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Analysis of Income Enhancement of Cattle in Karo Regency

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ABSTRACT

The enhancement of the income of the s is expected to have an impact on the welfare of cattle breeders in Karo Regency. The focus of this paper is to decide the factors that influence the respondents' income to grow Cattle business better in Karo Regency. It also was conducted in Tigapanah District, Tigabinanga District and Dolat Rakyat District in Karo Regency with using 78 respondents. The results showed that the cattle breeds, the feed, the labor and the selling cost of livestock were factors that had a notable result on the respondents' income in Karo Regency, while the cages cost and other costs did not have a notable effect on the respondents' income in Karo Regency.

KEYWORDS

cattle; income analysis; SWOT analysis strategy

INTRODUCTION

Cattle business is one of the efforts to increase the need for food. Cattle livestock products that are used to fulfill food ingredients and contain animal protein are in the form of meat. Cattle/ fattening cattle farming is a livestock business with the aim of increasing the income and welfare of livestock. Cattle farming is one of the activities that can be classified as an agribusiness opportunity and the opening of jobs so that it can increase the income of farmers and is a savings for owners of livestock (Silaen et al, 2022). The people's livestock business in absolute terms has provided improvements to livestock, but it is not significant because the rate of increase in non-breeders' income is much faster than the growth rate of small holder s' income so that until now small holder s are still in the low-income group (Saragih, 2001).

One of the advantages of Karo Regency is the existence of an animal market located in Sukarame Village of Tiga Panah District. This animal market operates every Tuesday from 09.00 WIB to 17.00 WIB. Around 600 to 700 livestock will be brought by breeders from various areas to be sold at this market. The livestock sold at this animal market are cows and buffaloes. Producers and consumers make transactions directly. Sellers and buyers of cattle come from Karo Regency and its surroundings, and some even come from outside Karo Regency, such as from Aceh, Dairi, Simalungun and Pakpak Barat. This animal market is one of the regional potentials of Karo Regency in the livestock sector and is very suitable for developing efficiency in the marketing of cattle (Regional Government of Karo Regency, 2020).

Karo Regency is in North Sumatra which has a strategic location in the highlands and supports the business of cattle. Karo Regency has a large agricultural land area of 187,302 ha and 30,045 ha horticultural land. Therefore, the potential for agricultural waste is very high, but most people have not utilized this agricultural waste to the fullest. According to Purnomo (2017) Efficiency in processing agricultural waste has a very important meaning to reduce feed costs so that it can increase breeder income. The government's role in this case is urgently needed to contribute education to s in the utilization of agricultural waste to

help develop the business of cattle breeders so that the population and beef production can increase consistently every year and income will also increase.

Based on the increasing number of cattle population in Karo Regency and also the increasing amount of beef production, the surrounding community sees this as a business opportunity, and lately many people have businesses as cattle breeders, because of that researchers interested in researching the income and feasibility of the community's business. From the results of this research will indicate whether the business is feasible or not to run.

RESEARCH METHODS

The location of this research was conducted in Tigapanah District, Tigabinanga District and Dolat Rakyat District, Karo Regency. The timeline of this research was done in May-August 2022. The research area was selected in a district with a high cattle population, namely Tigapanah District, a district with a moderate cattle population, namely Tigabinanga District, and a district with a low cattle population, namely Dolat Rakyat District.

Respondents were selected using a sampling technique where accidental sampling was selecting samples based on the factor of spontaneity. This means that anyone who accidentally meets the author and according to characteristics can be used as a sample (respondent). Sampling of respondents from breeders. The samples taken in this study amounted to 78 respondents. The following is a sample table from each district that will be taken in this study:

Table 1. Number of research samples

District	Sample
Tigapanah	30
Tigabinanga	30
Dolat Rakyat	18

From: Livestock and Fisheries Service of Karo Regency

The data obtained primary data and secondary data. Primary data was obtained through interviews and filling out a questionnaire. While secondary data obtained from various related agencies. Data obtained from interviews with respondents in the field were processed and tabulated.

Data and Information Collection

The type of data used in this research is primary and secondary data. Respondent requirements in this study were Cattle breeders in Karo Regency. The data includes cattle breed, feed, cage, labor, Cattle selling and other costs. Data was from various related agencies such as Central Bureau of Statistics of Karo Regency, Karo Regency Agriculture and Livestock Office as well as some relevant literature which was obtained through journals, research results, the internet and reference books.

Data Processing and Analysis Techniques

Revenue Analysis

Respondents' income(breeders' income) is calculated with:

$$Pd = TR - TC$$

Information:

Pd = Earned Profit Total (rupiah/year)

TR = Income (rupiah/year)

TC = Expenditure Costs (rupiah/year)

Analysis of Factors Influencing Income

Multiple linear regression is a regression model with multiple independent variables. Multiple regression analysis was performed to investigate how and in what direction the independent variables influence the dependent variable (Ghozali, 2018). Suliyanto (2011) states that multiple regression analysis is an analysis aimed at significantly determining the effect of multiple independent variables on the dependent variable. The multiple linear regression equation in this study is:

$$Y = a + bX_1 + bX_2 + bX_3 + bX_4 + bX_5 + bX_6 + \mu$$

Information:
Y = Breeders' Income
a = Constant
X1 = Cattle breeds Cost
X2 = Cost of Feed
X3 = Cage Cost
X4 = Labor Costs
X5 = Selling Price of Cattle
X6 = Other Expenses
μ = Errors

RESULTS AND DISCUSSION

Overview of Respondents

Breeders/ respondents who were sampled in this study were breeders in Tigapanah, Tigabinanga and Dolat Rakyat Districts. The characteristics of breeders obtained are:

Age

Data on the characteristics of respondents at the research location based on age are presented in table 2 below.

Table 2. Characteristics of respondents in research locations based on age.

No	Respondent Age (Year)	Total (People)	Percentage (%)
1.	21-30	19	24,36
2.	31-40	34	43,59
3.	41-50	20	25,64
4.	51-60	5	6,41
	Total	78	100

Based on Table 2 can be obtained that the age of the respondents in the breeder group was among 21-30 years, amounting to 19 people or 24.36%, the age of the respondents 31-40 years amounting to 34 people or 43.59%, the age of the respondents 41-50 years amounting to 20 people or by 25.64% and the age of the respondents 51-60 years amounted to 5 people or by 6.41%.

The average age of respondents to breeders in Karo Regency is between 31-40 years or around 43.59% where at this age the breeders are still productive and these things helped the livestock business being stable because it has good physical abilities so that it can maximize

in developing their livestock business. The non-productive age range is 0-14 years old, the productive age group is 15-56 years old and the elderly are 57 years and over. Karmila (2013) states that age is to see a person's physical abilities. The breeder age can impact their performance in livestock business activities. It is also closely related to the 's mindset in determining the management system that will be applied in livestock business activities.

Breeding Experience

The experience possessed in running a business is closely related to the skills possessed. Where someone who has a lot of experience will improve their abilities and adequate skills. Data on the characteristics of respondents at the research location based on their farming experience are presented in Table 3 below.

Table 3. Characteristics of respondents in research locations based on farming experience

No	Breeding Experience	Total (People)	Percentage (%)
1.	1-10	45	57,69
2.	11-20	26	33,33
3.	21-30	6	7,69
4.	31-40	1	1,28
	Total	78	100

Based on Table 3, it can be obtained that the respondents' farming experience in the group of breeders with 1-10 years of farming experience totaled 45 people or 57.69%, 11-20 years of farming experience totaled 26 people or 33.33%, 21 farming experience -30 years totaling 6 people or 7.69% and 31-40 years of farming experience totaling 1 person or 1.28%.

Based on the survey results, the average in Karo Regency has 1-10 years of farming experience, which is 45 people. Febrina (2011) states that generally experience in farming is obtained from her parents for generations. Hendrayani's (2009) thought, that experience in raising livestock is a very meaningful opportunity in achieving success in a farming activity. Technically, these s already know very well what to do if there are problems with diseases caused their livestock business. A lot of knowledge and experience in farming is very influential in making decisions in the technical implementation of the breeder's business run easily (2009).

Fund

According to Rahardi (2003) fund is a number of major to start a business step in the livestock sector. Fundis a major thing and backbone of the livestock business. Characteristic data at research locations based on fund.

Table 4. Respondents' Fund at Location

No	Source of Fund	Total (People)	Percentage (%)
1.	Assistance Fund	15	19,23
2.	Owner's Fund	63	89,77
	Total	78	100

Based on Table 4, it shows that as many as 15 s or 19.23% of respondents to breeders in Karo Regency received fund and as many as 63 s or 89.77% of their own fund. Based on a survey conducted in Karo Regency, it was found that most of the breeders used own fund to

run their livestock businesses and some others received helping from the government in the form of assistance with livestock cattle breeds, medicines and others. s who receive assistance are breeders who are already members of a livestock group.

Income Analysis

Cattle breeds Cost

The main way to improve the balance between supply and demand for livestock is highly dependent on the availability of quality cattle breeds. Therefore, efforts to improve quality and provide cattle breeds that meet standards in sufficient quantities and are available on an ongoing basis and at affordable prices must be pursued continuously. The price of Cattle breeds is given according to the type of livestock, quality of livestock and others.

Table 5. Statistical Data on Cattle Breeds Costs (Rp)

		Cattle breeds Cost
N	Valid	78
	Missing	0
Mean		61320512.82
Std. Deviation		44838380.35
Range		187000000
Minimum		8000000
Maximum		195000000

In table 5 it is known that the mean cost of Cattle breeding in Karo Regency is Rp. 61,320,512. The standard deviation is Rp. 44,838,380. The lowest cost of cattle breeds (Minimum) is Rp. 8,000,000 while the highest cost of cattle breeds (Maximum) is Rp. 195,000,000

Feed Cost

Cattle require feed in the form of forage. Superior forage for age will provide good results on the growth and productivity of cattle. Basically, ruminant livestock, one of which is a cow, requires feed as much as 10% of its body weight every day. Hartanto (2008) states that feed is an important aspect because 70% of the total production cost is for both forage and additional feed. The better the quality and amount of feed eaten by livestock, the greater the energy generated and after the energy needs of livestock are met, the remaining energy is stored in the form of meat.

Table 6. Statistical Data on the Feed Cost (Rp)

		Feed Cost
N	Valid	78
	Missing	0
Mean		25887769.23
Std. Deviation		31124407.71
Range		117900000
Minimum		600000
Maximum		118500000

In table 6, it is mean cost of feed for Cattle in Karo Regency is Rp. 25,887,769. The standard deviation is Rp. 31,124,407. The lowest feed cost (Minimum) is Rp. 600,000 while the highest feed cost (Maximum) is Rp. 118,500,000.

Cage Depreciation Cost

In the business of breeders using equipment in their farming-livestock business in accordance with the size of the business owned, the larger the business owned, the greater the costs incurred to buy complete equipment and repair of cages used in raising livestock.

Table 7. Statistical data on cage costs (Rp)

		Cage Cost
N	Valid	78
	Missing	0
Mean		1042243.59
Std. Deviation		775567.09
Range		3800000
Minimum		200000
Maximum		4000000

In table 7, it is a mean cost of Cattle pens in Karo Regency is Rp. 1,042,243. The standard deviation is Rp. 775,567. The lowest cage fee (Minimum) is Rp. 200,000 while the highest cage fee (Maximum) is Rp. 4,000,000.

Labor costs

The labor used by s in fattening cattle at all scales is grouped into two, namely labor within the family and labor outside the family (wages). Family labor is not paid in money, while outside family labor or wage labor is paid. The workforce used is tasked with finding/preparing feed, cleaning stables and feeding and drinking for livestock.

Table 8. Statistical data on labor costs (Rp)

		Labor Cost
N	Valid	78
	Missing	0
Mean		5446153.85
Std. Deviation		10512079.54
Range		48000000
Minimum		600000
Maximum		48600000

In table 8 is mean labor cost for Cattle in Karo Regency is Rp. 5,446,153. The standard deviation is Rp. 10,512,079. The lowest labor cost (Minimum) is Rp. 600,000 while the highest labor cost (Maximum) is Rp. 48,600,000.

Selling Cost

Table 9. Statistical Data for the Selling Cost of Cattle (Rp)

		Selling Cost
N	Valid	78
	Missing	0
Mean		24628205.13
Std. Deviation		4460822.17
Range		20000000
Minimum		15000000
Maximum		35000000

In table 9 is a mean cost of the selling price of Cattle in Karo Regency is Rp. 24,628,205. The standard deviation (std. deviation) is Rp. 4,460,822. The lowest selling price (Minimum) is Rp. 15,000,000 while the highest selling price (Maximum) is Rp. 35,000,000.

Other Fees

Other costs in Cattle farming in Karo Regency consist of transportation costs, land rental costs, health costs, and electricity costs.

Table 10. Statistical data on other costs (Rp)

		Other Costs
N	Valid	78
	Missing	0
Mean		1874608.69
Std. Deviation		1315357.22
Range		5733333
Minimum		116667
Maximum		5850000

In table 10 it is a mean cost of other costs for Cattle in Karo Regency is Rp. 1,874,608. The standard deviation is Rp. 1,315,357. Other costs lowest (Minimum) Rp. 116,667 while the highest other costs (Maximum) are Rp. 5,850,000.

Expenditure

Expenses are costs incurred within a certain period of time in livestock business such as cattle breed, labor, feed, transportation, medicine and others costs.

Table 11. Statistical Data on Expenditure (Rp)

		Expenditure
N	Valid	78
	Missing	0
Mean		95571288.18
Std. Deviation		82362542.78
Range		328116666
Minimum		9816667
Maximum		337933333

In table 11 it is a mean cost of cutting expenses in Karo Regency is Rp. 95,571,288. The standard deviation is Rp. 82,362,542. The lowest spending fee (Minimum) is Rp. 9,816,667 while the highest spending cost (Maximum) is Rp. 337,933,333.

Income

The amount of income at the time of the sale process as below:

Table 12. Statistical Data on Income (Rp)

		Income
N	Valid	78
	Missing	0
Mean		144474358.97
Std. Deviation		115547002.23
Range		432000000

Minimum	18000000
Maximum	450000000

In table 12 it is known that the mean of Cattle farms in Karo Regency is Rp. 144,474,358. The standard deviation is Rp. 115,547,002. The lowest net income (Minimum) is Rp. 18,000,000 while the highest net income (Maximum) is Rp. 450,000,000.

Net income

Net income is the difference between receipts and costs incurred for breeding which have been added to the wages of family labor, if respondents have loan fund from outside then the interest on outside fund is calculated.

Table 13. Statistical Data of Net Income (Rp)

		Net Income
N	Valid	78
	Missing	0
Mean		48903070.79
Std. Deviation		35158456.89
Range		133750000
Minimum		5800000
Maximum \		139550000

In table 13 is a mean cost of Cattle farms in Karo Regency is Rp. 48,903,070. The standard deviation is Rp. 35,158,456. The lowest net income (Minimum) is Rp. 5,800,000 while the highest net income (Maximum) is Rp. 139,550,000.

Classical Assumption Testing

Normality test

It is to look the residual values are normally distributed or not. Regression models require normality on the residual value, not on each research variable. The normality test was carried out to eximine the independent/independent/(X) and dependent/(Y) variables in the regression model have a normal distribution or not (Juliandi et al., 2014). According to Ajija (2011) a normality test is needed when the number of observations is less than 30. The normality test is used the error term approaches a normal distribution.

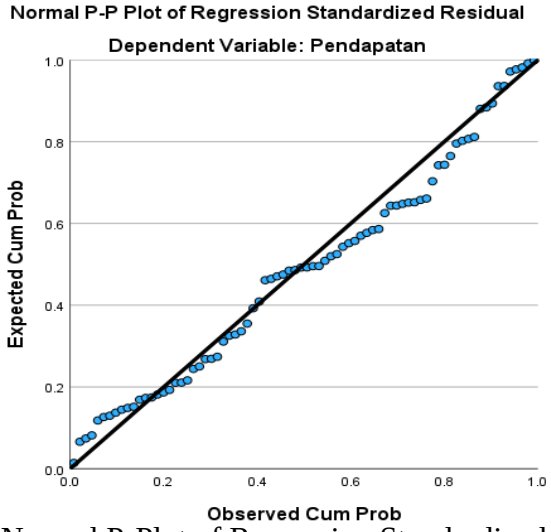

Figure 1. Normal P-Plot of Regression Standardized Residuals

The normality of the residuals is to look at a probability plot that compares the cumulative distribution of the normal distribution. The normal distribution will form a straight line diagonally and plotting the residual data will be compared with the diagonal line. By looking at the display of the normal plot graph in Figure it can be concluded that the respondent data obtained is spread along a diagonal line, which means that the data obtained has residuals that are normally distributed.

Multicollinearity Test

To test the regression model in finding correlations between independent variables. When there is a correlation, it is called a multicollinearity problem. A good regression model must show no correlation between the independent variables. It takes into account the value of the correlation matrix generated during data processing and the VIF (Variance Inflation Factor) value and its tolerance. VIF scores below 10 and tolerance values above 0.10 do not indicate multicollinearity. From this it can be concluded that there is no multicollinearity problem in the regression model.

Table 14. Multicollinearity Test Results

Fund	Multicollinearity Statistics	
	Tolerance	VIF
Feeding Cost	.164	6.083
Cage Cost	.342	2.925
Labor Cost	.401	2.495
Cattle Beer Cost	.224	4.465
Selling Cost	.610	1.640
Other Cost	.239	4.178

Based on the calculation results using SPSS, it looks from the VIF and tolerance values are as follows where the feed cost variable has a VIF value of 6,083 and a tolerance of 0.164. The stable cost variable has a VIF value of 2,925 and a tolerance of 0.342. The labor cost variable has a VIF value of 2,495 and a tolerance of 0.401. The cattle breeds cost variable has a VIF value of 4,465 and a tolerance of 0.224. The selling price variable has a VIF value of 1,640 and a tolerance of 0.610. Other cost variables have a VIF value of 4,178 and a tolerance of 0.239.

Based on the calculation results, it can be found that the VIF and tolerance values are in accordance with the provisions where VIF < 10 and tolerance > 0.10, thus there are no symptoms of multicollinearity. Based on the results obtained that the analysis found that the tolerance value of all independent variables was more than 0.10 and the VIF value was less than 10, it could be concluded that the independent variables did not occur multicollinearity so that the model met the classical assumption requirements in regression analysis.

Heteroscedasticity Test

The heteroscedasticity test was carried out with the aim of testing whether there were differences in variance or residuals from one observation to another. It was to find out a regression model there is an inequality of variance from the residuals in one observation to another.

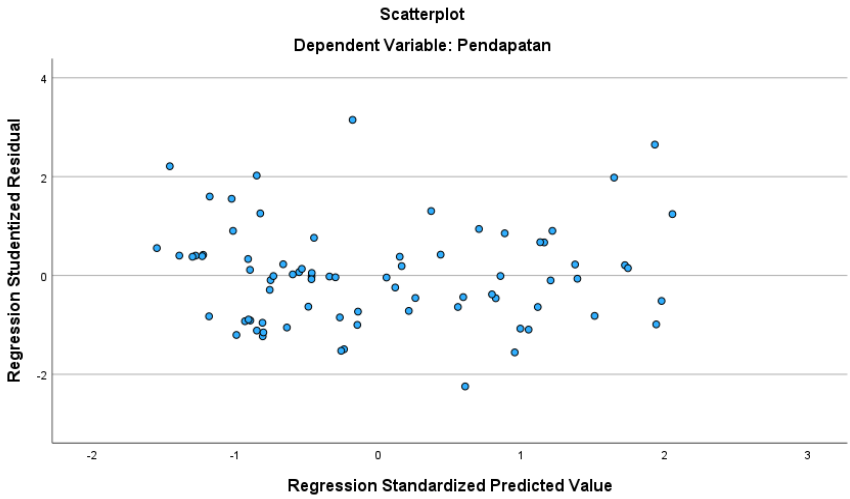

Figure 2. Scatterplots graph

It can look above that the points are arbitrarily distributed above and below the number 0 on the Y axis and do not form a specific pattern. It can be concluded that there is no heteroscedasticity in the regression model.

The results of the regression analysis with SPSS on the factors that affect the income of Cattle s in Karo Regency can be seen in the following table:

Table 15. Analysis of Affecting Income of Cattle s in Karo Regency

Variable	Regression Coefficient	T	Sig.
(Constant)	1556994,191		
Feeding Cost	-0,426	6,188	0,000
Cage Cost	0,314	2,711	0,008
Labor Cost	-0,190	2,853	0,006
Cattle Beer Cost	-0,396	-1,804	0,075
Selling Cost	0,880	2,871	0,000
Other Cost	-0,976	-0,191	0,387
R			0,937
R^2			0,877
F hit			84,72
Sig			0,001

Based on table 15, the multiple regression equation is obtained, so the income equation function for Cattle s in Karo Regency is formed which is included in the variables considered to have an influence on the income of Cattle s, namely cattle breeds costs (X1b1), feed costs (X2b2), stable costs (X3b3), labor costs (X4b4), selling price (X5b5) and other costs (X6b6). These variables will be simultaneously entered into the multiple regression equation to obtain:

$$Y = 1556994.191 - 0.426X1 + 0.314X2 - 0.190X3 - 0.396X4 + 0.880X5 - 0.976X6$$

Constant Value

In Table 15, the value of the constant/ intercept is 1556994.191, which means that if the independent variables are cattle breeds costs (X1), feed costs (X2), cage costs (X3), labor costs (X4), selling prices (X5) and other costs (X6) is considered zero (does not carry out

activities) then the breeder still earns a minimum income of Rp. 1,556,994/year or Rp. 129,749/month.

Coefficient of Determination (R2)

It actually calculate the model's ability to explain the dependent variable. The value of the factors of determination is between zero or one. The smaller the value of R2, the more limited the ability of the independent variables to explain the dependent variable.

In Table 15 it can be seen that R value in the group is 0.937 which shows the relationship between the variables of cattle breeds costs (X1), feed costs (X2), cage costs (X3), labor costs (X4), selling price (X5) and costs others (X6) to the 's income (Y) is 93.7%. This means that cattle breed costs (X1), feed costs (X2), cage costs (X3), labor costs (X4), selling prices (X5) and other costs (X6) to income in group (Y) have a relationship tight.

In Table 15 it can be seen that the R Square value is 0.877. This means that 87.7% of 's income can be affected by the variables of cattle breed costs (X1), feed costs (X2), cage costs (X3), labor costs (X4), selling price (X5) and other costs (X6). While the remaining 12.3% is influenced by other variables (μ) which are not examined in this study.

Simultaneous Variable Influence Test (f-test)

There is an effect of the independent variable on the dependent variable, you can look at the f-count value. In the table it can be seen that the f-count value is 84.72 greater than the f-table value which is 2.23 with a notable level of 0.001 (P <0.05). It can be seen that simultaneously the variable factors of cattle breedcosts (X1), feed costs (X2), cage costs (X3), labor costs (X4), selling prices (X5) and other costs (X6) affect the income of s (Y).

The six independent variables that have a significant effect on income can be interpreted that any increase or decrease in cattle breed costs, feed costs, cage costs, labor costs, livestock selling prices, and other costs will simultaneously result in an increase or decrease in income.

Partially Variable Influence Test (t-test)

It was conducted to see partially (individually) the effect of the independent variables studied, namely cattle breed costs (X1), feed costs (X2), cage costs (X3), labor costs (X4), selling prices (X5) and other costs (X6) to the dependent variable, namely income (Y).

Cattle breeds Cost (X1)

It can be seen that the t-count on the cattle breed cost variable (X1) is 6.188 which is greater than the t-table which is 1.993 with a significance level of 0.000 (P <0.05), so it can be concluded that the cost of cattle breed has a partial effect significant effect on income. The coefficient value which is negative indicates that the cost of cattle breeds (X1) has a negative effect of (0.426), which means that a growth in the cost of purchasing cattle breeds of Rp. 1000 will decrease the 's income by Rp. 426,-.

Cattle breed are production factors that make the success of farming. The cost of cattle breeds incurred will certainly affect the value of the livestock at the end of the year, if the cattle are not sold then the added value of these livestock will be calculated as income for the . According to Gultom and Wahyuni (2021) the cost of the cattle breeds purchased by the breeder affects the quality of the calves buied, so that the cost of the calves will impact Cattle business income in the local area.

Feed Cost (X2)

It can be seen that the t-count on the feed cost variable (X2) is 2.711 which is greater than the t-table which is 1.993 with a significance level of 0.008 (P <0.05), so it can be concluded that feed costs partially affect significant effect on income. The coefficient value which is negative indicates that the cost of feed (X2) has a positive effect of (0.314), which means that a growth in feed costs of Rp. 1000 will rise the 's income by Rp. 314,-.

Based on the survey results, it was found that 56.41% of the s in Karo Regency provided feed in the form of forage plus concentrate to their cattle and some others only provided forage in the form of grass. Providing quality and nutritious feed will greatly affect the production of cattle weight gain. Hartanto (2008) said that good feed is feed that meets the nutritional needs of livestock, namely, can meet the needs of protein, carbohydrates, fats, vitamins, and minerals for the growth of body weight. The increase in body weight is expected to increase the selling price so that it can increase the respondents' income in Karo Regency. Subandriyo, et al (2001) stated that the weight of the livestock will determine the selling price of the livestock, the better the body weight of the livestock, the higher the selling price, with the higher the price, the income to be earned will also increase.

Cage Cost (X3)

The t-count on the stable cost variable (X3) is 2.853 which is greater than the t-table which is 1.993 with a notable level of 0.006 (P <0.05), so the cage cost has a partial effect notable effect on income. The coefficient value which is negative indicates that the cost of the cage (X3) has a negative effect of (0.190), which means that an increase in the cost of the cage by Rp. 1000 will lessen the respondents's income by Rp. 190,-.

According to Suwarta (2012) Cost of depreciation of cages and equipment of cages, namely costs incurred in running a livestock business such as repair of cages and equipment and is calculated in rupiah (Rp/year). The cost of depreciation of the cage is influenced by the size of the cage and the materials used in the construction of the cage.

Labor Cost (X4)

On the labor cost variable (X4) is 1.871 which is not as much as the t-table which is 1.993 with a significance level of 0.075 (P> 0.05), so the labor costs are partial does not notable affect the income of s. The negative coefficient value indicates that labor costs (X4) have a negative effect of (0.396), which means that an increase in cage costs of Rp. 1000 will decrease the 's income by Rp. 396,-. who use labor on their farms are only 21.79% of the total respondents and the rest use family labor, namely wives and children to carry out livestock activities. The large number of workers used will result in greater production costs so that it will affect income.

Selling Cost (X5)

The t-count on the selling price variable (X5) is 2.871 which is greater than the t-table which is 1.993 with a notable level of 0.000 (P <0.05), so it can be concluded that the selling price has a partial effect significant effect on income. The positive value of the coefficient indicates that the selling price (X5) has a positive effect of (0.880), which means that an increase in the selling price of IDR 1000 will increase the 's income by IDR. 880,-.

The variable selling price of livestock affects income because revenue comes from the sale of livestock. According to Welerubun et al. (2016) that an increase in the selling price of livestock results in increased income and the income received will be greater.

Other Expenses Costv(X6)

The t-count on other cost variables (X6) is 0.191 which is not as much as the t-table which is 1.993 with a significance level of 0.387 (P> 0.05), so it can be concluded that other costs are not partially notable effect on the income of s. The coefficient value which is negative indicates that other costs (X6) have a negative effect of (0.976), which means that a growth in other costs of IDR 1000 will lessen the respondents 's income by IDR. 976,-.

Other costs include transportation costs, electricity costs and health costs. Transportation costs include the cost of transporting livestock from the pen to the point of sale. This transportation fee is used only when s want to sell their livestock and most breeders in Karo Regency sell their livestock at the livestock market in Tigapanah District.

The cost of electricity is the cost to pay for the electricity used in the enclosure. The small cost of electricity depends on how big or small the use of electricity is. Respondents in Karo Regency use electricity only for lights at night.

Health Expenses are costs used for medicines and vitamins given. The low cost of vitamins and medicines is due to the fact that s do not routinely provide vitamins to the livestock they raise. Medicines are only given at certain times, for example when a cow is sick, as well as vitamins given when the cow is not feeling well.

CONCLUSION

The cattle breeds costs (X1), feed costs (X2), stable costs (X3) and livestock selling prices (X5) are factors that have a significant effect on income while labor costs (X4) and other costs (X6) does not have a significant effect on the income of s in Karo Regency.

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