Total Revenue based on land area

Land Area (m <sup>2</sup> )	Reception (Rp)
2500	20.080.000
5000	44.710.000
10000	188.100.000
<b>Amount</b>	<b>252.890.000</b>
<b>Average</b>	<b>84.296.667</b>

Source: Primary Data, 2017 (processed)

Table 3. Revenue fees for land where the land area of 2500m<sup>2</sup> is Rp. 20,080,000, land with an area of 5000m<sup>2</sup> of Rp. 44,710,000, and land with an area of 10,000m<sup>2</sup> of Rp. 188,100,000, the total amount is Rp. 252,890,000 with an average of Rp 84,296,667

Table 4. Total Revenue by Commodity

Commodity	Reception(Rp)
Kale	14.760.000
Sawi	8.880.000
Tomato	21.070.000
Chili	188.100.000
Bean	10.880.000
Long beans	9.200.000
Total number	<b>252.890.000</b>

Source: Primary Data, 2017 (processed)

Table 4. Shows the cost of revenue from respondents based on Commodity where the kangkung commodity costs Rp. 14,760,000, mustard greens amounting to Rp. 8,880,000, tomatoes of Rp. 21,070,000, chilies amounting to Rp. 188,100,000, green beans amounting to Rp. 2,176,000, and Rp. Long beans, the total amount is Rp. 9,200,000, the total amount of the commodity is Rp. 252,890,000.\

### Income

Respondents' income for vegetable farmers in Namlea sub-district can be seen in

table 5. Shows the respondent's cost based on the area of land where the land area is 2500m<sup>2</sup> Rp. 17,697,048, land area of 5000m<sup>2</sup> is Rp. 37,158,929.

Table 5. Respondents' Income Based on Land Area

Land Area (Rp)	Revenue (Rp)	Production Cost (Rp)	Revenue (Rp)
2500	20.080.000	2.400.952	17.679.048
5000	44.710.000	7.551.071	37.158.929
10000	188.100.000	15.707.500	172.392.500
<b>Average</b>	<b>252.890.000</b>	<b>25.659.523</b>	<b>227.230.477</b>

Source: Primary Data, 2017 (processed)

10,000m<sup>2</sup> of land area of Rp. 172,392,500. total total income is IDR 227,230,477. The largest income is on a land area of 10000m<sup>2</sup>, land area is a factor in increasing farmers' income, the larger the land, the greater the income.

Table 6. shows the cost of income by commodity where the commodity of kangkung is Rp. 13,692,381, mustard greens amounting to Rp. 7,546,667, tomatoes of Rp. 17,522,500, chilies of Rp. 172,392,500, green beans amounting to Rp. 7,661,429, and long beans of Rp. 4,867,500, the total total of the commodity is Rp. 223,682,976.

Table 6. Respondents' income based on land area

Comodty	Reception (Rp)	Production Cost (Rp)	Revenue (Rp)
Kale	14.760.000	1.067.619	13.692.381
Sawi	8.880.000	1.333.333	7.546.667
Tomato	21.070.000	3.547.500	17.522.500
Chili	188.100.000	15.707.500	172.392.500
Bean	10.880.000	3.218.571	7.661.429
Long beans	9.200.000	4.332.500	4.867.500
	<b>252.890.000</b>	<b>29.207.024</b>	<b>223.682.976</b>

Source: Primary Data, 2017 (processed)

The biggest income of vegetable farmers is in chilli farmers, which is Rp.

172,392,500, and the next one is tomatoes for Rp. 17,522,500, the farmer's income also depends on the commodities that are cultivated. The total income of the vegetable farmer respondents in Namlea District, Buru Regency was Rp. 223,682,976, where the area of land and commodities are the determining factors for the size of the income of vegetable farmers.

### **Return Cost Ratio**

From the two tables, the cost of return ratio above shows the ratio based on the land area ratio on 10,000m<sup>2</sup> of land, 11.98 and on an area of 5,000m<sup>2</sup>, which is 5.92 and on 2500m<sup>2</sup> of land, 8.36. Meanwhile, the largest commodity is Kangkung, which is 13.9, and the commodity of Long Beans is 2.2, where on average everything is greater than.

The results of the R / C Ration analysis of the total revenue of Rp. 252,890,000 divided by the total production cost of Rp. 29,207,024 is 8.66 which is greater than 1, which means that the vegetable farmer's business is successful and the business is feasible to continue because (8.66 > 1).

### **CLOSING**

The conclusions of this study are: Fixed costs for the average land area obtained are Rp. 1,009,841 and variable costs of Rp. 7,543,333 so that the total cost is Rp. 8,533,174. and the cost of revenue for an average of several land areas of Rp. 84,296,667, the larger the land, the greater the cost of revenue. and the Return Cost Ratio in this study is said to be feasible because it is obtained at 8.66

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