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Priority efforts to increase income of agribusiness companies in West Bandung, West Java, Indonesia

Prima Gandhi¹*, Dita Miftakhul Jannah², Dinda Nurkaidah²

AFFILIATIONS

 ¹Agribusiness Management, Vocational School IPB University, Indonesia & Tokyo University of Agriculture, Japan.
 ² Agribusiness Management, Vocational School IPB University, Indonesia.

*Corresponding: prima.gandhi@apps.ipb.ac.id

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ABSTRACT

Horticulture is one of the agricultural sub-sectors with excellent potential to develop in Indonesia. Horticulture includes vegetables, fruits, medicinal plants, and ornamental plants. Along with the development of agricultural technology, horticultural crops can be cultivated with a hydroponic system. The hydroponic system or soilless culture is a way of cultivating plants using a solution medium. Hydroponic systems are proliferating for cultivating horticultural vegetables due to the increasing demand for quality vegetables. Vegetables cultivated using the hydroponic system are fresher and cleaner, so they have better quality than conventional vegetables. The reason is that plant roots are not in direct contact with the soil. One of the agribusiness companies that cultivate vegetables with a hydroponic system is Wangunsari Farm Hydroponics (WFH). WFH is in Lembang District, West Bandung Regency, West Java Province. WFH plans to cultivate Redoakleaf Lettuce vegetables and establish a Kale Crunch business to increase income. This study aims to analyze the financial aspects of cultivating RedOakleaf Lettuce and establishing a Kale Crunch business, and determining which business is a priority to be carried out first. The analytical method used is descriptive graphics, quantitative tabulation, and counting Net Present Value (NPV), Gross B/C, Net B/C, Internal Rate of Return (IRR), and Payback Period. Based on the financial feasibility calculations, it is concluded that both businesses are feasible for increasing WFH income. However, the Kale Crunch business has become a priority before cultivating the Red Oakleaf Lettuce vegetable because it has a value NPV IDR 27,149,410, Net B/C 4.1, Gross B/C>1 1.1, IRR>DR is 95% where DR is 3.5% and the payback period is two years where the business life is five years. Horticultural agribusiness supports the eighth Sustainable Development Goals (SDGs).

KEYWORDS

Holticulture; Hydroponics; Financial Feasibility; Kale Chips; Redoakleaf Lettuce; SDGs 8.

1. INTRODUCTION

Horticulture is one of the agricultural sub-sectors with great potential to develop in Indonesia. In Indonesia, horticulture includes vegetables, fruit, ornamental, and medicinal plants (Gandhi et al., 2022a). Currently, the cultivation of horticultural crops can be done with a hydroponic system. The hydroponic system is a method of planting without using soil media but instead using a nutrient solution for plants.

Types of lettuce cultivated in WFH are curly lettuce, romaine, endive, and Dolorosa. In addition to the demand for these four types of lettuce, WFH received orders for red oak and lettuce from five supermarkets, with a total demand of 75 kg per month. Red oakleaf lettuce is one of the exclusive vegetable commodities and has not been widely cultivated, so it has a high selling value. By cultivating red oakleaf lettuce hydroponically to meet market demand, it is expected to increase WFH's income.

Kale is a vegetable in the same family as cabbage, kailan, mustard greens, and broccoli, which belongs to the Brassicaceae family (Hanum & Jazilah, 2021). Kale is a leafy vegetable that comes in many varieties. Kale varieties are distinguished by their leaves (shiny bluish/green), shape (flat/thick), and small flowers (Samec et al., 2019). Kale is a nutrient-dense vegetable. Kale vegetables can be eaten in processed and raw conditions (Armesto et al., 2015).

Kale has high economic value because it contains minerals, vitamins and is rich in antioxidant compounds (Dewanti et al., 2019). Recently, people are more interested in consuming antioxidant-rich vegetables. Kale is known to have a good source of antioxidants compared to other vegetables (Waseem et al ., 2023). Kale is a superior vegetable in WFH because it has a high selling price. The Kale at WFH often does not sell out. As happened in March 2022, where out of total production of 100 kg, only 60 kg were sold, and 40 kg remained. Kale vegetables that are not sold and are not given any treatment will lose their economic value and become food waste.

Even though the remaining unsold kale vegetables can be an opportunity and capital to develop a Kale Crunch business or kale chips. Chips are one of the snacks widely consumed by people of various ages in Indonesia. It is one reason to innovate Kale into Kale Crunch. With the Kale Crunch product innovation, WFH hopes to get added value to increase the company's income.

In order to get added value as an effort to increase company revenue, WFH has two new business options: cultivating red oakleaf lettuce or establishing a Kale Crunch business. To choose a business is a priority, it is necessary to calculate the financial analysis of both. The purpose of this study was to analyze the financial aspects of business planning for red oakleaf lettuce cultivation and Kale Crunch production to determine which effort is more profitable to do first. The results of this study are a contribution to the research update.

2. MATERIALS AND METHODS

The research location is Wangunsari Farm Hydroponics, at Jalan Wangunsari no 43 RT 02 RW 03, Wangunsari Village, Lembang District, West Bandung Regency, West Java Province. The location of the research was determined purposively. Consideration of the selection of research sites by researchers because WFH is one of the producers of vegetables in West Bandung Regency, which has production data, organizational management, and facilities infrastructure relatively complete compared to other agribusiness companies in West Bandung Regency. This research was conducted on the date 31 January until 21 April 2022.

The data used in this research are primary and secondary. Primary data was obtained through direct observation of the company, from a general state of the company, organizational structure, procurement of *inputs* and *outputs*, data production, and marketing. In addition, primary data was also obtained through interviews with company owners, employees, partners, and potential customers. Secondary data is data obtained indirectly. Secondary data was obtained through the adaptation of textbooks and scientific journals. Taking the sample in the study uses *a purposive sampling method*.

The financial feasibility aspect is an aspect that is used to assess the company's overall finances (Gandhi et al., 2022b). The financial feasibility aspect is carried out to assess whether this business is feasible or not to run (Kasmir & Jakfar, 2014). The analysis of financial feasibility aspects carried out in the study includes analysis *of cash flow*, profit loss, and appropriateness of business. Cash flow analysis includes costs incurred and benefits received (Gandhi et al., 2022a). Costs are company expenses consisting of investment costs, fixed cost, and variables cost. The benefit is acceptance which got the company from sale results production. Benefits Also can be obtained from mark remainder. Calculation of total receipts using the formula:

TR = Px Q

Information:	
TR	= Total revenue (IDR).
Р	= Price (IDR).
Q	= Total production output (IDR).

Total revenue received by the company by multiplying the amount of production output (Q) with the selling price (P) (Gandhi & Tanjung, 2022). Furthermore, profit and loss analysis is carried out to explain the amount of income earned per period. In carrying out a profit and loss analysis, several components are needed, such as sales or revenue, cost of goods sold, gross profit, operating costs, gross operating profit, depreciation, net income, other income, EBIT, interest, EBT, taxes, and EAIT (Kasmir & Jakfar, 2014). Operational costs include all costs of production, maintenance, and other expenses related to production in one production activity period. There are two components of operational costs: fixed and variable (Gandhi & Purwana, 2023). Variable coasts are coasts whose size is in line with development of production or sales every year or one unit in time. In comparison, fixed are coasts area coasts whose amount is not affected by the development of the development of the amount of production or sales in one year or one unit of time (Nurmalina et al., 2014).

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In addition to total revenue (TR), knowing the total cost (TC) is necessary when carrying out a cost-benefit analysis. The formula for calculating TC is

$$TC = TFC + TVC$$

Information: TC = Total cost (IDR). TFC = Total fixed costs (IDR). TVC = Total variable costs (IDR).

Adding the total fixed costs (TFC) to the total variable costs (TVC) is carried out to determine the total costs incurred by the company to produce the product. Furthermore, to find out if a business is making a loss or making a profit, it can use the formula:

$$\pi = TR - TC$$

Information:

 $\begin{aligned} \pi &= \text{Profit (IDR).} \\ \text{TR} &= \text{Total revenue (IDR).} \\ \text{TC} &= \text{Total cost (IDR).} \end{aligned}$

The Break Even Point (BEP) is the main return point where total revenue (TR) = total cost (TC). The BEP formula can be written as follows:

$$BEP(unit) = \frac{TFC}{(P - TVC)}$$

Information:

BEP= Break-even point (units).P= Selling price per unit (IDR).TFC= Total fixed costs (IDR).TVC= Total variable costs (IDR).

Adding the total fixed costs (TFC) to the total variable costs (TVC) is carried out to determine the total costs incurred by the company to produce the product. Furthermore, to find out if a business is making a loss or making a profit, it can use the formula:

 $\pi=TR-TC$

Information:

 $\pi = Profit (IDR).$

TR = Total revenue (IDR).

TC = Total cost (IDR).

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$$BEP(unit) = \frac{TFC}{(P - TVC)}$$

Information:

BEP= Break-even point (units).P= Selling price per unit (IDR).TFC= Total fixed costs (IDR).TVC= Total variable costs (IDR).

NPV is the difference between the total *present value* of benefits and costs over the business's life. A business is declared feasible if the NPV is greater than 0 (NPV> 0) because it means the business is profitable or provides benefits. Calculation of NPV systematically can be formulated as follows:

$$NPV = \sum_{t=0/1}^{n} \frac{Bt}{(1+i)^{t}} - \sum_{t=\frac{0}{1}}^{n} \frac{Ct}{(1+i)^{t}} = \sum_{t=0/1}^{n} \frac{Bt - Ct}{(1+i)^{t}}$$

Information:

Т

B t = Benefits in year t (Rp).

C t = Cost in year t (Rp).

= Year of business activity (t=0, 1, 2, 3, ..., n), the initial Year can be year 0 or Year one depending on the characteristics of the business (Year).

i = interest rate/discount rate (%).

 $\frac{1}{(1+i)^t} = discount \, factor \, (DF) \text{ in year t (\%)}.$

The gross B/C ratio illustrates the effect of the additional costs on the additional benefits received. A business is feasible to run if *the Gross B/C ratio* is greater than 1 (*Gross B/C ratio* > 1), and a business is not feasible to run if it is less than one. Mathematically, *Gross B/C* can be formulated as:

$$Gross B/C = \frac{\sum_{t=0/1}^{n} \frac{Bt}{(1+i)^{t}}}{\sum_{t=0/1}^{n} \frac{Ct}{(1+i)^{t}}}$$

Information:

B t = Benefits in year t (IDR).

C t = Cost in year t (IDR).

n = Business age (years).

i = Discount rate (%).

T = Period or t-th year

Net B/C ratio is the ratio between positive and negative net benefits. A business can be said to be feasible if *the Net B/C ratio* is greater than one (*Net B/C* > 1) and is said to be feasible if *the Net B/C* is less than one. Mathematically it can be written by the formula:

$$(Bt-Ct)>0 \\ (Bt-Ct)<0 \\ Net \frac{B}{C} = \frac{\sum_{t=0}^{n} \frac{Bt-Ct}{(1+t)t}}{\sum_{t=0}^{n} \frac{Bt-Ct}{(1+t)t}}$$

Information:

Bt= Benefit in year t (IDR)Ct= Cost in year t (IDR)t= Period or t-th yeari= prevailing interest rate (%)n= Length of Period

A business is feasible if the IRR value exceeds *the opportunity cost of capital* (DR). Here is the IRR formula:

$$IRR = i_1 \frac{NPV_1}{NPV_1 - NPV_2} x (i_2 - i_1)$$

Information:

\mathbf{i}_1	= <i>Discount rate</i> that produces a positive NPV.
i_2	= <i>Discount rate</i> that produces a negative NPV.
NPV_1	= positive NPV.
NPV_2	= negative NPV.

Businesses with short *payback periods* or quick payback are likely to be selected. The weakness of this method is that it ignores the time value *of money* and *cash flow* after the *payback period*. A business can be feasible if *the payback period* is less than the age of the business. *The payback period* can be formulated as follows (Situmorang and Dilham, 2007):

Payback period =
$$n + \frac{a - b}{c - b} \ge 1$$
 year

Information:

n = The last year where the cash flow still cannot cover *the investment*.

a = amount *of initial investment*

b = qualitative sum of cash flows in the n_{th} year.

c = cumulative amount of cash flows in the n+1 year.

So based on the exposure above, financial feasibility analysis includes *Net Present Value* (NPV), *Gross B/C*, *Net B/C*, *Internal Rate of Return* (IRR), and *Payback Period*.

3. RESULTS AND DISCUSSION

3.1. Analysis Financial Planning for Red Oakleaf Lettuce Cultivation

Financial planning is important to develop a business to determine the costs required during the production process, the profits to be earned, and the feasibility of the business. Financial planning in research on red oakleaf lettuce cultivation using *cash* flow analysis, profit and loss, and investment criteria. The basic assumptions used to determine the business feasibility of adding *red oakleaf commodities* are as follows:

- 1. *Red oakleaf* commodity addition business is eight years based on the economic life *of the greenhouse* and NFT hydroponic installation.
- 2. The source of capital for developing this business uses its capital, with an average interest rate of Bank Indonesia (BI) in 2022 of 3.5%.
- 3. The company owns the land used for the greenhouse with a total area of 2,340 m 2, and 90 m 2 is used in developing this business.
- 4. The preparation period is carried out at the beginning of the first year for 28 days.
- 5. The residual value is based on the applicable provisions of 10% of the total purchase price.
- 6. Production capacity planning in the first year is 2,379 *packs*. Then the production capacity in the 2nd to 8th year is 3173 *packs* per year.
- 7. Red oakleaf vegetables are IDR 18,000 per pack.
- 8. All investment costs are incurred in the first year, and there is re-investment.
- 9. The depreciation method used is the straight-line depreciation method.
- 10.Calculation of corporate income tax is determined based on Government Regulation No. 23 of 2018 concerning income tax from businesses received or obtained by taxpayers of 0.5% of net profit before tax.
- 11.In developing this business, common costs *are* used for investment, fixed, and variable costs. Common cost is obtained by dividing the greenhouse area used in business development by the total greenhouse area and multiplying by 100%, which is 3.85%. The following is the calculation of the common cost of adding red oakleaf commodities.

 $Common \ cost \ = \ \frac{The \ area \ of \ the \ green \ house \ used}{The \ total \ area \ of \ the \ green \ house} \ \times \ 100\%$

$$Common \ cost \ = \ \frac{90 \ \text{m}^2}{2.340 \ \text{m}^2} \times \ 100\%$$

$$Common \ cost = 3,85\%$$

Based on these assumptions, the following details the financial planning for planning the development of the *red oakleaf commodity cultivation business* at Wangunsari Hydroponic Farm.

1. Capital requirements

The company's capital is the capital used in developing the business of *red oakleaf commodities*. The capital requirement for developing this business is IDR 181,090,155, consisting of investment and operational costs.

Following are details of capital or cost requirements in developing the business of *red oakleaf commodities*, as seen in Table 1.

No.	Name of Cost	Amount (IDR)
1	Investment Cost	135,203,723
2	Fixed Cost year 1	17,797,979
3	Fixed Cost years 2-8	18,658,839
4	Variable Cost 1	4,209,807
5	Variable Cost years 2-8	5,219,807
Total	-	181,090,155

 Table 1. Business development cost requirements

Source: Processed data (2022)

1. Investment costs

Investment costs are incurred at the beginning of activities and at certain times to obtain benefits for the coming year. Spending investment costs can also be done more than once, commonly called *reinvestment*. Investment costs incurred in adding *red oakleaf commodities* amounted to IDR 135,203,723. The details of the investment costs incurred are shown in Appendix 5.

2. Operating costs

Operational costs include all production, maintenance, and other costs that describe expenses to produce production used for each production process in one period of production activity (Nurmalina et al . , 2014). Operational costs consist of variable costs and fixed costs.

a. Fixed cost

Fixed costs are costs whose amount is not affected by the amount of production issued each month. Fixed costs for adding *red oakleaf commodities* include investment depreciation, electricity, transportation, team member salaries, and vehicle taxes. The total costs incurred in the first year amounted to IDR 17,797,979 and IDR 18,658,839 in years 2-8. The details of the fixed costs incurred are shown in Appendix 6.

b. Variable costs

Variable costs are costs whose magnitude is influenced by production developments. Generally, the time spent on variable costs is also influenced by the production time. Variable costs incurred for adding *red oakleaf commodities* in the first year amounted to IDR 4,209,807, and years 2-8 amounted to IDR 5,219,807. The details of the variable costs incurred are shown in Appendix 7.

4. Acceptance planning (inflow)

Revenue planning (*inflow*) is all revenue obtained during ongoing business activities. Revenue from Wangunsari Farm Hydroponics is obtained from the sale of *red oakleaf* vegetable products and the residual value of investment goods. *Red oakleaf* vegetables are sold at IDR 18,000 per pack to supermarkets that have collaborated. The price determined is based on an agreement between Wangunsari Farm Hydroponics and the supermarket taking into account the cost of goods sold (HPP). Projected sales of *red oakleaf* in the first year are 2,379 *packs* per year, with a total revenue of IDR 42,822,000. Furthermore, in the 2nd to 8th year, the sales projection is 3,173 *packs* per year with a total revenue of IDR 57,114,000. The residual value of investment goods is 10% of the total purchase price, so the total residual value in the 8th year is IDR 13,520,372.

5. Cash flow analysis (cash flow)

Cash flow is a stream of receipts and disbursements from all financial activities that affect cash conditions in a certain period. The flow of cash flows can show changes in cash in a certain period accompanied by reasons and sources of cash and its use. *Cash flow* analysis on adding *red oakleaf commodities* is shown in Appendix 8.

6. Profit and loss analysis

Profit and loss analysis is carried out in order to find out the net income that the company gets from the addition of *red oakleaf commodities*. Profit before tax is obtained from the total receipts minus the total costs incurred during a certain period. Net income is obtained from profit after tax, namely profit before tax minus company tax. The amount of tax on adding the *red oakleaf commodity* is 0.5% based on Government Regulation 23 of 2018 concerning Provisions for Business Income Tax. The profit and loss analysis on adding *red oakleaf commodities* is shown in Appendix 9.

7. Investment feasibility analysis

Investment feasibility analysis aims to determine business feasibility based on investment criteria. Some of these criteria include the *net present value* (NPV), *Net Benefit Cost Ratio* (Net B/C), *Gross Benefit Cost* (Gross B/C), *Internal Rate of Return* (IRR), and *Payback Period* (PP). The results of the analysis of the investment criteria can be seen in Table 2.

Investment criteria	Unit	Condition	Results	Information
NPV	IDR	> 0	IDR 203,363,478	Feasible
Net B/C		>1.00	3,12	Feasible
Gross B/C		>1.00	2,10	Feasible
IRR	%	>3.5%	46%	Feasible
PP	Year	< 8 years	3 Years 1 Month	Feasible

|--|

Source: Processed data (2022)

Table 2 shows the investment feasibility analysis results on adding the *red oakleaf commodity*, which was declared feasible. The NPV value of IDR 203,363,478 indicates that adding *red oakleaf commodities* generates a present benefit of IDR 203,363,478 at a business age of 8 years and an interest rate of 3.5%. A Net B/C value of 3.12 is feasible because the value is more than 1.00, which means that every cost incurred of Rp. 1.00 will get a net benefit of Rp. 3.12.

A Gross B/C value of 2.10 is feasible because the value is more than 1.00, which means that every cost incurred of IDR 1.00 will generate a gross benefit of IDR 2.10. The IRR value of 46% is said to be feasible because the value is more than the interest rate set at 3.5%. In addition, *the payback period* needed to return the investment cost is three years and one month. The value of *the payback period* is said to be feasible because it is less than the age of the business, which is eight years.

3.2 Analysis of Financial Aspects of Kale Crunch Business Establishment Planning

The financial planning used to establish the Kale Crunch business unit is profit and loss analysis and investment criteria. Investment criteria are seen by using cash flow to determine the feasibility of a business by considering the value factor and applicable investment criteria. The financial planning for the establishment of this business unit uses several supporting assumptions to determine the feasibility of establishing a business unit, namely as follows:

- 1. The capital used for the initial establishment of the business unit uses the company's capital. The business age of 5 years is determined based on the economic life of the investment costs, namely oil stoves and spinners.
- 2. The discount rate used is 3.5 % as a deposit interest rate, according to Bank Indonesia (BI) for 2022.
- 3. Production is carried out twice in one month. All investment costs are incurred in the first year of business, and re-investment is per the economic life.
- 4. The selling price of the product is calculated based on the HPP calculation of IDR 30,500.
- 5. The business income tax used is 0.5 %. The amount of the income tax rate follows the provisions in Government Regulation (PP) Number 23 of 2018 concerning income tax on income from businesses received or earned by taxpayers with a certain gross income.
- 6. Wangunsari Farm Hydroponics owns the building used in developing this business.
- 7. The production process can produce as much as 280 Pcs Kale Crunch in one month by requiring 38 kg 40 kg of kale.

In calculating cash flow in establishing the Kale Crunch business unit at Wangunsari Farm Hydroponics, there are the following components:

1. Cost planning

The financing plan includes investment costs, operational costs, which consist of variable and fixed costs, capital requirements, and capital obtained.

a) Investment Cost

Investment costs are incurred at a business's start to reap benefits several years later. Investment costs will be incurred in the first year and re-invested in several components according to their

economic life. The total investment cost incurred for developing this business is IDR 11,949,000, with a total depreciation cost of IDR 2,549,500.

b) Operational Costs

Operational costs are all expenditures used for the production process in a certain period. Operational costs in developing this business can be seen in Table 3.

Year Variable costs (IDR) Fixed costs (IDR) Operational cost (IDR)						
1	41,947,200	33,104,500	75,051,700			
2 -5	55,929,600	43,274,500	99,204,100			

Table 3.	Operational	costs of	the Kale	Crunch	business	unit
Labit J.	Operational	COSIS OI	the real	Crunen	Dusiness	um

Source: Processed data (2022)

Table 3 shows that business development requires variable costs and fixed costs.

i. Fixed cost

Fixed costs are costs whose amount is not affected by the development of production and sales in one year. Fixed costs for developing the Kale Crunch business amounted to IDR 33,320,500 in the 1st year and IDR 43,562,500 in the 2nd to fifth years. Details of the fixed costs of developing the Kale Crunch business can be seen in Table 4.

Table 4. Fixed costs of Kale Ci	runch business	units
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No	Name of Cost	Amount	Cost	Year 1 (IDR)	Years 2-5
			unit (IDR)		(IDR)
1	Investment cost depreciation	1	2,594,500	2,594,500	2,594,500
2	Electricity	1	150,000	1,350,000	1,800,000
3	Employee salary	2	1,620,000	29,160,000	38,880,000
	Total			33,104,500	43,274,500

Source: Processed data (2022)

ii. Variable cost

Variable costs are costs incurred according to production or sales each year. The amount of variable costs can vary according to the production carried out. The production costs incurred in developing this business in the 1st year amounted to IDR 41,947,200, and in the second to fifth years it was IDR 55,929,600.

2. Acceptance planning

Revenue planning shows the money that comes in as a result of selling Kale Crunch over a predetermined period. Planned revenue from the development of the establishment of business units is the sale of Kale Crunch . The calculation of the Kale Crunch sales revenue plan can be seen in Table 5.

Year	Number of production (pcs)	Price per pcs (IDR)	Total annual revenue (IDR)			
1	2,520	30,500	76,860,000			
2 -5 3,600 30,500 109,800,000						
Source: Dr	recessed data (2022)					

 Table 5. Kale Crunch business unit acceptance plan

Source: Processed data (2022)

Table 5 shows revenue from the sale of Kale Crunch in the first year with a total production of 2,520 pcs amounting to IDR 76,860,000 and for revenues in years 2 to 5 with a total production of 3,600 pcs amounting to IDR 109,800,000. The acceptance plan has not been calculated if there is a failure in the production process.

3. Acceptance improvement planning

1. Profit and Loss Report analysis

The income statement is calculated by deducting revenue from variable costs, fixed costs, loan interest, and business income tax. Loan interest is assumed to be 0% because it uses personal capital. The business income tax used is 0.5 %. The amount of the income tax rate follows the provisions in Government Regulation (PP) Number 23 of 2018 concerning Business Income Tax. The income statement for establishing the Kale Crunch business unit can be seen in Table 6.

Year	Net profit before tax (IDR)	Income tax (IDR)	Net profit after tax (IDR)				
1	1,808,300	7,962	1,799,259				
2 -5 10,595,900 52,980 10,542,921							
Sources Decoursed data (2022)							

Source: Processed data (2022)

Cash Flow Analysis (Cashflow) 2

Cash flow is the flow of net benefits as a result of reducing the flow of costs to the flow of benefits, which is structured to show a change in cash within one year for a certain period and provide reasons for changes in cash by showing where the sources of cash are from.

From the cash flow results, there are investment criteria, namely NPV (Net Present Value), Net B/C (Net Benefit Cost Ratio), Gross B/C (Gross Benefit Cost Ratio), IRR (Internal Rate of Return), and PP (Payback Period). The cash flow investment criteria for establishing the Kale Crunch business unit are listed in Table 7.

 Table 7. Cash flow analysis of Kale Crunch business units

No	Investment criteria	Eligibility criteria	Mark	Information
1	NPV	> 0	IDR 27,149,410	Feasible
2	IRR	> Interest rates	95%	Feasible
3	Net B/C	> 1	4,1	Feasible
4	Gross B/C	> 1	1,1	Feasible
5	Payback period	< Business age	2	Feasible

Source: Processed data (2022)

From the cash flow analysis in Table 5, the investment criteria are generated as follows.Cash flow calculation in Table 5, the investment criteria are generated as follows.

- 1. The Net Present Value (NPV) obtained from the investment feasibility is IDR 27,149,410, which means that the net profit earned over the business's life is for five years. These results state that establishing the Kale Crunch business unit is feasible because it is greater than zero (NPV > 0).
- 2. The Internal Rate of Return (IRR) obtained is 95%, where the greater the value obtained, the greater the rate of return to the company. The result of this value is greater than the discount rate used, which is 3.5 % of the BI interest rate, meaning that establishing the Kale Crunch business unit is feasible.
- 3. The obtained Net B/C of 4.1 is feasible because the Net B/C > 1 means that every Rp. 1 spent will receive a net benefit of Rp. 4.1 times the benefits.
- 4. The Gross B/C calculation exceeds the criteria > 1, where the Gross B/C obtained from the establishment of the Kale Crunch business unit is 1.1, which means that the establishment of this business unit is feasible to run.
- 5. Payback Period (PP) obtained based on cash flow calculations, the time needed to establish a business unit in return on investment is two years. Establishing the Kale Crunch business is feasible because the payback period does not exceed the business's life, which is five years.

3.3. Discussion : Comparison Analysis Financial Planning for Red Oakleaf Lettuce Cultivation and Kale **Crunch Business Establishment**

Indicator	Criteria appropriateness	Red Oakleaf Cultivation	The Kale Crunch Business
NPV	NPV>0	Rp 203,363,478	IDR 27,149,410
Gross B/C	Gross B/C>1	3,12	1,1
Net B/C	NetB/C>1	2,10	4,1
IRR	IRR>discount rate	46%	95%
Payback period	PP>business age	3 Years 1 Month	2 years

Source: Processed data (2023)

Based on the results of the financial analysis described in Table 8, it can be concluded that Red oakleaf Lettuce cultivation has an NPV> 0 is Rp. IDR 203,363,478, Net B/C>1 is 2.1, Gross B/C>1 is 3.12, IRR>DR is 46% where DR is 3.5%, and the payback period is three years one month which is smaller than business age is eight years. Fulfilling these five parameters makes cultivating red oakleaf lettuce feasible to increase WFH income.

The plan to establish a Kale Crunch business has an NPV > 0, namely IDR 27,149,410, Net B/C> 1, namely 4.1, Gross B/C> 1, namely 1.1, IRR> DR, namely 95% where DR is 3 .5% and the payback period > the age of the business is two years where the age of the business is five years. Fulfilling these five parameters makes planning to set up a Kale Crunch business feasible to increase WFH income.

4. CONCLUSION

Both of these business planning efforts are feasible. However, based on the value of NPV, Net B/C, Gross B/C, IRR, and payback period, it is better to establish a Kale Crunch business unit first compared to cultivating red oakleaf lettuce.

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