BUSSINESS ANALYSIS OF CASSAPRO UTILIZATION IN FEED ON KAMPONG CHICKEN IN MEDAN

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Abstract . This study aims to determine the feasibility and efficiency of the economic value of the business of raising livestock chicken with cassapro utilization in diet at various levels in chicken age 0-12 week. Research was held at Medan city in December 2015 to March 2016. Research using a survey method to determine the price of feed used in research. Cassapro flour consists of level 0% (P0), 10% (P1), 20% (P2), 30% (P3), 40% (P4). Parameters observed that the total cost of production, income, analysis of profit / loss, Revenue / Cost ratio (R / C ratio) and Income Over Feed Cost (IOFC) for a period of 3 months.
The results showed that the average income (Rp/100head/3month) were the highest in treatment P3 (279,468.89) and the lowest profit in treatment P0 (234,395.64), the average R / C ratio was the highest in treatment P3 (1.44) and the lowest in treatment P0 (1.34), the average IOFC for 3 months were highest in treatment P3 (196.123) and the lowest in treatment P1 (136.401). The conclusion from this study indicate cassapro as a mixture of feed ingredients in ration to the level of 40% can provide benefits feasibility applied to the community.

1. Introduction

Feed has the highest cost in the husbandry business which is about 70 % of total cost, including kampong chicken husbandry business. The limited feed component availability compared to the human and livestock population give raise to import activity of feed component in Indonesia especially corn. With that condition in mind, author was inspired to search for an alternative feed component that domestically produced and available in large quantity which is cassapro.
Cassapro is a abbreviation from cassava and protein, which is made by fermentating cassava in aspergillus niger solution. Cassapro has the nutritional values on par with corn and soya beans, especially in protein and carbohydrate. The process of making cassapro is not too difficult for farmers to apply, on account of the availability of aspergillus niger which is abundant in the farmers surrounding.
Bussiness analysis is an important part to determine whether or not cassapro has the market value on par with corn which as we know have a good market value (as in cost and nutritional value). Business analysis is used also but not limited to determine problems, solution and prevention in husbandry business.

2. Materials and Methods

This research was conducted by collecting data from 9 (nine) sub districts in Medan North Sumatra province, in December 2015 to March 2016.
The method used was a survey by direct interviews with respondents who were guided by a questionnaire.[2]
The research area was determined by purposive, the sample selection started on the personal judgment of researchers who claimed that the selected sample truly representated [3]
2.1. Data analysis

Descriptive Analysis
Descriptive analysis used to analysis data using direct observation on research object to discover situation, location, business model and characteristics of kampong chicken farm.
Economic Analysis
Economic or quantity analysis used to calculate:

a. Total Cost = Fixed Cost + Varied Cost
b. Total Revenue = (meat price/kg x production grade) + (byproducts price x production grade)
c. Profit = Total Revenue – Total Cost
d. R/C ratio = Revenue / Cost; to determine whether or not the business is profitable
e. Break Even Point Price : Total Cost / Production Result
f. Break Even Point Product : Total Cost / Market Price

IOFC (Income Over Feed Cost)
IOFC is used to determine the profit of a business compared to feed cost: Total Revenue – Total Feed Cost

3. Results and Discussion
3.1. Cassapro research result

Table 1. Production Cost, Revenue and Result from using cassapro as a feed component alternative

PARAMETER	TREATMENT				
	T0	T1	T2	T3	T4
Fledgling Cost (Rp)	140.000	140.000	140.000	140.000	140.000
Feed Cost (Rp)	69.589,06	65.936,85	62.319,87	58.579,51	55.155,87
Medicinal Cost (Rp)	16.000	16.000	16.000	16.000	16.000
Coop Equipment Cost (Rp)	20.000	20.000	20.000	20.000	20.000
Coop Rental Cost (Rp)	60.000	60.000	60.000	60.000	60.000
Transportation Cost Rp)	40.000	40.000	40.000	40.000	40.000
Workers Cost (Rp)	80.000	80.000	80.000	80.000	80.000
Total Production Cost (Rp)	425.589	421.937	418.320	414.580	411.156
Sales Result :					
Kampong Chicken Sales (Rp)	900.000	900.000	900.000	900.000	900.000
Total Production Result (Rp)	916.000	916.000	916.000	916.000	916.000
Profit - Loss (Rp)	490.411	494.063	497.680	501.420	504.844
R / C	2,15	2,17	2,19	2,21	2,23
IOFC	846.411	850.063	853.680	857.420	860.844

From table 1 we can conclude that 40 % treatment of cassapro were more efficient than other treatment levels. This was caused by the lowest feed price of T4 (Rp 55.155,87) compared to other treatment.
The summary of conducted research in 9 sub-districts of Medan can be seen from the table below:

Table 2. Survey data summary of farmers in Medan during research (Rp/20 chick)

No	Total Production Cost (Rp)	Total Production Result (Rp)	Profit/Loss (Rp)	R/C	IOFC (Rp)
1	667.000	900.000	233.000	1,35	468.000
2	637.000	900.000	263.000	1,41	468.000
3	657.000	900.000	243.000	1,37	468.000
4	657.000	900.000	243.000	1,37	468.000
5	652.000	900.000	248.000	1,38	468.000
6	657.000	900.000	243.000	1,37	468.000
7	667.000	900.000	233.000	1,35	468.000
8	661.000	900.000	239.000	1,36	468.000
9	668.333	900.000	231.667	1,35	450.000
10	666.667	900.000	233.333	1,35	450.000
11	683.333	900.000	216.667	1,32	450.000
12	601.667	900.000	298.333	1,50	540.000
13	674.167	900.000	225.833	1,33	450.000
14	668.333	900.000	231.667	1,35	450.000
15	670.833	900.000	229.167	1,34	450.000
16	628.000	900.000	272.000	1,43	468.000
17	585.600	900.000	314.400	1,54	554.400
18	650.000	900.000	250.000	1,38	468.000
19	646.154	900.000	253.846	1,39	484.615
20	615.556	900.000	284.444	1,46	500.000
21	627.778	900.000	272.222	1,43	500.000
22	595.357	900.000	304.643	1,51	514.286
23	614.286	900.000	285.714	1,47	514.286
24	666.207	900.000	233.793	1,35	453.103
25	652.000	900.000	248.000	1,38	468.000
26	652.000	900.000	248.000	1,38	468.000
27	624.667	900.000	275.333	1,44	468.000
Total	17.445.937	24.300.000	6.854.063	37,67	12.844.690
Average	646.145,82	900.000	253.854,19	1,40	475729,27

3.2. Total production cost

Based on table 2, kampong chicken farms in Medan have 100 – 150 livestocks but averaged to 20 heads. Table 2 showed that the highest Total Production Cost was found on the 11^{th}. It is caused by the consumption of feed of the 11^{th} was larger than the other. When consumption becomes higher with the same feed price, the total production cost will rise in response.

3.3. Total production result

Table 2 showed that kampong chicken farms in Medan have 100 to 150 heads, but averaged to 20 heads. Total production result from survey showed the same values, because of the averaged total of livestocks in each farm. The element that was influencing revenue was sales volume and sales prices.

3.4 Profit/loss

Profit/loss analysis used to determine the profitability of a farm by calculating the difference of total revenue and total cost. Based on table 2, the most profitable farm was the 17th (Rp. 314.400) and the lowest profitable farm was the 11th (Rp. 216.667). These result can determine the continuation of a farm especially in management decision to change the commodity of livestocks, the product or any other variable that inflicted a financial loss

3.5 R/C ratio

Based on the conducted survey on farmers in Medan (table 2), the 17th have the highest R/C ratio (1,54); and the 11th have the lowest (1,32). Based on the standard, if R/C ratio > 1, then the farm can bring benefits to farmers. As the R/C values becomes higher, the benefit from the farm also becomes higher. As the R/C values becomes lower, then the farm is not run efficiently.

3.6 IOFC

Income over feed cost was the barometer to see the feed cost which is the highest cost in a husbandry business. Based on table 2 the 17th have the highest IOFC values, and the 11th have the lowest.

4. Conclusions

The research concluded that:

1. Corn can be substituted by cassapro in Kampong Chicken's feed.
2. Cassapro is economical

4.1 Suggestion

This study suggest to farmers to start using cassapro as an alternative to the commercialised.

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