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PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.1006755>Available online at: <http://www.iajps.com>**Research Article****ANALYSIS BUSINESS MAINTENANCE OF BALINES COW  
EXTENSIVELY IN SUB - DISTRICT SUAI****Nolasco Da Costa<sup>1\*</sup>, Armando Afonso<sup>2</sup> and Andre Do Carmo<sup>3</sup>**

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**Abstract:**

*The purpose of this study is to determine the costs incurred by farmers in the Bali Cows breeding business extensively.*

*The material used this research Bali Cows breeders of Sub-District Suai, 135 Bali Cows breeders total population cattle 982 cows. The method used the research survey is interviewed respondents. and sampling in proportional sampling means sampling based on certain considerations, based on the amount of Balinese cattle rearing in each village in 7 districts. Sample used 11. Primary data was obtained by direct observation of the activities of Bali Cows and interviews with respondents, using questionnaires. Secondary data is obtained the office Village or related institutions. Identification breeders is needed to know the social breeders include name, age, occupation, responsibility of family and business livestock this need to know because it is very closely related to the activities of cultivation of cattle. Samples were taken by 135 respondents from Debus, Loro, Mane Ikun, Babo, Asu Mate and Asurai villages in Sub-District Suai worked on cultivation and fattening cows.*

*The results showed that the value of cattle in one year ago. The benefits gained by cattle ranchers in Sub-District Suai, increase in cattle value increased a year later. From the data of 135 respondents known the number of calves 269, female 460 and male 253 of the total number of cows 982 tail. Based on these data, the average number of breeder cows is calf 2, 1, female 3.4 and male 1.9. If the parent price is \$ 75, buy \$ . 25 and male \$ 40 then total of the initial asset value of the year average cow per breeder is \$ 3,535. The highest value of a female cow is \$ 2.25, because all breeders maintain a female cow of 3 - 4 head and the lowest is the cattle value of the seedlings of \$ . 525. Total receipts by breeders with total explicit costs. The average income of breeder cattle breeding is \$ 2,278.4 (direct receipts, indirect receipts), less explicit cost of \$ 63.6 so that the average income earned by farmers is \$ 2214.8.*

*From the results of the study concluded that the cost incurred for the livestock business for one year of \$ 1,703.6. The output value obtained during the maintenance period is \$ 2,278.4. So the amount of profits earned \$ 574.8.*

**Keywords:** *Analysis of Bali Extensive Cattle Breeding Business***Corresponding author:****Nolasco Da Costa,**

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**INTRODUCTION:**

The development of livestock sub-sector is an integral part of rural development, as most of the people of Timor Leste live in rural areas. Most people still depend on life in the sector agricultural. The development of livestock sub-sector is basically to increase income and welfare of farmer's household in order to fulfill the food needs of the population animal protein from livestock [1] (Hellyward, 2000).

One alternative that can increase family income is the development of Bali Cows breeding. The development of domestic cattle is able to produce economic surplus of the farmers. Farmers are required to master their farm management. The aims analysis to determine with certainty whether the effort made can provide satisfactory results or even a loss. Soekartawi (1986) [2] states that analyzing the business needs to know or describe the condition of a business in a certain period. Furthermore Kuswaryan *et al* (2004) [3] states that farm income is all good used for the necessities of life, sale is used to build a house, pay school tuition and capital interest less the total cost incurred ie fixed costs and non-fixed costs.

One of the problems faced by the development of livestock in Regency of Suai can be overcome by utilizing cattle as the land manager of agricultural. Therefore it is time to start thinking about the substitution of mechanical technology, so that some of the existing population cattle can be directed to the fattening pattern or directed to a good Multipurpose effort. The development and increase of Balinese beef population cattle will support the increases.

Production meat in Sub-District Suai. The development of livestock business, especially the maintenance of Bali Cows is encouraged by the increasing demand of meat from year, so there is a desire for farmers to sell livestock at a more reasonable price. But the addition of adequate production. The rate of increase in the population of Bali Cows is relatively slow, ie 4.23% in 2017 due to outbreaks of disease and there is no knowledge and management of disease management so that there is a decline in livestock population in the district of Suai. This condition causes the support of cattle supply to national meat production is low, resulting in a widening gap between demand and supply (Setiyono *et al.* 200

Bali Cows breeding system in Timor Leste is divided into two, namely: extensive and mixed farming. On extensive maintenance, livestock are kept in pasturelands with settled patterns farming or in forests. The pattern is mostly done breeders in Suai, especially in the village of Debus. The second way of maintenance is, in large part, a business of the people with the characteristics of the business household scale and the livestock ownership more,

while to direct the simple technology is not yet achieved.

The Bali Cows farmer in Regency Suai is still classified as a community farm where the pattern of community maintenance is generally still a business side, and not yet commercial. The maintenance system is still traditional and maintenance management has not been properly implemented, resulting in low productivity. Increased productivity of beef cattle, can be done by improving the maintenance system or manage the management business as to provide benefits and the increase has not been matched by increase farmers' income.

Farmers conducting farming activities are required to master the management of their business farming, by conducting an analysis of a business that aims to determine with certainty whether from the effort made can provide satisfactory results or even a loss. Rosida. I. (2006) states that analyzing a business needs to know or describe the condition of a business in a given period. The reality in the field, especially the farmers who raise Bali cattle in the district of Suai apparently maintains an average of 1-10 tail has not been fully aware of the financial review of his farm. In connection with this through research on the analysis of Bali Cows breeders, it is expected that farmers understand whether his business experience a profit or loss. Understanding of the condition of an enterprise will give encouragement to the farmer to correct the steps that are considered as the cause of less optimal management of the business that has been run.

**METHOD:**

This research was conducted of Sub-District Suai, East Timor, from May to June 2017. The material used this study ranchers were Bali 135 people with a total population cattle of 982 cows.

The method used is survey method that directly interviewed respondents. Sampling in proportional sampling means sampling based on certain considerations that is based on the amount of Bali Cows rearing for each in the 7 village.

Primary data were obtained by direct observation of Balinese cattle livestock activities and direct interviews with using respondents.

Questionnaire. Secondary data obtained from processing and analysis data.

analyzed data obtained then descriptiv. Before analyzing the data, performed the following steps: Editing is to select again the results of answers obtained from respondents to determine whether the data obtained is sufficient, coding is to make a classification of respondents' answers by type and provide the code on certain answers. This coding is done by calculating the average of the data that has been grouped.

The data obtained is then tabulated to obtain the following data: Livestock Value Beginning of the

year: is the predicted price of each livestock owned at the beginning of the year, Purchase of one last livestock: is the number of livestock purchased during the past year. Cost ; is the cost incurred during one know maintenance including feed costs, other costs (medicines, vaccines, IBs, dues etc.), Labor Costs, Depreciation Costs, Total Cost (consisting of two costs ie Explicit Costs (daily / + Miscellaneous Cost + Depreciation Cost of Tool + Place Rental) and Implicit Cost (Labor Cost + Cost of Capital), Acceptance: Is acceptance of sale of cattle and livestock if any, Year End Cattle Value: Cow residual value for one years after the sale, Revenue: is the Total Reduction of Revenue (Cash Receipts / Receipts of Cattle Sales + Indirect Receipts of Cow Value beginning and End of Year - Purchase of Cattle in the past year) Explicit Costs, Profit: Total Acceptance - (Explicit Costs + Implicit Cost).

## RESULTS AND DISCUSION:

### Identification of Breeders

Identification of breeders is needed to know the social breeders include name, age, occupation, family cover and type of livestock business. A sample of 135 respondents from Debus, Suai Loro, Mane Ikun Village, Lakonak Babo, Asu Mate and Asurai Village in Subdistrict Suai, have cultivation and fattening cows.

#### 1. Age of Farmers

All farmers are household heads who have a role as decision maker and manage cultivation business. Age breeders need to know because age determines the physical productivity in managing the cultivation of cattle. Here is the age table of farmers in 7 Villages of Sub-District Suai.

No	Age	Total	%
1	25-48	70	51,9
2	49-60	44	33,6
3	61-72	21	14,5
	Total	135	100

Source : Primary Data is Processed 2017

The data in Table 1 shows that farmers in Sub - District Suai are dominated by farmers whose average productive age is between 18-59 years old which is 70 people or 51,9%. Productive age is the age at which they can work alone to support themselves and other families (family). In addition, farmers can also innovate in accepting livestock technology in order to develop a better cultivation of cattle business to his village.

#### 2. Education

Education in question is a formal education ever pursued cattle breeders in the District of Suai. The percentage of education of farmers of Sub-District Suai can be seen in table 2 below.

**Table 2: Situation the group farmer of level education**

No	Level of Education	Total	%
1	Primary school	59	43,7
2	Junior high school	38	28,2
3	Senior high school	31	23,1
4	University	2	1,3
5	No school	5	3,7

Source : Primary Data is Processed 2017

The level of education of farmers is low, where at the elementary level of 59 people or about 43.7% of total farmers 135 respondents in Sub-District Suai, while the highest education is a graduate consisting of 2 people or about 1.3% of total farmers 135 respondents the interview. The educational level determines in the technological innovation program of farms. If most farmers are elementary school graduates then technological innovation programs such as counseling, training should be adjusted to the level of education so that farmers can understand and can used in the pattern of farming.

#### 3. Job Basic

Breeders The main duties of cattle breeding farmers in Sub-District Suai are farmers, laborers, civil servants and entrepreneurs. Employment data and number of breeders are in the table below.

**Table 3: Situation of The farmer job the group**

No	Job	Total	%
1	Farmer	66	48,9
2	Laborers	37	27,4
3	employees	5	3,7
4	Entrepreneur	27	2,0

Source : Primary Data is Processed 2017

The cultivation of cows in Suai subdistrict is a sideline business that is done outside the main job of breeder. The main activities of breeders in cultivation of cows in the sub-district of Suai are mostly as farmers as many as 66 people or by 48.9% of the total 135 respondents. Farmers' work done by cattle ranchers in the cattle group in Subdistrict Suai are rice, corn and farmers coffee. Although the main job of breeders, farmers can still do the process of cattle cultivation by utilizing spare time before and after work. Besides farmers there is also work as a laborer as much as 37 people or by 27.4% of the 135 respondents so it is very compatible with the pattern of farms that can be sustainable, farmers can use agricultural waste to feed cattle and also time to look for grass / feed / cattle grazing conducted in unison with the time the farmers to farm to farm.

#### 4. Livestock Value Early Years

The table below is the table of cattle values on a year ago. The usefulness of knowing how much profit obtained by cattle ranchers in the District of Suai, the increase in cattle value increased a year later. Data on the number of cows in Sub-District Suai can be seen in the table below.

**Table 4: Value animal first years**

No	Type Cow	Total	Value \$
1	Calf	2,1	525
2	Female	3,4	2250
3	Male	1,9	760
		Total	3535

Source : Primary Data is Processed 2017

From the data of 135 respondents known the number of calves 269, female 460 and male 253 of the total number of cows 982 tail. Based on these data, the average number of breeder cows is pedet 2,1, female 3.4 and male 1.9. If the parent price is \$ 75, buy \$. 25 and male \$. 40 then The total initial asset value of the average cow per breeder year in Suai Subdistrict is \$ 3,535. With the highest value is a female cow for \$ 2.25, because all breeders maintain a female cow amounted to between 3 to 4 and the lowest is the value of cattle tillers ie \$. 525.

#### 5. Purchase of Livestock One Year

Purchase of beef cattle is the purchase of cows made by farmers with the aim of raising and producing cows (calf). Purchase of bulls is the purchase of bulls / going to be purchased by the breeder in order to beef cattle.

**Table 5: Last Year Cattle Purchases**

No	Type Cow	Total	Value \$
1	Calf	0	0
2	Female	0,44	33
3	Male	0	0
		Total	330

Source : Primary Data is Processed 2017

Respondent's data as much as 135 breeders to purchase females as many 60 tails. From table 5 can be seen the average purchase of cows conducted by cattle ranchers in Sub - District Suai over a year ago that is for \$. 33. Whereas the peasants do not. never buy cattle tillers and also males, because the cow is already while sufficient the sale has not been so good. The farmer only buys female cows by using funds from the sale of male and female cows that have previously been maintained and are not productive anymore that must be sold and replaced with a new cow that is still productive. Unproductive female cow is a cow that is not feasible to become a mother.

#### Cost

##### 1. Cost of livestock feed business

Production facilities are an important factor that can support the success of the cultivation of cattle

done. In the cattle breeding business requires a cost to perform the production process. Breeders in the cattle fattening business incur costs other than forage also for the purchase of salt, and soybean skin for cattle feed. Farmers in Sub-District Suai do not pay for feed because grass feed is already available in the pastureland. The availability and sustainability of feed and feed quality are not fully known by the farmers.

#### 2. Other Costs Other

Other costs are costs incurred in the cultivation of cattle beyond the cost of purchasing livestock, assets and feed. In Sub - District Suai there are no other costs. Other costs may include group fee fees, the cost of purchasing a worm drug and the cost of artificial insemination (IB).

#### 3. Labor Costs

The manpower used in the cultivation of cows in Suai Subdistrict is labor in the family. Manpower in the cultivation of cattle in Sub-District Suai all use of energy in the family, while the average number of hours used and also the amount of costs used in the cultivation of cattle in the District of Suai and the amount of costs incurred farmers can be seen the table below.

**Table 6: Cost average labor**

No	Labor (hours)/ day (\$)	The average wage/ year (\$)	average wage/ year (\$)
1	12	25	164

Source : Primary Data is Processed 2017

The average length of time spent in cultivation of cattle Sub - District Suai is 1.5 hours, and the average wage per day is \$ 25 so that the total cost incurred in one year is \$ 164. The \$ 1,640 fee is earned the daily cost of work in the area around Sub-District Suai for \$ 25 and for the effective working day is 8 hours ie \$ 3.1 per hour then multiplied by the average number of hours used by farmers in the cultivation process that is 1.5 hours. Users of labor time is an average of 1.5 hours obtained from the assumption that if farmers come to the cage in the forest every month an average of 1.5 days or 36 hours so that 1.5 hours per day obtained.

#### 4. The cost of depreciation of livestock business tools

Depreciation cost depends on the amount of equipment, the purchase price of each tool and the age of use of the tool. The tools used in the cultivation of cattle in the District of Suai is, cages, hoes and sickles. The more expensive the price of the tool and the more the number of tools used in the production process, the cost of depreciation issued by farmers will be greater. Cost of shrinkage

of farmers of Sub-District Suai can be seen in table below.

**Table 7: Costs depreciation tools**

No	Name tools	Value depreciation (\$)
1	Cage	59,5
2	Machetes	2,5
3	Hoe	1,6
	Total	63,6

Source: Primary Data is Processed 2017

From table 7 above, it is known that the average total depreciation of the tools in the cultivation of cattle in Sub-District Suai is \$ 63.6. While the highest depreciation the cost of depreciation of the enclosure of \$ 59.5 due to the average cost making the cage of \$ 250 with an average age of 4.2 years. While the lowest value is the value of shovel shrinkage that is equal to \$ 1.6, the shovel is a tool to collect the dirt from the cage to the livestock manure collection.

### 5. Total Cost

The total cost incurred in the production process of the cultivation of cattle, both explicit and implicit costs. Explicit costs are costs actually incurred during the production process by farmers, including daily costs, depreciation cost of equipment, and other costs. While the implicit costs that are not actually issued in the production process, for example the cost of the use of labor in the family and the cost of own capital. The average production cost of cultivation business in Sub- District Suai can be seen in the table below.

**Table 8: total cattle breeding**

No	Type costs	Description	Value (\$)
1	Explicit costs	1. Costs daily feeding 2. Other costs 3. Costs depreciation tool 4. Rent to place	0063,60
2	Female	Total costs explicit	63,6
3	Male	1. Labor 2. Owners income	1,6400
		Total costs emplicit	1,640
		Total costs	1,703,6

Source: Primary Data is Processed 2017

in Sub-District Suai. Of the total total cost of explicit is \$ 63.6 while the highest cost of explicit cost is the cost of the tool deviation of \$ 63.6. Daily cost (feed), miscellaneous costs and lease of premises is 0 because the farmer does not issue at all the cost. The total amount of implicit costs is \$

1,640 the largest of labor costs. The total cost of the sum of explicit costs plus the implicit cost is \$ 1,703.6.

### Reception

The acceptance of cultivation of cows in Sub-District Suai is the results of the sale of reject female cows, saplings, bulls, and also cow dung. The details of receipt can be seen in the table below.

**Table 9: Accept of cattle raising business**

No	Type caw	Total	Value
1	Reject female	1,18	885
2	Bulls sapling	0	0
3	Bulls	0,55	500
4	Cow dung	0	0
		Total	1385

Source: Primary Data is Processed 2017

From 135 respondents, it is known that the sale of female rejects is 160 and 75 bulls with the price of female cow \$ 750 and male \$ 900. From table 11 it is known that the cow breeding business is \$ 1,385, the result is from the sales of the cows of rejects of 885, males of 500.

### Last Year Cattle Value

The value of cattle last years from breeders in the District of Suai is the value of livestock that exist at this time, the value of last years of livestock need to know to know the addition of livestock value from the previous year. Year-end value of livestock can be seen in the table below.

**Table 10: Cattle Value Last Year Business.**

No	Type Cow	Total	Value (\$)
1	Female	0,8	600
2	Anakn	2,1	525
3	Male	1,31	1186,6
		Total	2311,6

Source: Primary Data is Processed 2017

From table 12 The total value of the average cow assets of the year-end breeders is \$ 231.16 with the highest value of bulls for \$ 1186.6 and the lowest is the value of cattle tillers ie \$ 525 While the difference in cattle value from last year and the value of cattle last years in the cultivation of cattle breeders of Sub - District Suai is for \$ 353.5-231,16 = \$ 122.34.

### Income

Revenue is the difference between the total revenue earned by farmers in Sub-District Suai with total explicit costs. To know more clearly the average

income of beef cultivation can be seen in the table below.

**Table 11: Cattle breeding business income Breeders in Sub-District Suai**

No	Description	Value (\$)
1	Indirect acceptet	1,385
2	Indirect acceptance	1,223,4
3	Purchase of cattle last year	330
3	Total receipts	2,278,4
4	Explicit costs	63,6
	Profit	2,214,8

Source: Primary Data is Processed 2017

The average income of cattle breeding cultivation in Suai Subdistrict is \$ 2,278.4 which is revenue from (direct income, indirect income), less explicit cost of \$ 63.6 so that the average income earned by farmers in Sub-District Suai is equal to \$ 2214.8.

#### Advantages

Profit is the total revenue generated from the sales of saplings, dung, cows and cattle increase in a year over the past year, minus explicit costs and implicit costs. To see the advantages can be seen in the table below

**Tabel 12: Profit of farms cattle in sub Sub - District Suai**

No	Description	Value (\$)
1	Reception	2,278,4
2	Explicit costs	63,6
3	Impicit Cost	1640
	Profit	574,8

Source: Primary Data is Processed 2017

The average profit earned by a breeder is \$ 574.8 due to the high implicit cost of \$ 1,640 that causes the profit to be low calculated per year.

#### CONCLUSIONS:

- Cattle Breeders in Sub - District Suai are dominated by 25-48 year-old breeders, so farmers are likely to progress by innovating to advance the now-administered farm because it is supported by members dominated by productive farmers.
- Farmers keep cows between 1-10 cows.
- Costs incurred for a one year livestock business of \$ 1,703.6
- The amount of output obtained during the maintenance period is \$ 2,278.4
- The amount of revenue and profits earned \$ 574.8.

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