ANALYSIS OF FEASIBILITY ON BUSINESS HATCHERY BAWANG MERAH (ALLIUM CEPA VAR. ASCALONICUM) (CASE : DISTRICT OF MEDAN MARELAN MEDAN)

Salmiah
Nurul Nadhilah
Agribusiness Study Program, Universitas Sumatra Utara
E-mail: salmiah@usu.ac.id

ABSTRACT .
The research is aimed to analyze the conditions of production , prices and income as well as to analyze the feasibility of effort seeding Onion red (*Allium cepa* var. *Ascalonicum*) in subdistrict of Medan Marelan , Medan. The study is conducted against 30 farmers who do business seeding onions red in Medan Marelan Subdistrict , Medan City. The method of research that is used is the analysis of revenues , R / C, BEP Production and BEP Price . Results of the study showed that the average cost of production amounting to Rp . 6,259,498, receipts of Rp . 13,477,666 with an average production yield of 310 kg with a selling price of Rp 42,500 / kg and a profit of Rp . 7,218,167. R / C of 2.15, BEP production amounted to 144 kg and BEP price of Rp . 20,000 / kg. Based on the results of the description of the , business seeding onions red in the subdistrict of Medan Marelan feasible to run .

1. Introduction

Indonesia is a country agrarian which has the potential large in the sector of agriculture in view of the extent of land that is available . Agriculture is a sector of major eye livelihoods of the people of Indonesia. Sector of agriculture was itself composed of various subsectors including subsector of plant food , subsector estates , subsector livestock and subsectors of horticulture (Maftukin, Hastuti and Subekti, 2015) . Shallots are produced almost in all regions of Indonesia. Province -producing main onion red were marked by vast acreage harvested in over a thousand hectares per year are North Sumatra, West Sumatra, Java, West Java, Central Java, East, West Nusa Tenggara, Central Sulawesi and South Sulawesi. Profile farming onions red characterized by 80% of farmers who are growers of small to spacious land of less than 1 ha (Elisabeth, Santoso and Herlina, 2013) Motivation establishment of business is in them is because the price of selling onions red which is quite good although the patterns of change that is quite extreme . To achieve productivity which is the maximum , the system of cultivation of onions red should be done in an intensive so that the necessary skills and tenacity extra of each individual farmer (Fauzan, 2016).

For society Indonesia onion red is one of the plants of horticulture which is used as one of the ingredients that are not able to be separated from the cooking of food everyday . Onion red is one of the commodity vegetable that has a value of economical high , both in terms of the fulfillment of consumption nationwide , the source of income of farmers , as well as its potential as a producer of foreign countries (Ulvi, 2017) . Apart from being a cooking ingredient , onion is also used as a treatment ingredient . Onion red can be used as alone , or using materials other . For the treatment of some sort is onion red can be given in the form of whole , raw , and can also be cooked first , and also made cider onion (Wibowo, 2008) . Seeds are qualified and empowered production of high can be used to increase productivity and production . Factors seedling holding role is important to support the success of the production plant onions red . In decades past this demand onion red for consumption and seed in a country experiencing an increase . Request onion red which continue to rise need to be offset by increasing the production of onions red . But the problems in increasing the production of onions red in Indonesia is the seed hard earned time before the season planting (Nurwahyuningsih, Suhardiyanto and Sobir, 2017). Meanwhile, according to Endang Iriani in 2013, the main limiting factor in onion farming is the availability of high-quality superior seeds is still very limited, the high intensity of pest and disease attacks in certain seasons. Certified superior shallot seed varieties are needed as the main requirement to initiate the production process of these commodities in order to obtain high yields and excellent quality (Iriani, 2013). To increase production the use of high quality seeds is the first step (Rahayu and Berlian, 1998) . A good seed will grow into a perfect plant so that production increases . In obtaining the results of seed onions red plantings also be very influential (Wibowo, 2008) .

Enterprises seeding onions red has a prospect that is good considering the very need for seed onion red that grade . Howover, the decision to infuse capital in the venture seeding onions red is an action that has consequences big in an activity of investment due to capital is one of the factors of production are scarce so that in the effort to have , mastered and used it should be handled as economical . By because it is , the analysis of feasibility in an activity of farming needs to be done.

Farming feasibility is a study of whether a project if implemented can run and develop according to its objectives or not .

Based apart late in the above , the purpose of research it is (1) to analyze the conditions of production , price and revenue effort seeding onions red , (2) to analyze the feasibility of effort seeding onions red .

2. RESEARCH METHODOLOGY

Location research determined by *purposive* or deliberate that taken with the consideration specified in accordance with the purpose of research . The research is conducted in the District of Medan Marelan, North Sumatra, which is one of the sub-district centers of production of vegetables in the city of Medan.

The population in the study this is the farmer who seek seeding onions red in the subdistrict of Medan Marelan . Total population who seek seeding onions red for 30 people. Retrieval of samples for research is conducted in the census means that the entire population of farmers who do business seeding onions red in the subdistrict of Medan Marelan used as a sample . With such a large sample that is used in the research is as much as 30 people.

Data collection methods used in this study are primary data and secondary data . The primary data obtained through interviews in directly to the respondent namely farmers farmers who do business seeding onions red in the subdistrict of Medan Marelan by using a list of questionnaires that had been prepared in advance in advance . The secondary data was obtained through relevant agencies and services such as the Statiska Central Board (BSP) and the sub-district office .

2.1.Data Analysis Method
Data analysis methods used in this study are farming analysis , R / C, production BEP, price BEP .

2.1.1. Farm Analysis
Farm is a place where a person or a bunch of people trying to manage the elements of production such as the nature , force labor , capital and skills with the purpose of production to produce something in the field pert anian.

2.1.1.1. Cost
In the effort of farmers the cost is classified into two , namely the cost of fixed (*fixed cost*) and the cost is not fixed (*variable cost*). The total cost can be calculated using the formula :
$$TC = FC + VC \quad (1)$$
Description :
TC : *Total Cost* (total cost)
FC : *Fix Cost* (fixed fee)
VC : *Variable Cost* (cost variable)

2.1.1.2. Reception
Reception farming is the multiplication of production were obtained with the price of the sale . Receipts can be calculated by the formula ;
$$TR = Y.Py \quad (2)$$
Information
TR : *Total Revenue* (total revenue)
Y : Production Results
Py : Price Y

2.1.1.3. Income
Farm income is the difference between revenue and all costs . Revenue can be measured by the formula :
$$\Pi = TR - TC \quad (3)$$
Description :
Π : Net Farm Revenue
TR : Total Revenue
TC : Total Cost

2.1.2. Feasibility Analysis
Study the feasibility of farming is a study of whether a project when implemented can run and evolve in accordance with its purpose or not.

R / C aims to determine the extent to which the results were obtained from businesses that benefit in the period specified or to see the advantages relative (Soekartawi, Dillon and Hardaker, 1984). R /C can be calculated using the formula :

$$R / C = \frac{\text{Total Reveneu}}{\text{Total Cost}} \quad (4)$$

Description :
R = Acceptance
C = Cost
Assessment Criteria :
R / C> 1, means the business has been run as efficiently .
R / C = 1, meaning businesses that are run under conditions of point breakeven / Break Event Point (BEP).
R / C <1, business is not profitable and not feasible .

Analysis of break-even is an engineering analysis to study the relationship between costs fixed , the cost variable , profit and volume of activity . Can be formulated as follows :
   a.   BEP Production

$$BEP = \frac{FC}{P} \quad (5)$$

Description :
BEP : Break Even Point
FC : Fixed Cost
P : Price per unit

   b.   BEP Prices

$$BEP = \frac{TC}{Q} \quad (6)$$

Description :
BEP : Break Even Point
TC : Total Cost
Q : Quantity (Number of items)

3. Results and Discussion

3.1. Production , Prices and Revenues Business Hatchery Bawang Merah

Indicators of success of a farmer can be seen from the income he gets from farming activities he does . According to research Devi, provision of materials organic is a factor that affects puppies and number of tuber crops onion red that can increase production . Instead according to research Nurhapsa in Pare-pare that land is one of the constraints in increasing the production of onion red because of the narrowness of the land that is controlled (Nurhapsa, Kartini and Arham, 2015). The decline in productivity was also included one of the decrease in the production of onions red . If the reception that gained more substantial than the cost that incurred it can be said of farming are favorable . According to research Pasaribu , the price of onions red imported relate positively to the demand of imported onions red in Indonesia is significant . Wherein if the production of onions red national experience rise in the demand for imports of onions red will decrease (Pasaribu and Daulay, 2013).

Table 1. Average Production Costs , Revenue and Net Revenue of Shallot Hatchery Farming Per Farmer / Year and Per Ha / Year in Medan Marelan District

Description	Unit	Seeds Onion Red	
		Per Farmer	Per Hectare
Production Costs (TC)	Rp	6,259,498,8	156,487,470
Price	Rp / kg	42,500	42,500
Production	Kg	310.13	7753.25
Reception (TR)	Rp	13,477,666.67	336,941,666.75
Benefits (∏)	Rp	7,218,167.87	180,454,196.75

Source : Primary Data Analysis (2019)

Production average per farmer per year amounted to 310 kg with the price of selling an average of Rp . 42,500 / kg. P enerimaan per farmer / year with extensive land an average of 0.04 hectares of Rp . 13,447,666.67 / year with a production cost of Rp . 6259498.8 / year so it can be

known attempt seeding onions red for per farmer per year menguntu ngkan with revenue amounting to Rp 7,218,167.87 / year . For income per hectare / year can be seen in the revenue table obtained at Rp . 336,941,666.75 per ha / year and the cost of production amounting to Rp . 156,487,470 per Ha / Year . So it can be known attempt seeding onions red profitable premises n revenue sebesa Rp . 180,454,196.75 / year

3.2. Feasibility of Business Hatchery Bawang Merah

Farming feasibility is a measure to see whether a farm will be profitable or feasible to do . If a farm is not profitable then farming it is not feasible to do . By because the analysis of feasibility in a project needs to be done .

Tabel 2. R / C ratio , BEP Production and BEP Price   Per Farmer / year and per ha / year in Business Seeding onion red in the subdistrict of Medan Marelan

Description	Seeds Onion Red	
	Per Farmer	**Per Hectare**
Production Costs (TC)	Rp . 6,259,498,8	Rp . 156,487,470
Price	Rp . 42,500 / kg	Rp . 42,500 kg
Production	310.13 kg	7753.25 kg
Reception (TR)	Rp . 13,447,666.67	Rp . 336,941,666.75
Benefits ($\prod$)	Rp . 7,218,167.87	Rp . 180,454,196.75
R / C Ratio	2.15	2.15
BEP Production	144.32 kg or 144 kg	3,682.05 kg or 3,682 kg
BEP Prices	Rp . 20,165 / kg	Rp . 20,183 / kg
	or Rp . 20,000 / kg	or Rp . 20,000 / kg

Source : Primary Data Analysis (2019)

R / C ratio were obtained per farmer / year with extensive land an average of 0.04 hectares of 2.15 and a per hectare / year amounted to 2.15 then attempt seeding onion red can be said to be feasible to run . It is also supported by research onion red others who performed in Malang, Jawa East that farming onion red is quite profitable and feasible with R / C of 2.95 (Pasaribu and Daulay, 2013). On the contrary, the acquisition of B / C is only 1.97 where this farming is still feasible but is less profitable and farmers' income is categorized as low (Elisabeth, Santoso and Herlina, 2013). P erolehan BEP production per farmer / year with an average area of land of 0.04 ha of 144 kg. Production of seed onions red per farmer / year amounted to 310 kg, the results of production per farmer / year more substantial 2.1 times as much compared BEP production then it can be said efforts seeding onions red feasible to run and have a gain of 53.5%. BEP price per farmer sebesa Rp . 20,000 / kg. Price of seed onions red per kg per farmer / year more substantial 2.1 times as much compared to the BEP price which amounted to Rp . 42,500 / kg so it was stated that the onion hatchery business was feasible to run and a profit of 52.9 %.

P erolehan BEP Production per ha / year amounted to amounted to 3,682 kg Production of seed onions red per ha / year more substantial 2.1 times as much compared BEP production which amounted to 7753 kg so it can be said efforts seeding onions red feasible to run and profit amounted to 52.5 %. And the acquisition of BEP price of Rp . 20,000 / kg. Prices of onion red per hectare / year more substantial 2.1 times as much compared to the BEP price which amounted to Rp . 42,500 / kg, it can be stated that the onion hatchery business is feasible to run and a profit of 52.9%.

4. Conclusion

Based on the results of the analysis and discussion , it can be concluded that the onion hatchery business is feasible to run . The ratio comparison receipt with the total cost of production enterprises seeding onions red > 1. Production of the average effort seeding onions red that there is more substantial than the BEP production . The average price of the sale of seed onions red more substantial than the BEP price , by thus attempt seeding onions red already efficient and profitable and otherwise feasible to run .

REFERENCE

1. Elisabeth, D. W., Santoso, M. and Herlina, N. (2013) 'Pengaruh pemberian berbagai komposisi bahan organik pada pertumbuhan dan hasil tanaman bawang merah (Allium ascalonicum L.)', *Jurnal Produksi Tanaman*, 1(3).
2. Fauzan, M. (2016) 'Pendapatan, risiko, dan efisiensi ekonomi usahatani bawang merah di Kabupaten Bantul', *AGRARIS: Journal of Agribusiness and Rural Development Research*, 2(2), pp. 107–117.
3. Iriani, E. (2013) 'Prospek pengembangan inovasi teknologi bawang merah di lahan sub optimal (lahan pasir) dalam upaya peningkatan pendapatan petani', *Jurnal Litbang Provinsi Jawa Tengah*, 11(2), pp. 231–243.

4. Maftukin, M., Hastuti, D. and Subekti, E. (2015) 'ANALISIS KELAYAKAN PEMBENIHAN UMBI BAWANG MERAH (Studi Kasus di Penangkar Benih Sentani Desa Kelompok Kecamatan Wanasari Kabupaten Brebes)', *MEDIAGRO*, 11(1).

5. Nurhapsa, N., Kartini, K. and Arham, A. (2015) 'ANALISIS PENDAPATAN DAN KELAYAKAN USAHATANI BAWANG MERAH DI KECAMATAN ANGGERAJA KABUPATEN ENREKANG', *Jurnal Galung Tropika*, 4(3), pp. 137–143.

6. Nurwahyuningsih, N., Suhardiyanto, H. and Sobir, S. (2017) 'Aplikasi Root Zone Cooling System untuk Perbaikan Pembentukan Umbi Bawang Merah (Allium Cepa Var. Aggregatum)', *Jurnal Keteknikan Pertanian*. Bogor Agricultural University, 5(2), p. 196421.

7. Pasaribu, T. W. and Daulay, M. (2013) 'Analisis permintaan impor bawang merah di Indonesia', *Jurnal Ekonomi dan Keuangan*. University of North Sumatra, 1(4), p. 14730.

8. Rahayu, E. and Berlian, N. (1998) 'Bawang merah', *Cetakan IV. Jakarta: Penebar Swadaya*.

9. Soekartawi, A. S., Dillon, J. L. and Hardaker, J. B. (1984) 'Ilmu Usaha Tani & Penelitian Untuk Pengembangan Petani Kecil'. UI-Press.

10. Ulvi, D. P. (2017) 'Analisis Usaha Tani Bawang Merah (Allium Ascalonicum L.)(Studi Kasus: Desa Simatupang, Kecamatan Muara, Kabupaten Tapanuli Utara)'. Universitas Sumatera Utara.

11. Wibowo, S. (2008) 'Budidaya bawang putih, merah dan bombay', *Penebar Swadaya. Jakarta.*