

**ANALYSIS OF ALOE VERA PROCESSING BUSINESS INCOME (CASE STUDY OF UMMI HOME INDUSTRY IN MAKASAR DISTRICT, EAST JAKARTA)**

**Siti Rochaeni<sup>1</sup>**, Armaeni Dwi Humaerah<sup>2</sup>, Rafidah Salamah<sup>3</sup>

<sup>1,2,3</sup> Department of Agribusiness, Faculty of Sains, and Technology, UIN Syarif Hidayatullah Jakarta

*Corresponding Author*

DOI : 10.15408/aj.v15.i2.28214

**Abstract**

The condition of the spread of the aloe vera industry in Indonesia is relatively small and scattered which has high added value, the use of aloe vera as a raw material for cosmetics and medicines can become an export commodity if maximized. Therefore, it is necessary to pay special attention to the aloe vera commodity and its role in improving the economy in the UMKM industry in Indonesia. This study aims to determine the costs incurred and analyze the income in the *Ummi Home Industry* aloe vera processing business in Makasar District, East Jakarta. The scope of this study is the aloe vera processing business at *Ummi Home Industry*, processed products from aloe vera, namely instant aloe vera (*powder*), *nata de aloe* (cocktail), and aloe herbal tea. The data processing and analysis methods used in this study are business income analysis, *Return Cost ratio (R/C)* Analysis, *Benefit and Cost ratio (B/C)* Analysis, *Break Even Point (BEP)* Analysis, and *Payback Period (PP)* Analysis.

Based on the feasibility of the aloe vera processing business, the largest R/C ratio value was obtained in the processed aloe vera herbal tea with a capacity of 25 kg of 11.6. The smallest R/C ratio value is in the processed *Nata de Aloe* capacity of 1 kg of 2.9. The largest production BEP is in processed Instant Aloe Vera (*Powder*) with a capacity of 50 kg of 50 pcs with a total production of 200 pcs. The smallest production BEP is in processed aloe vera herbal tea with a capacity of 25 kg of 3 pcs with a total production of 35 pcs. The highest price BEP is in processed Instant Aloe Vera (*Powder*) with a capacity of 1 kg of Rp. 10,990 with a selling price of Rp. 35,000. The lowest price BEP is in the processed aloe vera herbal tea with a capacity of 25 kg of Rp. 1,727 with a selling price of Rp. 20,000. The fastest *Payback Period* value is found in aloe vera herbal tea products with a PP value of 0.02 years with an input of 25 kg. The longest *Payback Period* value is found in The Instant Aloe Vera (*Powder*) product with an average PP of 0.12 years.

**Keywords:** Operating Income; Aloe Vera; R/C Ratio; B/C Ratio; BEP; *Payback Period (PP)*

**INTRODUCTION**

The development of aloe vera agribusiness has very good prospects in terms of community involvement and the benefits it causes, including: (1) how to cultivate aloe vera is relatively easy; (2) encourage the growth of rural industries, both upstream and downstream sectors, so as to expand *employment opportunities in rural areas*; (3) *the variety of products is very diverse from food and beverages, cosmetic raw materials,*

and medicinal raw materials; (4) the added value of downstream products is quite large; and (5) the demand for processed products has a good market (Government of Kal-Bar News, 2004). According to BPS, in DKI Jakarta Province, aloe vera production was highest in 2017 with a total production of 54,039 Kg. This is due to the efforts of the DKI Jakarta Provincial government which promotes the cultivation of aloe vera biopharmaceutical plants, to be used as the main raw material for making medicines or processed foods. Aloe vera production in DKI Jakarta province has fluctuated, with the highest gain in 2017 and the lowest gain in 2016. However, in 2017 to 2018 it experienced a decrease of 28,755 kg. When viewed from the *trend* line, it tends to increase (positive value) which means that production in 2014-2018 did not experience a significant decline. However, the development of aloe vera commodities in DKI Jakarta is not going well.

The potential for the development of processed aloe vera in the *UMMI Home Industry* is quite large, judging from the need for aloe vera every day. In a day requires 50 kg of aloe vera, which is approximately 25 aloe vera fronds and a month requires as much as approximately 1000 kg of aloe vera. Aloe vera produced by the *Umami Home Industry* itself is only intended for processed products. However, according to the owner of the aloe vera processing business, the amount of fresh aloe vera produced only meets 5% of the needs of aloe vera processing raw materials and has not met the needs needed for aloe vera processing. Therefore, to meet the raw materials, business owners buy from Bogor or Sukabumi as much as 500 kg every two weeks.

The scale of the aloe vera processing business is still classified as a micro-industry or household that still uses a simple processing technology by relying on human labor to make its production capacity limited. There are capital factors and the role of the government faced that make the business undeveloped, including limited knowledge and lack of guidance of craftsmen in question to increase processed production and increase income. The market and the size of income are the main factors of a business activity, including in an activity of processing agricultural products both large-scale and small-scale. Therefore, it is necessary to conduct a more detailed financial analysis so that the company's management knows the company's actual income.

Based on this, this study aims to 1) Find out the costs incurred in the *Umami Home Industry* aloe vera processing business in Makasar District, East Jakarta. And 2) Analyzing the income of the Aloe Vera product processing business *Umami Home Industry* in Makasar District, East Jakarta.

## RESEARCHER'S METHODS

### Research Location and Time

The location of the study was conducted at the *Umami Home Industry* located on Jengki Cipinang Asem Street RT 12/09 No. 1, Kebon Pala Village, Makasar District, East Jakarta Municipality, DKI Jakarta Province, Indonesia. Data collection was carried out in February 2020-October 2020.

### Data Types and Sources

The data used in the study are primary data and secondary data. Primary data are obtained through the results of interviews with related parties. Secondary data are

obtained from various sources of company reports.

### Data Analysis

#### Business Income Analysis

Income (profit) is the difference between receipts and total business costs (Soekartawi, 2016: 58), which is used:

$$Pd(p) = TP(p) - TB(p)$$

Information:

$Pd(p)$  = Processed business income (*powder*), *Nata de aloe*, and Aloe Vera Herbal Tea

$TP(p)$  = Total reception (*powder*), *Nata de aloe*, and Aloe Vera Herbal Tea

$TB(p)$  = Total Cost (*powder*), *Nata de aloe*, and Aloe Vera Herbal Tea

#### R/C Ratio Analysis

R/C Ratio instant aloe vera (*Powder*)

The calculation of the R/C Ratio of instant aloe vera (powder) processing business can be formulated as follows:

R/C Ratio =

$$\frac{\text{Total Business Revenue of Instant Aloe Vera (Powder)}}{\text{Total Business Cost of Instant Aloe Vera (Powder)}}$$

R/C Ratio Aloe Cream

R/C Ratio=

$$\frac{\text{Total Business Receipts nata de aloe}}{\text{Total Business Costs nata de aloe}}$$

R/C Ratio Aloe Vera Herbal Tea

R/C Ratio=

$$\frac{\text{Total Revenue of Aloe Vera Herbal Tea Business}}{\text{Total Cost of Aloe Vera Herbal Tea Business}}$$

#### B/C Ratio Analysis

B/C Ratio analysis is an analysis of profits and costs, which is calculated between the level of profit and the total costs incurred in aloe vera processing business.

B/C Ratio Instant Aloe Vera (*Powder*)

B/C Ratio

$$= \frac{\text{Total Business Profit of instant aloe vera (powder)}}{\text{Total Business Cost of instant aloe vera (powder)}}$$

B/C Ratio Aloe Cream

B/C Ratio

$$= \frac{\text{Total Business Profit nata de aloe}}{\text{Total Business Costs nata de aloe}}$$

B/C Ratio Aloe Vera Herbal Tea

B/C Ratio

$$= \frac{\text{Total Profit of Aloe Vera Herbal Tea Business}}{\text{Total Cost of Aloe Vera Herbal Tea Business}}$$

### **Break Even Point (BEP) Analysis**

According to Prajnanta (2002: 58-59) the analysis of the principal return can be based on the selling price and the volume of production to be achieved. Systematically it can be formulated as follows:

#### **BEP for Selling Price**

Instant Aloe Vera (*Powder*)

BEP for Selling Price

$$= \frac{\text{TC Instant Aloe Vera (Powder)}}{\text{TP Instant Aloe Vera (Powder)}}$$

TP *Instant Aloe Vera (Powder)*

*Nata de Aloe*

BEP for Selling Price

$$= \frac{\text{TC Aloe Vera Nata de Aloe}}{\text{TP Aloe Vera Nata de Aloe}}$$

TP *Aloe Vera Nata de Aloe*

Aloe Vera Herbal Tea

BEP for Selling Price

$$= \frac{\text{TC Aloe Vera Herbal Tea Aloe Vera}}{\text{TP Aloe Vera Aloe Vera Herbal Tea}}$$

TP *Aloe Vera Aloe Vera Herbal Tea*

#### **BEP for Production Volumes**

Instant Aloe Vera (*Powder*)

BEP for Selling Price

$$= \frac{\text{TC Instant Aloe Vera (Powder)}}{\text{Selling Price of Instant Aloe Vera (Powder)}}$$

Selling Price of *Instant Aloe Vera (Powder)*

Products *Nata de Aloe*

BEP for Selling Price

$$= \frac{\text{TC Aloe Vera Nata de Aloe}}{\text{Selling Price of Nata de Aloe}}$$

Selling Price of *Nata de Aloe*

Products Aloe Vera Herbal Tea

BEP for Selling Price

$$= \frac{\text{TC Aloe Vera Herbal Tea}}{\text{Selling Price of Aloe Vera Herbal Tea Products}}$$

Selling Price of *Aloe Vera Herbal Tea Products*

#### **Payback Period (PP) Analysis**

According to Kasmir and Jakfar (2012: 101), the *Payback Period* Method is a technique of assessing the period of return on investment from a business or project. The *Payback Period* (PP) calculation model is:

*Instant Aloe Vera, Nata de Aloe, and Herbal Tea Payback Period (Powder)*

$$\text{PP} = \frac{\text{Instant Aloe Vera}}{\text{Business Investment x 1 Year}}$$

Business Investment x 1 Year

$$\text{PP} = \frac{\text{Nata de Aloe}}{\text{Business Investment x 1 Year}}$$

Business Investment x 1 Year

$$\text{PP} = \frac{\text{Herbal Tea}}{\text{Business Investment x 1 Year}}$$

Business Investment x 1 Year

## RESULTS AND CONCLUSIONS

The total production costs incurred in the largest Instant Aloe Vera (*Powder*) processing business are at a capacity of 50 kg of Rp. 1,734,397 per day and the smallest at a capacity of 5 kg of Rp. 219,803. In accordance with the increasing production capacity used, the production costs incurred are also increasing. The largest receipt received at a production capacity of 50 kg was Rp. 7,000,000, with the total production of products as much as 200 pcs with a unit price of Rp. 35,000, the price of Instant Aloe Vera (*Powder*). The income earned has a positive income, which means that the Instant Aloe Vera (*Powder*) processing business is profitable. Based on the largest revenue data from the processing of Instant Aloe Vera (*Powder*) capacity 50 of Rp. 105,312,055 if the income is calculated for one month and the lowest income is Rp. 9,603,945 if the income is calculated for one month for 20 productions.

The largest production cost issued in the *Nata de Aloe* processing business is at a capacity of 4 kg of Rp. 376,473 per day and amounting to Rp. 3,439,129 if the total production costs are calculated for 20 working days for one month. Furthermore, the largest total receipts in the *Nata de Aloe* processing business are found in a production capacity of 4 kg of Rp. 2,000,000 per day and of Rp. 40,000,000 if the total receipts are calculated for one month, with the amount of product production as much as 200 pcs with a unit price of Rp. 10,000. means that the acceptance received is greater following its production capacity.

Total the cost of producing aloe vera herbal tea issued is Rp. 60,462 per day or once production, in a month the production of 20 times the receipt of the Aloe Vera Herbal Tea processing business at *Umami Home Industry* comes from the multiplication between the price of Aloe Vera Herbal Tea and the number of product outputs that Generated. The revenue received by the business owner at a capacity of 25 kg, resulted in a receipt of Rp. 700,000 per day with a total production of 35 pack and amounting to Rp. 14,000,000 if the total variable costs were calculated for one month. The revenue of the Aloe Vera Herbal Tea processing business is the result of receipts minus the costs incurred in conducting a business. The income earned by *Umami Home Industry* has a positive value income, which means that the processing business is profitable. Deposits from the processing of Aloe Vera Herbal Tea at a production capacity of 25 kg amounting to Rp. 12,790,753 if the total variable costs are accumulated for one month.

The calculation of the R/C *ratio* analysis of herbal teas is the most profitable, but not many craftsmen have processed herbal teas because it is difficult to get a market that has produced a lot of herbal teas even though there are different commodities. Although herbal tea is the most profitable product but lacks interest from the finished market, the product that is widely produced is instant aloe vera (*powder*) which is a superior product from *Umami Home Industry*. Seen from the results of the B/C *Ratio* analysis on aloe vera processing business at *Umami Home Industry*, the first largest acceptance was obtained by herbal tea of 10.6. This shows that with a B/C *Ratio* value of 10.6 means that for every Rp. 1,000 costs incurred; the aloe vera herbal tea business will get a profit of Rp. 10,600.

Based on the results of BEP Production on *instant* aloe vera at a capacity of 50 kg, it produces a production BEP of 50 pcs, with a total production (pcs) of 200 pcs. In addition, *nata de aloe* at a capacity of 4 kg produces BEP production of 38 pcs, with

a total production (pcs) of 200 pcs. Then for aloe vera herbal tea which only has a capacity of 25 kg, it produces BEP production of 3 pcs, with a total production (pcs) of 35 pcs. Overall, the total production of the three products from aloe vera processing results gets results above the production BEP, this means that the production issued by *Umami Home Industry* has experienced a profit from the amount of production. BEP the lowest price at the time of product price or sales per unit or volume of Rp. 870, this is found in processed aloe vera herbal tea at a capacity of 25 kg. Overall, BEP price obtained is below the price set by the *Umami Home Industry*, this means that the company can generate a profit on the sales price of the product per pcs, because the pricing of product sales from processing aloe vera is above the BEP price point.

The fastest return on capital is in *aloe vera herbal tea products*. With an average PP value of 0.02 years, or it can be interpreted as the duration of return on capital for 18 days. *Nata de Aloe* product with a return of capital of 1 month 2 days. As well as instant aloe vera products (powder) have a return time of capital for 1 month 13 days.

## CONCLUSION AND SUGGESTION

Based on the results of the research above, conclusions can be drawn 1) The total production costs incurred in the Aloe Vera processing business are as follows: The largest investment cost is in the processed Instant Aloe Vera (*Powder*) capacity of 50 kg of Rp. 4,040,000 depreciations of Rp. 3,397 per day. The smallest investment cost is in processed aloe vera herbal tea with a capacity of 25 kg of Rp. 260,000 with a depreciation of Rp. 712 per day. The biggest fixed cost is in processed Instant Aloe Vera (*Powder*) at a capacity of 50 kg of Rp. 94,397 per day. The smallest fixed cost is in the processed aloe vera herbal tea with a capacity of 25 kg of Rp. 30,712 per day. The biggest variable cost is in processed Instant Aloe Vera (*Powder*) at a capacity of 50 kg of Rp. 1,640,000 per day. The smallest variable cost is in the processed aloe vera herbal tea with a capacity of 25 kg of Rp. 321,000 per day.

The income of the Aloe Vera processing business is as follows 1) The highest income is in the processed Instant Aloe Vera (*Powder*) capacity of 50 kg of Rp. 5,265,603 per day. The lowest income is in processed aloe vera herbal tea with a capacity of 25 kg of Rp. 639,538 per day.

The largest R/C ratio value is in the processed aloe vera herbal tea with a capacity of 25 kg of 11.6. The smallest R/C ratio value is in the *processed Nata de Aloe* capacity of 1 kg of 2.9. The largest B/C ratio value is in the processed aloe vera herbal tea with a capacity of 25 kg of 10.6. The smallest B/C ratio value is in the processed *Nata de Aloe* capacity of 1 kg of 1.9.

The largest production BEP is in processed Instant Aloe Vera (*Powder*) with a capacity of 50 kg of 50 pcs with a total production of 200 pcs. The smallest production BEP is in processed aloe vera herbal tea with a capacity of 25 kg of 3 pcs with a total production of 35 pcs. The highest price BEP is in processed Instant Aloe Vera (*Powder*) with a capacity of 1 kg of Rp. 10,990 with a selling price of Rp. 35,000. The lowest price BEP is in the processed aloe vera herbal tea with a capacity of 25 kg of Rp. 1,727 with a selling price of Rp. 20,000. The fastest *Payback Period* value is found in aloe vera herbal tea products with a capacity of 25 kg with a PP value for 0.02 years or equivalent to 18 days. The longest *Payback Period* value is found in Instant Aloe Vera (*Powder*) products with an average of 0.12 years or equivalent to 1 month 13

days (+ 4.8 hours).

Advice for aloe vera processing business owners is expected to *manage* production cost expenditures so that product income can be optimal. For the Makasar District Government, it considers products to focus on development, namely instant aloe vera (*powder*) and unused final products, namely aloe vera herbal tea to become a *zero-waste* process.

## BIBLIOGRAPHY

- Center, *Aloevera*. 2004. *Profile of Aloevera Agribusiness in Pontianak City, West Kalimantan*. Aloevera centre, Pontianak.
- Astuty, Tri. 2016. *The Influence of Packaging Design, Taste, and Product Variations on the Purchasing Decisions of Bumi Anugrah Consumers*. PERFORMANCE: Journal of Business Management and Star-Up. Vol.1 No.4; pp 455-463.
- Agency for Research and Assessment of Technology. 2004. *Aloevera Center*. [www.bpt.go.id](http://www.bpt.go.id), April 28, 2019, at 12:34 p.m.
- Central Statistics Agency (BPS). 2017. *Micro and Small Industries*. <https://bps.go.id/subject/170/industri-mikro-dan-kecil.html>, October 24 2019, 09:00 WIB.
- Central Statistics Agency (BPS). 2018. *Makasar District in Numbers*. <https://bps.go.id/subject/170/Kecamatan-Makasar-dalam-Angka.html>, October 24, 2019, at 11:00 a.m.
- Central Statistics Agency (BPS). 2018. *East Jakarta in Numbers*. <https://bps.go.id/subject/170/Jakarta-Timur-dalam-Angka.html>.24 October 2019, 13:00 WIB.
- Central Statistics Agency (BPS). 2018. *Biopharmaceutical Plant Statistics*. <https://bps.go.id/subject/170/Statistik-Tanaman-Biofarmaka.html>, 27 October 2019, 3:00 p.m.
- Brigham, E.F and M.C. Ehrhardt. 2005. *Financial Management Theory And Practice*. Eleventh Edition. South Western Cengage Learning, Ohio
- Department of Health. 1992. *Health Drinks*. Jakarta
- Department of Agriculture. 2002. *Grand Strategy for Agro-Industrial Development (Agricultural Product Processing Industry)*. Directorate of Agricultural Product Processing and Marketing, Department of Agriculture, Jakarta
- Eriyanto. 2007. *Sampling Techniques: An Analysis of Public Opinion*. LKIS. Yogyakarta
- Furnawanthi, Irni. 2002. *Properties and Benefits of Aloe Vera the Magic Plant*.
- Harmono and Agus Andoko. 2005. *Cultivation and Business Opportunities*. Agromedia Library, Jakarta
- Hartanto, E.S. and E.H. Lubis. 2002. Processing of Aloe Vera Juice Drinks (Aloe vera Linn). *Juournal of Agro-based Industry* 19 (1-2) : 29-35.
- Hendrawati, T.Y. 2015. *Aloe Vera Powder Properties Produced from Aloe Chinensis Baker, Pontianak, Indonesia*. *Journal of Engineering Science and Technology Special Issue on SOMCHE 2014 & RSCE 2014 Conference, January (2015)* 47 – 59. *School of Engineering, Taylor's University*
- Hery. 2014. *Accounting of Assets, Liabilities, and Equity*. Grasindo, Jakarta.
- Henry, R. 1979. *An up Dated Review of Aloe vera*. *Cosm. and Toiletri*. 94 :42-50.

- Cashmere and Jakfar. 2016. *Business Feasibility Study*. Revised Edition. Prenamedia Group. Jakarta
- Kusumawati, et al. 2018. *Analysis of the Efficiency of Aloe Vera Plant Cultivation in Maharatu Village, Marpoyan Damai District, Pekanbaru City*. Journal of Agribusiness Vol 20 No. 1.