

COST ANALYSIS AND BUSINESS INCOME OF SHEEP FEED PRODUCTION (CASE STUDY IN CV, GUMUKMAS MULTIFARM JEMBER)

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Abstract. To keep the feed availability on the export quota of sheep, the company of Gumukmas Multifarm which is at Desa Purwoasri Kecamatan Gumukmas Kabupaten Jember, will be increasing the capacity of the sheep feed production from 1-2 tons per day to 5 tons per day. The sheep feed will be marketed 0.5 tons for himself, 1 ton for co-orporation, and the rest for farmers around Jember. To realized the planning, the company want to do cost analysis and business income to know how this project is feasible or no. To do that, Gumukmas Multifarm was buy 3 machine are diskmill, hammer mill and horizontal mixer. This study aims to determine income and business efficiency in the production of sheep feed. This research use descriptive and analytical methods. Collecting data in this study derived from primary data and secondary data. The results showed that the production of sheep feed profitable and efficient to be developed based on the analysis of income and the value of RC ratio. The income was IDR 630.140,- and RC-ratio was 1.23.

1. INTRODUCTION

Indonesia has large people population makes Indonesia a potential market for livestock industry. Indonesia consumes meat is still low comparing with ASEAN countries at 7 kg/capita/year. To meet the needs of nations animal protein, the livestock industry has good prospect in Indonesia. To supports livestock industry, is needed Animal feed industry to provide feed, which contributes 70 percent of livestock production cost. It is makes feed as an important factor in livestock farm. Animal feed demand tend to increase by 8,3 percent annually with 2015 domestic consumption by 15.9 million ton ^[2].

The process of manufacturing animal feed is a means whereby raw materials of widely ranging physical, chemical and nutritional composition can be converted into a homogenous mixture suitable for producing a desired nutritional response in the animal to which the mixture is fed ^[3]. Production of animal feed not only produce a good quality product, but its more important is economically, cheap, and can be bought by a farmer capability^[4].

The feed manufacturing process is consist of several unit, include the following: raw material storage, selection, and weighing; raw material grinding; mixing of dry ingredients and addition of liquids; and packing, storage and dispatch. Their processing need equipment weighing, grinding, mixing and sewing machine. Their equipment vary with the output of feed required as well as differences in manufacturer's design^[2].

In recent year, developing of feed industry in Indonesia is develop rapidly. Mostly feed industry is located in the city , such as : PT. Charoen Pokphand Indonesia, PT Japfa Comfeed, PT. Malindo Feedmill, and PT. Sierad Produce. Moe expensive the transportation costs from producen to konsumen, makes goodnportunity to develop animal feed industry in the district. So added value raw material of feed will be belong to people in the district. The developing of feed industry should be supported dan developed continuously in the district to decreases cost of transportation beetwen poducen and konsumen ^[4].

One of animal feed industry which is located in the district is CV. Gumukmas Multifarm Jember. The company produce sheef feed 1-2 ton per day. Based on the above conditions, the company will be increasing the production to be 5 ton per day or more. To do that the company want to evaluate how much the profitability and business efficiency the animal feed production.

Before starting a sheep feed mill business, it would be better if the company considering the profitability and business efficiency. The cost analysis and business income used in this study has assisted the consideration process of the development capacity^[5]

2. MATERIALS AND METHODS

2.1 Collecting Data

Collecting data in this study derived from primary data and secondary data. Primary data obtained directly from CV. Gumukmas Multifarm Jember and experiment of 1000 kg sheef feed production. Secondary data were obtained through written data in field and related agencies.

2.2. Calculation revenue and total cost

The raw material costs consist of : Corn, Rice Bran, Coconut Waste Coffea Skin, Corncob, Ipomoea Reptans , Molases and Concentrate. There are three process of manufacturing sheep feed, were grinding, mixing, and bagging. The manufactures costs each process consist of : maintenance and repairing, depreciation, interest, operator/labour, fuel/electricity, oil, and plastic bag.

2.3. Income and business efficiency analysis

Income of the business (I_B) is accounted by subtraction total revenue (T_R) by total costs (T_C) with the formula is ^[1]: $I_B = T_R - T_C$, and the efficiency of business (R/C) is accounted by division total revenue (T_R) by total costs (T_C) with the formula is ^[1]: $R/C = T_R/T_C$

3. RESULTS AND DISCUSSION

3.1 Raw Material Cost

There are 8 kind of raw material. To make 1000 kg sheep feed are needed is Corn, Rice Bran, Coconut Waste Coffea Skin, Corncob, Ipomoea Reptans , Molases and Concentrate (Table 1). Based of the cost of raw material, highest composition is concentrate about 34.68%, and then corn and coconut waste is each 16.18%, Ipomoea reptans 13.87%, Rice bran 8.09%, Corncob 6.07%, Molases 3.47%, Coffea skin 1.45%.

Tabel 1: Raw Material Cost of 1000 kg sheep feed production

No	Raw Material	Quantity(kg)	Price (IDR/kg)	Costs (IDR)	% Costs
1	Corn	100	4.200	420.000	16.18
2	Rice bran	70	3.000	210.000	8.09
3	Coconut waste	140	3.000	420.000	16.18
4	Coffea skin	30	1.250	37.500	1.45
5	Corncob	210	750	157.500	6.07
6	Ipomoea reptans	120	3.000	360.000	13.87
7	Molases	30	3.000	90.000	3.47
8	Concentrat	300	3.000	900.000	34.68
		1.000		2.595.000	100.00

Sumber : CV Gumukmas Multifarm Jember

From Table 1, it can be seen that concentrate take highest composition (34.68%) of raw material to make 1000 kg sheep feed. It should be decreased by other material but it still good nutrition for feeding of sheep, such as waste of edamame, waste of tofu, and out of date milk powder.

3.2 Manufactures Cost

From 8 raw material, only 4 raw material must be grinded, which is corn, coconut waste, coffea skin and corncob (Figure 1). The cost of grinding are 5.79% of total cost. It is good because using new machinery.

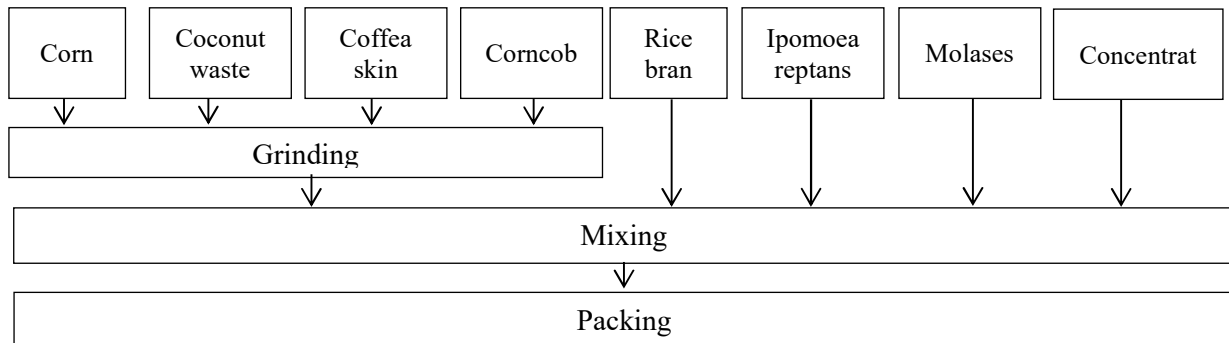


Figure 1 : Processing of sheep feed

From grinding by diskmill machine of 100 kg corn, 140 kg coconut waste, 30 kg coffea skin, 210 kg corncob, need grinding time 2.55 hours with two operators. For mixing by mixer machine of 1000 kg all of raw material was need time 1.57 hours with four operators, and packing by sewing machine for 40 bags 25 kg, was need time 1.83 hours with two operators.

Tabel 2 : Manufactures Cost of 1 000 kg sheep feed production.

No	Cost Component	Costs (IDR)
1	Maintenance	508
2	Depreciation cost	4 567
3	Interest	1 142
4	Labour	150 370
5	Fuel	63 670
6	Electricity	1 482
7	Oil	3 954
8	Plastic bag	37 500
Manufactures Cost		263 193

In Table 2 shown that labour costs is the highest in manufactures costs. The labour costs can be reduced by using conveyor.

3.3. Income and Business Efficiency

Tabel 3: Income and Business Efficiency

No	Componens	Cost (IDR)	Percentage of Cost (%)
1	Feed Raw Material Costs	2.595.000	90.42
2	Manufactures Cost	263.193	5.79
3	Others (building maintenance, electricity and water)	108.667	3.79
3	TOTAL COSTS	2.869.860	100.00
4	TOTAL REVENUE	3.500.000	
5	INCOME	630.140	
6	RC ratio	1.23	

From Table 3, Total costs of 1000 kg sheef feed was IDR 2.869.860 (the sum of raw material costs, operating costs, and others) and total revenue (the result of multiplication total product 1000 kg with the price IDR 3.500 per kg) was IDR.3.500.000,-. So, the income is IDR.630.140,- (substraction of total revenue with total cost) and RC-ratio was 1.23 (deviation total revenue by total costs). It means that if the company spent money IDR 2.869.860 for 1000 kg (1 ton) of Sheef feed, they get earnings IDR.630.140, so if the company produce a 5 ton per day of sheef feed with modal IDR 14.349.300 (5 ton per day x IDR 2869.860 per ton) the company will get income IDR 3.150.700 per day ,- RC-ratio was 1.23 means that if the company spent money IDR 1, they will get IDR 1.23. The results showed that the production of sheef feed profitable and efficient to be developed.

4. CONCLUSION

The results showed that the production of sheef feed profitable and efficient to be developed based on the analysis of income and the value of RC ratio. The income was IDR 630.140,- and RC ratio was 1.23

Suggestion :

It is necessary to formulate of sheef feed with low concentrate by others raw material but it still good nutrition. It is necessary to applicate the conveyor system for all process (ginding, mixing an packing)

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