



FEASIBILITY ANALYSIS OF PATCHOULI BUSINESS IN LERE VILLAGE BASALA DISTRICT KONAWE SELATAN REGENCY

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Abstract

This study aims to determine the income and feasibility of patchouli agroindustry in Lere Village, Basala District, South Konawe Regency. The sampling technique in this study used the census method and the informants in this study were patchouli farmers in Lere Village, Basala District, South Konawe Regency as many as 16 respondents. The results showed that the results of the feasibility analysis of patchouli agroindustry were feasible to run with the total business income generated, which was Rp. 109,809,734., with the average income of each patchouli farmer is Rp. 6,863,108., and based on the results of the calculation of the R/C Ratio, which is $3.58 > 1$ and is said to be feasible, which means that each expenditure is Rp. 100 will provide an income of Rp. 358. Based on the results of the calculation of the BEP, the price is Rp. 131,081., and BEP production of 90 Kg. Meanwhile, the production value of patchouli agroindustry is 324 Kg with a selling price of Rp. 470,000 greater than the price BEP and production BEP, then the patchouli agroindustry is said to be profitable.

Keywords: *Feasibility, Farming, Patchouli*

1. Introduction

Most of the plantation products are export-oriented and traded in international markets, as a source of foreign exchange. Besides providing economic benefits, it cannot be ignored so that plantation businesses can maintain and even improve environmental quality. The contribution of the plantation sub-sector to the national economy in 2012 reached \$35.64 billion or equivalent to Rp.427.68 trillion. The role of these plantations tends to increase from year to year in strengthening national development (Harlin, 2016).

Patchouli (*Pogostemon cablin* benth) is one of the important essential oil-producing plants and is known as patchouly oil. Patchouli oil along with 14 other types of essential oils is an export commodity that generates foreign exchange. Indonesia is the main supplier of 90% of the world's patchouli oil. Indonesian patchouli oil has been known to the world since 65 years ago, the volume of essential oil has always increased, in 2001 it reached 5,080 tons with a value of \$52.97 million or 4.4% of the value of the world's essential oil trade. the main supplier of 90% patchouli oil in the world (Halfin 2017).

The main problem faced by patchouli distillers in Lere Village, Basala District, South Konawe Regency is the price of patchouli oil which often fluctuates, and during the rainy season in June-October the price of patchouli can reach Rp. 470,000 per kg and in the dry season in January-March the price of patchouli decreased to Rp. 350,000/kg and the government's lack of attention to farmers, starting from the planting period, agricultural infrastructure to maintaining the price of agricultural products, farmers did not receive counseling on farming techniques that could improve the quality and quantity of yields, thus greatly affecting the production volume of patchouli plant management. .

Given the problems above, it is necessary to conduct research on business feasibility. Business feasibility analysis is an analysis/research on whether or not a business is profitable or not, which is usually a farming business.).

In addition to the need to conduct research based on business feasibility analysis, it is also necessary to calculate the Break Even Point (BEP) or break even point. Break Even Point (BEP) or the break-even point is a point that shows that the total revenue generated by the company is equal to the total costs incurred, so that the company does not make a profit and does not suffer a loss. Break Even Point (BEP) can be interpreted as a situation where in operations, the company does not make a profit and does not suffer a loss. Based on the description above, the authors are interested in conducting this research through an empirical

study with the research title "analysis of the feasibility of patchouli agro-industry farming in Lere Village, Basala District, South Konawe Regency.

2. Methods

This research was conducted in Lere Village, Basala District, South Konawe Regency. The selection of this location was done deliberately with several considerations. Lere Village is a village where the majority of the people work as patchouli farmers as a short-term crop. This research was conducted from January to March 2022. The population of patchouli farmers in Lere Village, Basala District, South Konawe Regency, namely 16 farmers, the method used in determining the sample is the census method. The census method is that the entire population is presented as respondents and uses a structured questionnaire as the main data collection tool to obtain specific information. The data collection method used interviews, which is one of the data and information collection techniques by directly interviewing patchouli farmers. Questioner, which is a technique or data collection tool by asking a list of questions about the problem to be studied to the informant to be answered. Observation in the field, namely direct observation of farmers who have patchouli cultivation and analyze the things that affect the income of patchouli farmers.

3. Results and Discussion

Characteristics of respondents provide an overview seen from several aspects, namely age, level of education, gender, number of dependents in the family, and farming experience. These aspects can affect the performance of patchouli oil agroindustry development respondents in this study are patchouli farmers who are in Lere Village, Basalama District, South Konawe Regency.

3.1 Characteristics of Respondents Based on Age Level

Age is a factor that affects the success of work and the ability to work both physically and mentally. The age classification of respondents from Patchouli farmers in Lere Village, Basalama District, South Konawe Regency is as follows;

Table 1. Age Classification of Patchouli Farmers in Lere Village, Basala District, South Konawe Regency.

Age (Years)	Number of people)	Percentage %
35 – 39	6	37
40 – 44	4	25
45 – 49	3	19
50 – 54	3	19
Amount	16	100

Source: Primary Data After Processing, 2022

Table 1 shows that the patchouli farmers in Lere Village, Basala District, South Konawe Regency aged 35-39 years were 6 people with the highest percentage of 37%, then patchouli farmers aged 40-44 were 4 people with a percentage of 25%, and the last is at the age level of 45 – 49 and 50 – 54 each as many as 3 people with a percentage of 19%. With a percentage of 37%, namely at the age level of 35-39, it shows that patchouli farmers in Lere Village, Basala District, South Konawe Regency are classified as productive age. According to

Priyono and Yasin (2016), the productive age for each individual is between 20 to 40 years, This age is considered very productive for the workforce because if the age is below 20 years, the average individual still does not have sufficient skill maturity and is still in the educational process. Meanwhile, at the age of 40 years, the physical ability of the individual begins to decline.

3.2 Characteristics of Respondents Based on Education Level

Education level is a person's level in taking the last study to add knowledge and insight to learn about the conditions that will be faced. The education levels taken by patchouli farmers in Lere Village, Basala District, Konawe Selatan District are as follows:

Table 2. Level of Education of Patchouli Farmers in Lere Village, Basala District, South Konawe District.

Level of education	Number of people)	Percentage (%)
SD	5	31
JUNIOR HIGH SCHOOL	7	44
SENIOR HIGH SCHOOL	4	25
Amount	16	100

Source: Primary Data After Processing, 2022.

Table 2. Describes the education level of patchouli farmers as research respondents in Lere Village, Basala District, South Konawe District, which is very influential in the patchouli agro-industry business process. The highest level of education of farmers is at the junior high school level, which is 5 people with a percentage of 31%, while the lowest level of education is at the high school level, which is 4 people with a percentage of 25%. This shows that farmers are able to accept innovations in the patchouli agro-industry business well. According to Sedarmayanti (2003) education with its various programs has an important role in obtaining and improving the quality and professional abilities of individuals at work. Through education a person is prepared to have the provisions to be ready to know,

3.3 Characteristics of Respondents Based on Business Experience

The business experience of patchouli farmers greatly affects the agro-industry business that is run. Farmers who are experienced in running a business are able to overcome the risks or problems that will be faced in their business. The classification of patchouli agro-industry experience in Lere Village, Basala District, South Konawe Regency is as follows:

Table 3. Characteristics of Patchouli Farmers Respondents Based on Business Experience in Lere Village, Basalama District, South Konawe Regency

Business Experience (Years)	Number of people)	Percentage(%)
10 – 15	3	19
16 – 20	6	37
21 – 25	7	44
Amount	166	100

Source: Primary Data after Processing, 2022.

Table 3. It can be seen that patchouli farmers in Lere Village, Basala District, South Konawe Regency are very varied with the lowest farming experience, namely 10-15 years with a total of 3 farmers with a percentage of 19%, while the highest or highest farming experience is 21 - 25 years, namely 9 people with a percentage of 44%. This has explained

that the level of experience of patchouli farmers has been going on for a long time so that farmers have been able to overcome problems or obstacles that arise in the patchouli agro-industry business. Kondorura et al (2018) explains that a worker who has more work experience will certainly understand better what to do when facing a problem that arises.

3.4 Characteristics of Respondents Based on Number of Family Dependents

The number of family dependents includes the number of family members who are still under the responsibility of the head of the family. The more dependents the family will have, the more needs are needed. The size of the family dependents of each respondent can support marketing because a relatively large family can facilitate work because it is a potential source of labor. The number of family dependents of each respondent can be seen in the table below:

Table 4. Number of Family Dependents of Patchouli Farmers in Lere Village, Basala District, South Konawe Regency

No	Family Dependents (Persons)	Number of Respondents (Persons)	Percentage (%)
1	1 – 2	4	25
2	3 – 4	12	75
Amount		16	100

Source: Primary Data After Processing, 2022

Table 4. Explains that farmers who have the highest family dependents are in the number of dependents 3-4, namely 12 people with a percentage of 75%, while the lowest family dependents are 1-2 with a total of 4 people with a percentage of 25%. This shows that patchouli farmers in Lere Village, Basala District, North Konawe Regency generally use family members as labor so that they can reduce labor costs in the patchouli agro-industry business process.

Taftazani and Purwanto (2018) explain that the number of dependents can be a reason for someone to be able to work, for example a worker who has dependents will be more enthusiastic because he realizes that not only he will enjoy the results but there are other people who are waiting for his hard work and become his responsibility. .

3.5 Production Cost Analysis

Production costs include fixed costs and variable costs. Fixed costs are the cost of depreciation of equipment and variable costs include the cost of raw materials, equipment, and labor costs. Fixed costs are types of costs that are incurred in one production process are fixed in number and do not change. In carrying out the patchouli agro-industry business, which includes fixed costs, is the equipment used, which is calculated based on the price of each equipment. Variable costs are costs incurred in the production process depending on the size of the resulting production. Variable costs include costs used to purchase seeds, fertilizers, medicines and labor.

3.6 Fixed cost

Fixed costs are costs whose total amount remains within a certain range of activity volumes depending on the type of business activity. Fixed costs in the patchouli agro-industry business are equipment costs which consist of depreciation of the hoe Rp. 8825.,

spray Rp. 68,183., cart Rp. 80,325, gerpal Rp.8,606., sickle Rp. 13,425., and scissors Rp. 8,625.

The average fixed costs used by patchouli farmers in Lere Village, Basala District, South Konawe Regency can be seen in the following table:

Table 5. Total Average Fixed Costs Issued by Patchouli Farmers in Lere Village, Basala District, South Konawe Regency

No	Description	Amount (Rp)
1	Tool Shrink Land Tax	3,008,266
Total		3,008,266
Average Fixed Cost		188.017

Source: Primary Data After Processing, 2022

Based on the data above, it can be seen that the average use of fixed costs incurred by patchouli farmers in the patchouli agro-industry business in Lere Village, Basala District, South Konawe Regency, is Rp. 3.00.266., and obtained the total average fixed costs of the total costs used by 16 patchouli agro-industry business actors in Lere Village, Basala District, South Konawe Regency, which is Rp. 188.071. Fixed costs are costs that do not change in total as business activity increases or decreases. Included in this cost group are depreciation costs (buildings, machinery, vehicles, and other fixed assets), salaries and wages that are paid regularly, rent costs, insurance costs, taxes, and other costs whose amount is not affected by sales volume (Krista, 2006:57).

3.7 Variable Cost

Variable costs are costs whose total amount changes in proportion to changes in the volume of activity. Variable costs consist of the cost of purchasing seeds of Rp. 11,448,000., with the purchase price of aunt patchouli, which is Rp. 27,000/Kg., fertilizer includes Urea Rp. 5,109,000., NPK fertilizer Rp. 3,419,000., liquid organic fertilizer Rp. 1.350.000., medicines including furdan Rp. 486.000., and labor wages of Rp. 17.650.000., for more details about the variable costs used in the patchouli agro-industry business in Lere Village, Basala District, South Konawe Regency can be seen in the following table:

Table 6. Average Total Variable Costs Expended by Patchouli Farmers in Lere Village, Basala District, South Konawe Regency

No	Description	Cost (Rp)
1	Seeds	11,448,000
2	Fertilizer	
	-Urea	5,109,000
	-NPK	3,419,000
	-Organic Liquid	1.350.000
3	Drugs	
	-Furdan	486.000
4	Labor	17,650,000
Total		39,462,000
Average Fixed Cost		2,466.375

Source: Primary Data After Processing, 2022

Based on Table 6, it can be seen that the average use of variable costs that must be spent on the Patchouli Agroindustry Business from a total of Rp. 39,462,000., ie each patchouli

farmer respondent in average spends variable costs which include the cost of seeds, fertilizers, medicines and labor of Rp. 2,466,375/Person. Variable costs are costs that in total increase in proportion to the increase in activity and decrease in proportion to the decrease in activity. Variable costs include the cost of direct materials, direct labor, some supplies, some indirect labor, small tools, rework, and defective units. Variable costs can usually be identified directly with activities that cause costs (Krista, 2006:58).

3.8 Total cost

The total cost of a business is the total cost, which consists of fixed costs and variable costs. Every business has a different total cost, where the total cost of a business is determined by the amount of fixed costs and variable costs. In the patchouli agro-industry business in Lere Village, Basala District, South Konawe Regency which is the object of this research. The total costs in the patchouli agroindustry can be seen in the following table:

Table 7. Total Costs Expended by Patchouli Farmers in Lere Village, Basala District, South Konawe Regency

No	Description	Amount (Rp)
1	Fixed cost	3,008,266
2	Variable Cost	39,462,000
Total		42,470,266

Source: Processed Primary Data, 2022

Based on the table above, it can be seen that the total use of costs in the patchouli agro-industry business in Lere Village, Basala District, South Konawe Regency is Rp. 42,470,266., from the total fixed costs of Rp.3.008.266., and variable costs of Rp. 39,462,000.,

3.9 Revenue Analysis in Patchouli Agroindustry

Revenue is the total value of the products sold within a certain period of time multiplied by the selling price determined by the craftsman which is measured in rupiah (Rp). For more details, the acceptance of patchouli agro-industry in Lere Village, Basala District, South Konawe Regency can be seen in the following table:

Table 8. Average Income of Patchouli Farmers in Lere Village, Basala District, South Konawe Regency

No	Description	Amount (Kg)	Selling Price (Rp/Kg)	Revenue (Rp)
1	Patchouli Production	324	470,000	152,280,000
	Total	324	470,000	152,280,000

Source: Processed Primary Data, 2022

The average income of patchouli agro-industry farmers in Lere Village, Basala District, South Konawe Regency with units sold is an average of 324 Kg with a selling price of Rp. 470,000/Kg so that the receipt of Rp. 152,280,000. Zaenuddin Kabai (2015) revenue is the total income received by producers in the form of money obtained from the sale of goods produced.

3.10 Income Analysis of Patchouli Agroindustry

Income is a reduction from the total revenue with the costs incurred in the patchouli agro-industry business. A business is said to be profitable if the total revenue received is greater than the total costs incurred. Details of the benefits obtained from the patchouli agro-industry business in Lere Village, Basala District, South Konawe Regency, can be seen in the following table:

Table 9. Average Income of Patchouli Farmers in Lere Village, Basala District, South Konawe Regency

No	Description	Amount (Rp)
1	Total Revenue (TR)	152,280,000
2	Total Cost (TC)	42,470,266
Total income		109,809,734
Average Income		6,863,108

Source: Processed Primary Data, 2022

The total income obtained from the patchouli agro-industry business in Lere Village, Basala District, South Konawe Regency is Rp. 109,809,266 from the reduction in total revenue (TR) of Rp. 152,280,000 minus the Total Cost (TC) of Rp. 42,470,266., and the average income of patchouli farmers is Rp. 6.368.108., MenuruNafarain (2006) income is the inflow of assets from the company's activities selling goods and services in a period that results in an increase in capital that does not come from investment contributions.

3.11 Revenue Cost Ratio

Revenue cost ratio is a feasibility analysis test with a comparison between total income and total costs incurred. The criteria used in this analysis is that if the R/C value > 1 then the business is said to be profitable and feasible to run, because the amount of income is greater than the amount of costs incurred, and vice versa. The calculation of the results of the analysis of income with costs (R/C) can be seen as follows:

$$\text{Revenue Cost Ratio } (R/C) = \frac{TR}{TC}$$

$$R/C = \frac{\text{Rp. } 152.280.000}{\text{Rp. } 42.470.266}$$

$$R/C = 3.58$$

R/C is the comparison value between total revenue and total cost. The total income received by patchouli farmers is Rp. 152,280,000 and the total cost is Rp. 42,470,266.

Based on the description above, it can be concluded that the patchouli agro-industry business is declared profitable and feasible to cultivate. This can be seen from the comparison of total income with total costs that are greater than one, which has a number of $3.58 > 1$. In other words, the R/C value of 3.58 means that for every Rp. 100 costs incurred, the patchouli agro-industry business gets an income of Rp. Rp. 358. According to Suratiah (2015), R/C is a comparison between revenue and total costs where revenue = the amount of revenue earned, cost = the amount of costs incurred.

3.12 Break Event Point (BEP) Feasibility Analysis

BEP is a condition where the business does not make a profit and does not experience a loss. The BEP on the patchouli agro-industry business in Lere Village, Basala District, South Konawe Regency is as follows:

$$BEP \text{ Produksi} = \frac{\text{Total Biaya (Rp)}}{\text{Harga Jual (Rp)}}$$

$$BEP \text{ Produksi} = \frac{\text{Rp.42.470.266}}{\text{Rp.470.000}} = 90$$

BEP Price

$$BEP \text{ Harga} = \frac{\text{Total Biaya (Rp)}}{\text{Jumlah Produk}}$$

$$BEP \text{ Harga} = \frac{\text{Rp.42.470.266}}{324} = \text{Rp. 131.081}$$

From the above calculation, it can be seen that the product BEP and the price BEP are 90 patchouli and the BEP price is Rp. 131,081 of patchouli sales reached 90 Kg, it will break even at a price of Rp. 131,081. Meanwhile, the production value of patchouli agroindustry is 324 kg with a selling price of Rp. 470,000 it can be concluded that this amount is greater than the Product BEP and Price BEP, so the patchouli agro-industry business in Lere Village, Basala District, South Konawe Regency is said to be profitable. According to Mulyadi (2001:232) states that: the break-even point is the state of a business that earns a profit and does not suffer a loss.

4. Conclusion

From the results of data analysis conducted that the income received by this business provides benefits to patchouli farmers with a total income of Rp. 109,280,000., with an average income of Rp. 6,863,108. From the results of the calculation of the feasibility level, an R/C value of 3.58 can be concluded that the patchouli agro-industry business in Lere Village, Basala District, South Konawe Regency is feasible to run with the provisions, if the R/C value > 1 then the patchouli agro-industry business is profitable.

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