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Financial Feasibility Analysis of Black Soldier Fly (*Hermetia illucens*) Cultivation Business in Bogor, West Java

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Abstract - Indonesia produces 38,649,897.78 tons of waste every year. With waste management not being optimal in Indonesia, which is only 62.2%, this results in a buildup of waste. The accumulated rubbish can be a source of disease and pollute the environment. One effort to overcome the problem of waste accumulation is to cultivate Black Soldier Fly (BSF) larvae or also known as maggots. Apart from being able to deal with waste, maggots can also be used as additional animal feed which is high in protein and has economic value. The aim of this research is to determine the financial performance of the Black Soldier Fly (BSF) cultivation business in Bogor. The components used to analyze financial performance are Net Present Value (NPV), Internal Rate of Return (IRR), and Benefit Cost (B/C). The results of the financial performance analysis of the Black Soldier Fly (BSF) cultivation business in Bogor show that the business was declared feasible because it met the criteria applied, namely Net Present Value (NPV) with a value of IDR. 9.037.698,47. Internal Rate of Return (IRR) with a value of 20%. Net Benefit Cost Net (B/C) with a value of 1,76.

Keywords: Black soldier fly, business feasibility, NPV, Net B/C, IRR

1 Introduction

Waste is a problem that is quite difficult to tackle. Based on data from the Sistem Informasi Pengelolaan Sampah Nasional (SIPSN) of the Ministry of Environment and Forestry, the amount of waste generated in Indonesia in 2023 is 38,649,897.78 tons [1]. This situation is exacerbated by the continuously increasing population each year and the suboptimal waste management, which is only 62.2% per year. This condition results in the accumulation of waste at the landfill. This unmanaged pile of garbage can become a source of disease that can endanger the surrounding residents [2]. Besides carrying diseases, piles of garbage can also be dangerous to the environment because they can pollute the surroundings and damage the natural ecosystem. Based on its source, waste can be divided into several places such as household waste, offices, businesses, markets, and others. As reported by the Ministry of Environment in 2023 below.

Table 1. Waste Composition Based on Waste Source

Sources Of Waste	Percentage
Household	51,2%
Commerce	15,11%
Market	11,64%
Area	8,19%
Office	6,06%

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Sources Of Waste	Percentage
Public Facilities	5,05%
Other	2,75%

Source: SISPSN, 2024

Based on this data, the most waste comes from households, which is 51.2%, followed by commerce at 15.11% and markets at 11.64% of the total 37,592,703.79 tons of waste in 2023. Apart from the source of waste, it is also divided into organic waste and inorganic waste, as reported by BPS in 2023, organic waste dominates the total waste, which is 50.10%.

One of the provinces that produces the most waste is West Java Province after East Java and Central Java. As of 2023, this province produces 4,782,722 tons of waste [3]. To overcome the problem of waste accumulation in the city of Bogor, 40% of which is organic waste, it is necessary to process waste in order to reduce the amount of existing waste and turn it into a sustainable business. One of the efforts that can be made to process organic waste is to use bioconversion of BSF maggot Bogor City is in 7th place with the amount of waste generated in 2023 is 284,631 tons [3]. The largest type of waste generated in Bogor City is food waste, as much as 40%, paper/cardboard 20%, plastic 15%, and wood/ranting 14%. With the high amount of organic waste generated, it is necessary to process waste in order to reduce the amount of existing waste. One of the efforts that can be made to process organic waste is by using maggot [4]. Maggot is an organism that will turn into a fly with the Black Soldier Fly (BSF) or also known as the black soldier fly. This fly has a short life cycle, fast growth and can decompose 80% of organic waste, both vegetables, fruits, and food waste. BSF flies only live for 7-14 days, with five life cycles, namely the adult phase, egg phase, prepupae phase, and pupa phase. Maggot is in the prepupal phase and pupa phase, during which time maggot is usually utilized as an alternative feed for livestock and fisheries [5]. Maggot has a crude protein content of 36.6%, lauric acid 49.18%, besides that maggot given fermented palm oil cake makes the protein content increase to 45.14% [6]. With a high protein content, maggot can be used as an alternative feed for poultry and fisheries.

In cultivation and animal husbandry, feed is a key factor in the success of cultivation, because feed is the largest cost component in aquaculture and fisheries, which is 60%-70% of the total production cost, and feed that has a high protein content is also needed to accelerate growth [7]. To be able to reduce production costs, an alternative feed with a high protein content at a low price is needed, one of the alternative feeds that can be used is maggot, considering that maggot can reduce organic waste and has a high protein content. This maggot has the potential to be managed and has a fairly high economic value [2]. As research conducted by [5] conducted at Omah Maggot Warna Warni located in Puntir Martopuro Village, Purwosari District, Pasuruan which was conducted in 2022 resulted in the cultivation of maggot at Omah Maggot Warna Warni is feasible to run.

One of the BSF maggot cultivators in Bogor City is located in Bubulak Village, West Bogor Subdistrict, Bogor City, West Java. One of the BSF maggot cultivators in Bogor City is located in Bubulak Village, West Bogor District, Bogor City, West Java. For the selection in Bogor city as the location of this research scale because the waste obtained is organic waste. With the existing organic household waste, researchers can research BSF cultivation in Bogor and at this location, the organic waste that can be processed is 1 ton of waste each day. Considering that 40% of the waste in Bogor

City comes from food waste, it makes it an opportunity for BSF maggot cultivation. Based on the results of research [5], as well as the emergence of the potential to cultivate BSF maggot to tackle waste and high nutritional content to be used as alternative feed, it is the basis for researchers to conduct research on the financial feasibility of BSF maggot cultivation using investment parameters in the form of NPV, IRR, NET B/C, to see the comparison of the value of benefits with the value of costs carried out at the Experimental Lab Universitas Terbuka [8].

2 Materials and methods

This research was conducted at the Experimental Lab Universitas Terbuka, Bubulak Village, West Bogor District, Bogor City, West Java. The selection of this research location was carried out purposive with the consideration that 40% of the waste in Bogor City comes from food waste and the lack of BSF maggot cultivators. This location was chosen because it is already running a lab-scale business and can reduce 1 tons of waste every day. The data source used uses primary data obtained directly from the object of research by conducting observations, in addition to primary data this study uses secondary data obtained from publications related to the research conducted such as journals, books, and government reports [9], [10]. This type of research uses descriptive research with the aim of collecting, compiling, analyzing data and interpreting data. In addition, this research uses a quantitative approach using financial analysis using the Net Present Value (NPV), Internal Rate of Return (IRR), NET Benefit Cost (NET B/C) analysis methods [11].

2.1 Cost

Cost is a necessary component for doing business. By definition, cost is a sacrifice of economic resources owned to be processed and utilized into objects that have more value in the hope that it can provide benefits now and in the future [12]. In running a business, the resources owned are different, so it is necessary to utilize resources wisely and maximally to generate large revenues from the costs sacrificed. With the use of minimal costs, it is expected that the revenue obtained will be greater, resulting in profit [13].

2.2 Financial Performance Analysis

Financial performance analysis is an analysis to determine how effective the costs incurred to generate profits. One of the business objectives is to create as much profit as possible by maximizing the costs incurred to be able to utilize the value of the company [14]. To be able to know the performance of finance, it is necessary to do a calculation in order to know clearly whether a business is worth running. Generally, this calculation is done with the help of Microsoft Excel software as a help tool to make the calculation easier. There are various indicators that can be used to analyze the financial performance of a business. In this study, the indicators used are Net Present Value (NPV), Internal Rate of Return (IRR), and Net Benefit Cost (NET B/C).

2.2.1 Net Present Value (NPV)

Net Present Value (NPV) is an analytical method to calculate the difference between the benefits obtained by a business and the costs incurred to obtain benefits [15]. In other words, NPV is used to determine if a business run will provide profit or loss. There are three criteria used in NPV, namely the criteria for feasibility of running is when NPV is greater than zero (NPV > 0), being in a break-even position or at the Break Even Point (BEP) when NPV is equal to zero (NPV = 0), the last is

when the business is not feasible, namely if NPV is smaller than zero (NPV < 0) [10]. To find NPV, can use the following formula.

$$NPV = \sum_{i=1}^{n} \frac{B_t - C_t}{(1+i)^t}$$

Information:
NPV : Net present value
n : Economic life of business
t : Year of business activity
i : Discount interest rate (discount rate)
Bt : Benefits or benefits in year t
CT : Cost in year t

2.2.2 Internal Rate of Return (IRR)

Internal Rate of Return (IRR) is an analytical method to calculate the discount rate or calculate the interest rate, which shows the net present value of the BSF maggot cultivation business that results in NPV equal to zero [15]. The bank interest rate issued by Bank Indonesia in this study is 6.25% [16]. There are three criteria used in IRR, namely when it is feasible to run, the break-even point is not profitable and not detrimental, and not feasible to run. Conditions when a business is profitable, the IRR value will be greater than the interest rate (IRR > Interest Rate), being at the break-even point is not profitable and not detrimental (IRR = Interest Rate), conditions are not feasible to run where the IRR is less than the interest rate (IRR < Interest Rate) [17]. To find the IRR value, can use the following formula.

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

Information:
IRR : Internal rate of return
i_1 : Interest rate that generates positive NPV
i_2 : Interest rate that generates negative NPV
NPV_1 : Present value that makes NPV positive
NPV_2 : Present value that makes NPV negative

2.2.3 Net Benefit Cost (NET B/C)

Net Benefit Cost (NET B/C) is an analysis method used to see the extent to which the efficiency of the use of costs in the form of a comparison between positive net present value and negative net present value, or in other words the comparison between the amount of cost benefits and investment benefits [15]. There are three criteria in NET B/C, namely feasible to run, at the BEP break-even

point or not feasible. The criteria that are said to be feasible are when the Net Benefit Cost is greater than 1 (NET B/C > 1), the criteria are at the break-even or BEP point when the Net Benefit Cost is equal to 1 (NET B/C = 1), and the criteria are not feasible if the Net Benefit Cost is less than 1 (NET B/C < 1) [18]. To find the NET B/C value, can use the following formula.

$$\text{Net B/C ratio } = \frac{\sum_{t=0}^{n}(NPV +)}{\sum_{t=0}^{n}(NPV -)}$$

Information:
B/C : Benefit-cost ratio
I : Discount factor
t : Total analysis time (years)
N : Project economic life

3 Results and discussion

This research was conducted at the Experimental Lab Universitas Terbuka, Bubulak Village, West Bogor District, Bogor City, West Java for 8 months from January 2024 to August 2024. The life cycle of BSF maggot begins with eggs that will hatch into BSF larvae. The price of BSF eggs/gram ranges from IDR. 7,500 - IDR. 15,000. The place used for BSF egg hatching does not require a large area. A square cage with a length of 2x2 meters can already be used for BSF cultivation. The BSF egg hatching cage is in the form of a 2-tiered rack, made of PVC pipe and then formed into a rack with a length of 170x50 cm.

In addition to a BSF egg hatchery, a BSF larvae rearing cage is also required. The size of the BSF larvae rearing cage in this study is 360x140 cm long. Inside the cage, there is a multi-tiered shelf for storing maggot rearing trays. The rearing cage is also equipped with a transparent plastic roof. The roof is used to minimize the exposure of BSF larvae to sunlight and rain, which can interfere with the growth of BSF larvae [19]. A green net is placed around the rearing cage to protect the BSF larvae from predators such as lizards, rats, birds and others. Maggots eat all types of organic waste, but it is necessary to pay attention to the humidity of the cage, if the maggot cage is too wet, it is necessary to provide fine bran and sawdust to maintain the stability of cage humidity, reduce unpleasant odors and can be used as feed for BSF larvae [20]. Generally, in order to produce one kg of BSF maggot, 8-10 kg of feed is required and will be used up within 3 days. After that, additional food is given to the larvae. With a dose of 1 kg of feed until the larvae become pupae.

Furthermore, BSF cultivation requires a love cage that functions for the mating and egg-laying process of BSF flies. In this study, the BSF mating cage has a length dimension of 3x2x2 meters and contains buckets for egg laying. BSF flies will lay eggs in the bucket that has been provided. The bucket is given a tray used for wooden placemat and banana leaves and given feed so that the smell invites BSF flies to lay eggs. BSF flies will lay their eggs on the wood and banana leaves. In addition to the rack and bucket, there is also a drinking place for the BSF flies.

3.1 Fixed Cost

In carrying out BSF maggot cultivation, there are several cost elements such as fixed costs, variable costs. Fixed costs are cost whose amounts remain unchanged and are not affected by changes in production volume, while variable costs are cost whose amounts change depending on production volume [15]. The data of this research is doing for 6 months started from january-june 2024. In this study, the fixed costs of BSF maggot cultivation are as follows.

Table 2. Fixed costs of BSF maggot cultivation (IDR)

Name of Goods	Ammount	Unit	Price per Unit	Total	Durability	Total
Filter	2	Meters	15.000	30.000	24	1.250
Baki	10	Units	20.000	200.000	36	5.556
Concrete iron	2	Units	40.000	80.000	60	1.333
Bucket	4	Units	20.000	80.000	36	2.222
Pipe	4	Pcs	42.000	168.000	36	4.667
Pvc pipe	4	Pcs	10.000	40.000	36	1.111
Green nets	1	Roll	85.000	85.000	24	3.542
Wood	12	Units	25.000	300.000	12	25.000
Wood	12	Units	6.000	72.000	12	6.000
Plastic	5	Meters	14.000	70.000	24	2.917
Nail	1	Kg	26.000	26.000	12	2.167
Dop	4	Pcs	6.500	26.000	36	722
Sand	5	Kg	2.000	10.000	60	167
Cement	5	Kg	2.200	11.000	60	183
Motorcycle	1	Units	4.000.000	4.000.000	60	66.667
Total Price			**Total Investment**	5.198.000	**Total Fixed Cost**	123.503

Source: Primary data, 2024

Based on the explanation from Table 2, it is explained that the details of fixed costs for BSF maggot cultivation for six months from January to June 2024. Fixed costs include various equipment and supplies used in the cultivation process and do not change in value despite fluctuations in production volume. From the total investment of IDR 5,198,000, the accumulated value of fixed costs calculated based on the durability or economic life of each item reached IDR 123,503. This fixed cost is calculated by dividing the total price of the tool with the service life to determine depreciation in units of months, resulting in a depreciation value per month for each component.

The component with the largest depreciation value comes from the purchase of a motorcycle with a total depreciation of Rp. 66,000 for 60 months, followed by wood with a total fixed cost of Rp. 25,000, followed by trays worth Rp. 5,556 and pipes with Rp. 4,667. This shows that the main equipment that supports the production process such as cultivation media and tool construction has an important role and a significant cost allocation in the fixed cost structure. Meanwhile, several other items such as sand, cement, and hubcaps have relatively small fixed costs because both the quantity and unit price are low. All of these materials are needed to make mating cages and bioponds for cultivating BSF maggots. The largest investment was in a used motorcycle vehicle worth Rp. 4,000,000, although it only contributed a fixed cost of Rp. 66,667 over a period of sixty months. With a total fixed cost of IDR 123,503 per month, it can be concluded that the fixed cost structure in BSF maggot farming is quite efficient, especially considering that the equipment can be used in the long term without needing to be replaced in the near future. This efficiency contributes to the long-term

sustainability of the business, as the large initial capital will be paid off over time through repeated use without significantly increasing monthly production costs. This provides a distinct financial advantage to maintain cost stability and ensure sustainable business viability.

3.2 Variable Cost

The next required cost is variable cost, which consists of feed derived from waste obtained from locations around the cultivation site. In obtaining fruit waste, there is no cost because maggot feed is fruit waste that has been discarded [17]. So in this case the cost of finding maggot feed is included in the cost of fuel to carry feed with a nominal value of IDR. 10,000/day, which in a month costs IDR. 300,000. In addition to fuel, there are also costs for labor wages of IDR. 30,000 per hour, which in a month costs IDR. 900,000. The details of the variable costs of BSF maggot cultivation are following.

Table 3. Variable costs of BSF maggot cultivation (IDR)

Components of Cost	Cost	Length of Time	Variable Cost per Month
Labor wage	30.000	30	900.000
Fuel	10.000	30	300.000
Total			1.200.000

Source: primary data, 2024

3.3 Revenue of BSF Maggot Cultivation

After knowing all the cost elements involved in BSF maggot cultivation, the next step is revenue, which consists of revenue from the sale of eggs, prepupae, and BSF maggots. The main revenue from BSF maggot cultivation carried out at the Experimental Lab Universitas Terbuka comes from the sale of BSF maggot eggs. In two weeks, this object can produce three grams of eggs, which in one gram of eggs will produce 4 kg of maggots. In this BSF maggot cultivation, there are 24 trays used to accommodate maggots with a total of 3 kg of maggots produced. Based on these conditions, in one month the Experimental Lab Universitas Terbuka produces 6 grams of BSF eggs, 6 kg of BSF maggot and 18 kg of prepupa [5]. As in the following table:

Table 4. Revenue of BSF maggot cultivation (IDR)

Description	Production Quantity/Month	Unit	Price	Total
Egg	45	Gram	8.000	360.000
Prepupa	18	Kg	70.000	1.260.000
Maggot	144	Kg	6.000	864.000
Total				2.484.000

Source: primary data, 2024

Based on the data, it can be seen that the revenue from the sale of BSF eggs amounted to IDR. 360.000, revenue from prepupae amounted to IDR. 1.260.000, and revenue from the sale of maggot amounted to IDR. 864.000. The accumulation of all elements of BSF maggot cultivation revenue amounted to IDR. 2.484.000 per month. The largest revenue from the business comes from prepupae sales, which account for more than 50% of total revenue. This shows that the prepupae stage has a

relatively high selling value compared to other products, especially since it is an important phase in the life cycle of BSF that is widely utilized as high nutritional value animal feed. This also indicates the great benefits of maggot as each cycle in its phase can be economically beneficial and environmentally beneficial [20]. In addition it is important to note that this location has a business purpose and is a full-fledged business unit. The use of the Open University Lab name is a name that has functions for production, prototype development, and product sales.

3.4 Income of BSF Maggot Cultivation

In addition to revenue, it is also necessary to know the income from BSF maggot cultivation to determine the difference between income and costs incurred each month, as mention in Tabel 5. Based on the table, it is known that the total income of the BSF maggot business at the Experimental Lab Universitas Terbuka is IDR. 1.112.716/month. Total revenue from BSF maggot cultivation amounted to IDR. 2.484.000/month with total costs incurred of IDR. 1.371.283/month.

Table 5. Income of BSF maggot cultivation in a mounth (IDR)

Total Fixed Cost	Total Variable Cost	Total Production Cost	Total Revenue	Income
123.503	1.200.000	1.323.503	2.484.000	1.160.497

Source: primary data, 2024

After all the cost and revenue components are known, the next step is to analyze the financial performance of BSF maggot cultivation, this financial performance analysis is intended to determine whether the BSF maggot cultivation carried out at the Experimental Lab Universitas Terbuka is feasible to run or not feasible to run [21]. Parameters for analyzing the financial performance of this BSF maggot cultivation use NPV, IRR, and Net B/C.

3.5 NPV of BSF Maggot Cultivation

Net Present Value (NPV) is calculated to determine the difference between the benefits obtained by a business and the costs incurred. In this study, it is assumed that the NPV calculation for one year with monthly income also uses the assumption of a loan interest rate from Bank Indonesia (BI Rate) of 6.25%, as shown in the Table 6.

Table 6. Net Present Value of BSF Maggot Cultivation (IDR)

Mounth	Revenue	Cost	Value	NPV
0		(5,198,000)	(5,198,000)	(5,198,000)
1	2,484,000	1,323,503	1,160,497	1,092,233
2	2,484,000	1,323,503	1,160,497	1,027,984
3	2,484,000	1,323,503	1,160,497	967,514
4	2,484,000	1,323,503	1,160,497	910,601
5	2,484,000	1,323,503	1,160,497	857,037
6	2,484,000	1,323,503	1,160,497	806,623
7	2,484,000	1,323,503	1,160,497	759,174
8	2,484,000	1,323,503	1,160,497	714,517

Mounth	Revenue	Cost	Value	NPV
9	2,484,000	1,323,503	1,160,497	672,487
10	2,484,000	1,323,503	1,160,497	632,929
11	2,484,000	1,323,503	1,160,497	595,698
12	2,484,000	1,323,503	1,160,497	560,656
Total				4,399,452

Source: Data processed by researchers, 2024

Based on the data in Table 6, it can be seen the results of the Net Present Value (NPV) calculation for BSF maggot cultivation assuming a business period of one year (12 months) and an interest rate of 6.25%. In month 0, it is known that the initial investment amounted to Rp. 5,198,000 as an expenditure for fixed costs. Every month this business generates revenue of Rp. 2,484,000 and operating costs of Rp. 1,323,503, resulting in a net value of Rp. 1,160,497 every month. This value is then discounted to get the present value of each cash flow, which shows a gradual decrease from month to month due to the effect of the time value of money. From the calculation results, it is known that the NPV value in the first month reached Rp. 1,042,585 and continued to decline until the 12th month with a value of Rp. 560,656. The accumulation of the total present value of the cash flows resulted in a total NPV of Rp. 4,399,452. This value is positive, which indicates that the BSF maggot cultivation business is financially viable because it is able to generate profits that exceed the initial investment cost. In other words, the return on investment not only covers all initial costs, but also provides additional profits [9]. This positive NPV indicates that the investment is profitable and worth continuing. These conditions conclude that the NPV value of BSF maggot cultivation meets the criteria, which is greater than zero [20].

3.6 IRR of BSF Maggot Cultivation

Internal Rate of Return (IRR) is one of the components used in analyzing the financial performance of BSF businesses in Bogor. IRR is used to show the ability of a business to gain the profits achieved. With the help of Microsoft Excel software by accumulating the difference between costs and revenues during the BSF maggot cultivation period. Based on the results of the calculations that have been carried out, it was found that the results of the IRR calculation of BSF maggot cultivation were 20% with a loan interest rate of 6,25%. So that BSF maggot cultivation in the Experimental Lab Universitas Terbuka is said to be feasible because it is greater than the Bank Indonesia Interest Rate [17].

After calculating the NPV value of BSF maggot cultivation, the next step is to calculate the Internal Rate of Return (IRR) value, where the calculation results show that the internal rate of return of this project reaches 20%, this value is much higher than the loan interest rate or BI Rate of 6.25% [16]. This is a strong indicator that the BSF maggot farming business is not only able to cover all investment and operational costs, but also generate significant profits for the business. The difference of 13.75% between the IRR value and the interest rate indicates an attractive rate of return and makes this business very promising, especially if managed sustainably. In the context of financial feasibility analysis, an IRR greater than the discount rate reinforces the results of the NPV analysis and provides additional confidence that this aquaculture project is a profitable investment [12].

3.7 NET B/C of BSF Maggot Cultivation

Net Benefit Cost Net (B/C) is an indicator used to show the value of income with expenses. In other words, the profit earned is spent in the BSF cultivation business. As mentioned in the Table 7. Based on the calculation results that have been carried out, it is known that the initial investment value required to carry out BSF maggot cultivation is IDR. 5.198.000. This condition reflects the total costs that must be incurred when starting cultivation, such as procurement of resources and supporting facilities. Initial investment is one of the important factors that determine the success of a cultivation, because with a large initial investment it is necessary to generate significant positive cash flow to be considered profitable and feasible to run. From the initial investment, the accumulated Net Present Value (NPV) value obtained over the specified time period reached Rp. 9,597,451.99. This shows that this aquaculture business is able to generate positive and significant cash flows after deducting all investment costs, even taking into account the time value of money [9]. Therefore, this investment is considered not only feasible but also promising as it generates a high net surplus within a one-year period.

Table 7. Net Benefit Cost Value of Maggot Cultivation (IDR)

Initial Investment	Accumulated NPV	Net B/C
5.198.000	9.597.451,99	1,85

Source: Data processed by researchers, 2024

After the calculation, the value of the Net Benefit-Cost Ratio (Net B/C) is 1.85, indicating that every Rp. 1 invested in the cultivation of BSF maggots at the Open University Experimental Lab will provide a return of Rp. 1.85. This ratio value illustrates excellent financial efficiency, because a number above 1.0 indicates that the income generated is much greater than the costs incurred [9]. The higher the B/C value, the higher the profit margin, and in this context, BSF maggot farming can be categorized as a highly profitable and economically viable investment. With a ratio of 1.85, this business is not only able to cover operational costs and initial investment, but also provides high added value for business actors, making it very appropriate to be developed sustainably [5].

4 Conclusion

Based on the results of research conducted at the Open University Experimental Laboratory which runs a sustainable business by utilizing BSF maggot, it can be concluded that the BSF maggot cultivation business has a life cycle starting from eggs, larvae, prepupae, pupae, and BSF flies. Based on the results of the financial feasibility analysis using NPV, IRR, and Net B/C and with a loan interest rate of 6.25%, it is known that the NPV is greater than zero with a value of Rp. 4,399,452, the NPV value which is greater than zero indicates the fulfillment of the NPV criteria so that it is said to be feasible to run. Next is the IRR where the value is greater than the BI interest rate of 6.25% with a total value of 20% so that it is declared feasible, and finally the Net B / C which is greater than 0 with the total value of NET B / C is 1.85 so that according to the NET B / C criteria it is said to be feasible. So that overall based on the criteria for financial feasibility analysis using NPV, IRR, and NET B/C, the BSF maggot cultivation business at the Open University Experimental Laboratory is declared feasible to run, because it meets all the criteria.

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